



Perry Nuclear Power Plant After Action Report/ Improvement Plan

Exercise Date – September 13, 2016

Radiological Emergency Preparedness (REP) Program



FEMA

Published: October 27, 2016

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EXECUTIVE SUMMARY

On September 13, 2016, a Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise was conducted in the 10-mile Emergency Planning Zone (EPZ) around the Perry Nuclear Power Plant (PNPP) by the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA), Region V. The purpose of the exercise was to assess the level of preparedness of State and local jurisdictions in responding to a radiological emergency. This exercise was held in accordance with DHS/FEMA policies and guidance concerning the exercise of State and local Radiological Emergency Response Plans (RERPs) and procedures.

The most recent plume exposure pathway exercise at this site was conducted on September 23, 2014. The qualifying emergency preparedness exercise was conducted on November 28, 1984.

The DHS/FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. The State of Ohio, Counties of Lake, Geauga and Ashtabula, local municipalities, as well as various non-government entities and volunteers all contributed to the success of the exercise.

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

This After Action Report/Improvement Plan (AAR/IP) contains the evaluation of the biennial exercise and the evaluation of the following out of sequence activities:

- Emergency Worker Equipment/Vehicle Monitoring and Decontamination
- Emergency Worker Monitoring and Decontamination
- Evacuee Vehicle Monitoring and Decontamination
- Evacuee Monitoring, Decontamination, Registration and Congregate Care
- Protective Actions for Schools (EV-2)
- Backup Route Alerting

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Except where noted in this report, the State and local off-site response organizations, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them.

The State of Ohio was not evaluated for Plume Exposure Pathway response activities during this exercise, but did participate in a manner sufficient to support demonstrations by Lake, Ashtabula, and Geauga Counties.

No Level 1 or 2 Findings or Plan Issues were identified for the State of Ohio or Lake, Ashtabula, or Geauga Counties. Two previous Level 2 Findings and one previous Plan issue for the State of Ohio were resolved during the exercise. One previous Plan Issue for the State of Ohio remains unresolved.

Sections 4 and 5 of this report provide detailed information regarding any Level 1 or 2 Findings, Plan Issues and the Corrective Actions demonstrated, as applicable.



SECTION 1: INTRODUCTION

1.1 Exercise Basis

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all offsite nuclear planning and response. DHS/FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350 "Review and Approval of State and Local Radiological Emergency Plans and Preparedness", 351 "Radiological Emergency Planning and Preparedness" and 352 "Commercial Nuclear Power Plants: Emergency Preparedness Planning." These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

The Joint FEMA/NRC Regulation 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 governments' participation in joint exercises with licensees.

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

- Taking the lead in offsite emergency planning and in the review and evaluation of Radiological Emergency Response Plans (RERPs) and procedures developed by State and local governments;
- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;
- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated December 7, 2015 (Federal Register, Vol. 81, No. 57, March 24, 2016); and
- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:
 - U.S. Department of Agriculture;
 - U.S. Department of Commerce;

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- U.S. Department of Energy;
- U.S. Department of Health and Human Services;
- U.S. Department of the Interior;
- U.S. Department of Transportation;
- U.S. Environmental Protection Agency;
- U.S. Food and Drug Administration; and
- U.S. Nuclear Regulatory Commission.

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

Formal submission of the RERPs for the Perry Nuclear Power Plant (PNPP) to FEMA Region V by the State of Ohio and involved local jurisdictions occurred on May 24, 1989. Formal approval of these RERPs was granted by FEMA on June 17, 1994, under 44 CFR 350.

A REP Partial Participation Plume Exposure Pathway Exercise was conducted on September 13, 2016, and evaluated by DHS/FEMA to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public's health and safety during a radiological emergency involving the PNPP. The purpose of this exercise report is to present the exercise results and findings on the performance of the Offsite Response Organizations (ORO) 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 DHS/FEMA Region V RAC Chair, and approved by the DHS/FEMA Headquarters.

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

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980; and
- FEMA P-1028 REP Program Manual, dated January 2016.

Section 1 of this report, entitled "Introduction," describes the exercise basis and the 10-mile and 50-mile Emergency Planning Zones around the Perry Nuclear Power Station.

Section 2 of this report, entitled "Exercise Overview," presents information pertaining to the team that planned and coordinated the exercise. This section also provides a listing of all participating jurisdictions and functional entities that were evaluated.

Section 3 of this report, entitled "Exercise Design Summary," contains the purpose and design of the exercise, and basic information regarding the exercise scenario submission and approval process.

Section 4 of this report, entitled "Analysis of Capabilities," presents detailed information regarding the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Level 1 or 2 Findings and/or Plan Issues (if any) assessed during this exercise, recommended corrective actions, and the State and local government's schedule of corrective actions, if applicable, for each exercise issue identified; and (2) descriptions of any unresolved Level 1 or 2 Findings and/or Plan Issues assessed during previous exercises and the status of the OROs efforts to resolve them.

Section 5 of this report, entitled "Conclusion" presents the DHS/FEMA summary of overall exercise conduct and results as evaluated against the requirements of 44 CFR 350.

1.2 Emergency Planning Zone (EPZ) Description

The PNPP is owned by FirstEnergy Corporation and is operated by its subsidiary FirstEnergy Nuclear Operating Company (FENOC). The PNPP site is located in the Village of North Perry, Lake County, Ohio, on the southern shore of Lake Erie, approximately 35 miles east of Cleveland, Ohio. The plant's location is North Latitude 41° 48 04.2", West Longitude 81° 08' 36,6". The populations of smaller municipalities, including Perry Village, North Perry Village, Madison Village, the villages of Fairport Harbor and Grand River, Geneva City, and Geneva-on-the-Lake Village, are included in the populations of their respective townships.

The PNPP reactor Units One and Two are located approximately seven miles northeast of Painesville, Ohio, and 35 miles east of Cleveland, Ohio. The plant's reactor Unit One is a 1205 Me net (3579 megawatt) boiling water reactor (BWR) designed by General Electric Company. The reactor supplies steam to a General Electric turbine generator. Construction of Unit Two were discontinued, and there are no plans to complete the unit at this time.

The plant site occupies approximately 1100 acres on a lake plain 50 feet above the lake low-water datum. The terrain surrounding the plant is essentially flat within five miles of the lakeshore. Rising generally to the south, the site is broken only by a lattice work of shallow,

north-south stream beds and low, almost unnoticeable east-west ridges; the latter are remnants of ancient lake-shores. Approximately five miles inland, the shoreline plane is abruptly cut by a 100- foot-deep ravine of the Grand River. The terrain south of the river is more rolling, interrupted by north-south ravines of tributaries of the Grand, Kellogg, Big, Paine and Mill creeks and several smaller streams. A large portion of the site is forested, some 250 acres are devoted to the plant structural complex and the remainder is open grassland.

The Nuclear Regulatory Commission (NRC) defines two emergency planning zones around nuclear power plants: a plume exposure pathway zone with a radius of 10 miles (16 km), concerned primarily with exposure to, and inhalation of, airborne radioactive contamination, and an ingestion pathway zone of about 50 miles (80 km), concerned primarily with ingestion of food and liquids contaminated by radioactivity. The NRC's estimate of the risk each year of an earthquake intense enough to cause core damage to the reactor at Perry was 1 in 47,619, according to an NRC study published in August 2010.

The PNPP 10-mile EPZ encompasses land areas in three counties: Lake, Ashtabula, and Geauga. A total of 17 municipal jurisdictions are situated wholly or partially within the EPZ. The PNPP EPZ boundary follows geographic (township) boundary lines and major roadways, with the exception of part of the western boundary. The western EPZ boundary follows the Concord Township western boundary from the county line northward, continuing along the Painesville Township boundary line to the Conrail railroad. At the Conrail intersection it follows the 10-mile radius line to Mentor Marsh and continues west along the marsh to Lake Erie

Lake County, where the PNPP is located, is the smallest of Ohio's 88 counties, with 232 square miles. The 2010 census, which is the most recent census upon which Evacuation Time Estimates have been approved by the NRC, estimates the permanent resident population to be 97,723 within the 10-mile EPZ. The estimated population of the seven subareas was as follows: Subarea 1 - 2,108, Subarea 2 - 9,424, Subarea 3 - 8,265, Subarea 4 - 20,068, Subarea 5 - 3,777, Subarea 6 - 5051, and Subarea 7 - 44,030. The 10-mile EPZ had an estimated peak summer population of 151,407 persons.

There are a number of beaches, parks, and campgrounds within the 10-mile EPZ that attract a sizeable transient population during the summer. These areas are located along the Lake Erie shore and in the stream valleys. In particular, Headlands State Park (just west of Fairport Harbor) and Geneva State Park (west of Geneva-on-the-Lake) draw large crowds on warm summer weekends.

Major highways that transverse the 10-mile EPZ are: Interstate 90, a four lane divided roadway (east-northeast to west-southwest) which runs between Pennsylvania (30 miles to the east) along Lake Erie to Cleveland (35 miles to the southwest); State Route 20, a major 4-lane roadway, which parallels I-90 to the north approximately two miles; State Route 84, a 2-lane roadway which lies between I-90 and State Route 20.

Significant rail lines in the 10-mile EPZ are: Conrail, which carries passenger rail-traffic on Amtrak; Norfolk and Western Railway, a subsidiary of Norfolk and Southern; Baltimore and Ohio Railway; and an independent, Painesville Railway. The three main railways parallel the three roadways listed above and lie to the north of Interstate 90. There are two airports in the 10-mile EPZ: Casement Airport in Painesville Township and Concord Airport in Concord Township. Neither airport serves commercial air-passenger traffic.

The Perry 10-mile EPZ is subdivided into a total of seven Subareas. These Subareas are the basic units for which protective action recommendations are issued. Subarea boundaries also generally follow geographic (township and city) boundaries and major roadways, and reflect distance and direction from PNPP. The distance ranges of concern are 0-2 miles, 2-5 miles, and 5-10 miles. EPZ and Subarea boundaries have been accepted at the state and county levels and are incorporated in off-site radiological emergency response plans. Subarea descriptions are as follows:

Subarea 1 (within 2 miles of PNPP) consists of North Perry Village and portions of Perry Township (including Perry Public Schools) in Lake County. This area is bounded on the east by Townline Road, and on the west by Blackmore Road. On the south, it is bounded by Middle Ridge Road between Townline and Call Roads, the northern boundary of Perry Village, New York Avenue, Ohio Street and Route 20 to Blackmore Road.

Subarea 2 (2 to 5 miles East) includes portions of Madison Township and Madison Village in Lake County. This area is bordered on the east by Route 528, on the south by Interstate 90, and on the west by the Perry/Madison Township line and Townline Road. A small section of North Perry Village extends into Madison Township and Subarea 2.

Subarea 3 (2 to 5 miles South and West) includes Perry Village and portions of Perry, Leroy and Painesville Townships in Lake County. This area is bounded on the east by Townline Road and the Perry/Madison Township line; on the south and west by Interstate 90, Vrooman Road, Madison Avenue, Bowhall Road, Routes 20 and 535, and Hardy Road.

Subarea 4 (5 miles to EPZ boundary, East) includes the city of Geneva, Geneva-on-the-Lake

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Village and a portion of Geneva Township in Ashtabula County, as well as the eastern portions of Madison Village and Madison Township in Lake County. This area is bounded on the east by the Geneva Township eastern boundary, on the south by Interstate 90, on the west by Route 528.

Subarea 5 (5 miles to EPZ boundary, SE) includes portions of Madison Township in Lake County, Thompson Township in Geauga County and Harpersfield Township in Ashtabula County. This area is bounded on the east by Route 534, the Lake/Gauga County line and the Lake/Ashtabula County line; on the south by Route 166; on the west by the Lake/Gauga County line and the Madison/Leroy Township line; and on the north by Interstate 90.

Subarea 6 (5 miles to EPZ boundary, SW) includes portions of Concord and Leroy Townships in Lake County. This area is bounded on the east by the Madison/Leroy Township line and the Lake/Gauga County line; on the south by the Lake/Gauga County line; on the west by the Concord Township western boundary; and on the north by Interstate 90.

Subarea 7 (5 miles to EPZ boundary, West) includes the city of Painesville, the villages of Fairport Harbor and Grand River, and portions of Painesville, Concord and Leroy Townships and Mentor Headlands in Lake County, plus a small portion of Perry Township, southwest of the intersection of Route 84 with Vrooman Road. This area is bounded on the east by Hardy Road, Route 535, Route 20, Bowhall Road, Madison Avenue, and Vrooman Road; on the south by Interstate 90, and on the west by Concord and Painesville Township western boundaries; and a line extending cross country from the intersection of the Conrail Railroad track and the Mentor/Painesville Township line to the Mentor Marsh, and then extending westward to include the Mentor Headlands area.

The 50-mile EPZ encompasses portions of six Support Counties, including the Counties of Lorain, Mahoning, Medina, Portage, Summit, and Trumbull. The 50-mile EPZ also includes portions of three counties in the Commonwealth of Pennsylvania, including the Counties of Erie, Crawford and Mercer. The 50-mile EPZ also encompasses a portion of Canadian Lake Erie and a small peninsular land area along the north side of Lake Erie that includes Laverne Kelly Memorial and Rondeau Provincial Parks in Ontario, Canada.

SECTION 2: EXERCISE OVERVIEW

2.1 Exercise Details

Exercise Name

Perry Nuclear Power Plant (PNPP)

Type of Exercise

Plume Exposure Pathway

Exercise Date

September 13, 2016

Program

Department of Homeland Security (DHS)/Federal Emergency Management Agency (FEMA)
Radiological Emergency Preparedness (REP) Program

Scenario Type

Radiological Emergency

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2.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the PNNP REP, Partial Participation, Plume Exposure Pathway Exercise on September 13, 2016, and/or in out-of-sequence demonstrations on September 12, 13, and 14, 2016:

State Jurisdictions

- Ohio Department of Health (ODH)
- Ohio Department of Natural Resources (ODNR)
- Ohio Emergency Management Agency (OEMA)
- Ohio Environmental Protection Agency (EPA)
- Ohio National Guard (ONG)
- Ohio State Highway Patrol (OSHP)
- Ohio State University (OSU)

Risk Jurisdictions

- Ashtabula County Board of Commissioners
- Ashtabula County Communications Department
- Ashtabula County Department of Job and Family Services
- Ashtabula County Dog Warden
- Ashtabula County Emergency Management Agency (ACEMA)
- Ashtabula County Engineer's Office
- Ashtabula County Fire/EMS
- Ashtabula County Health Department
- Ashtabula County Job and Family Services Department
- Ashtabula County Sheriff's Office (ACSO)
- Ashtabula County Schools
- Chardon Village Fire Department
- Concord Township Fire Department
- Fairport School District (FSD)
- Geauga County Amateur Radio Association
- Geauga County Board of Commissioners

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- Geauga County Department of Emergency Services
- Geauga County Engineer
- Geauga County Health District
- Geauga County Job and Family Services Department
- Geauga County Public Information Office
- Geauga County Sheriff's Office
- Geneva Area City Schools Bus Supervisor
- Geneva City Fire Department
- Geneva City Police Department
- Geneva School District
- Harpersfield Fire Department
- Kirtland City Fire and Rescue
- Kirtland City Police Department
- Lake County Board of Commissioners
- Lake County Communications Department
- Lake County Emergency Management Agency (LCEMA)
- Lake County Engineer's Office
- Lake County General Health District (LCGHD)
- Lake County Geographical Information Systems (GIS) Department
- Lake County Job and Family Services Department
- Lake County School District
- Lake County Public Information Office
- Lake County Sheriff's Office (LCSO)
- Lake County Telecommunications Department
- Lake County Utilities Department

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- Lake Health Hospitals (EMS)
- Lakeside High School
- Laketran Regional Transit Authority
- Madison Fire District
- Madison School District
- Madison Township Police Department
- Madison Village Police Department
- Radio Amateur Civil Emergency Services (RACES)

Private Sector Organizations

- American Red Cross
- Ashtabula County Amateur Radio Club
- Citizen Corps
- FirstEnergy Nuclear Operating Company
- Retired Service Volunteer Program (RSVP)
- Salvation Army

Federal Jurisdictions

- Federal Emergency Management Agency
- United States Coast Guard
- United States Nuclear Regulatory Commission

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SECTION 3: EXERCISE DESIGN SUMMARY

3.1 Exercise Purpose and Design

The DHS/FEMA Region V evaluated the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise conducted on September 13, 2016 to assess the capabilities of local emergency preparedness organizations in implementing their Radiological Emergency Response Plans (RERP) and procedures to protect the public's health and safety during a radiological emergency involving the Perry Nuclear Power Plant in accordance with the requirements of 44 CFR 350 and NUREG 0654/FEMA-REP-1. The Exercise was planned and evaluated in accordance with the provisions of FEMA P-1028 REP Program Manual of January, 2016. The purpose of this report is to present the results and findings on the performance of the Offsite Response Organizations (OROs) during a simulated radiological emergency.

3.2 Exercise Objectives, Capabilities, and Activities

Exercise objectives and identified Capabilities/REP Criteria selected to be demonstrated are discussed in Appendix E "Extent-Of-Play Agreements."

The Exercise Planning Team (EPT) selected objectives for the Offsite Response Organizations (OROs) that focus on evaluating emergency response procedures, identifying areas for improvement, and fostering collaboration between the various OROs and stakeholders. This exercise focused on the following objectives:

- OROs will effectively demonstrate Emergency Operations Management.
- OROs will effectively demonstrate Protective Action Decision-Making.
- OROs will effectively demonstrate Protective Action Implementation.
- OROs will effectively demonstrate Emergency Notification and Public Information.
- OROs will effectively demonstrate Field Measurement and Analysis.
- OROs will effectively demonstrate Support Operations and Facilities.

3.3 Scenario Summary

Appendix F "Scenario Details," contains a summary of the Plume Phase Exercise Scenario

submitted by the State of Ohio and FirstEnergy Nuclear Operating Company (FENOC) on July 15, 2016. Results of the technical review of the Scenario, completed on August 10, 2016, indicated that the scenario was adequate to support demonstration of DHS/FEMA requirements regarding the criteria selected for demonstration in the State and County extent-of-play submission of June 8, 2016. DHS/FEMA Region V accepted this exercise scenario and subsequent extent-of-play agreement revisions on August 11, 2016.

Appendix F "Exercise Timeline" presents the simulated sequence of events which was used as the basis for invoking emergency response actions by Offsite Response Organizations (OROs) during the PNPP Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on September 13, 2016.

During the exercise, in addition to information and data provided through the PNPP Off-Site Scenario and Timeline, State of Ohio controllers provided "inject messages" containing scenario events and/or relevant data to those positions or locations who would normally receive notification of such events. These inject messages were the method used for invoking additional specific response actions by OROs.

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SECTION 4: ANALYSIS OF CAPABILITIES

4.1 Exercise Evaluation and Results

Contained in this section are results and findings of the evaluation of all jurisdictions and functional entities that participated in the September 13, 2016, Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile Emergency Planning Zone (EPZ) surrounding the Perry Nuclear Power Plant (PNPP).

Each jurisdiction and functional entity was evaluated based on its demonstration of exercise criteria delineated in the FEMA P-1028 REP Program Manual of January 2016. Detailed information on the exercise criteria and the extent-of-play agreement used in this exercise are found in Appendix E “Extent-Of-Play Agreements” of this report.

Presented below are definitions of the terms used in this report relative to the criteria demonstration status:

- **M – Met:** The status of a REP exercise Evaluation Area Criterion indicating that the participating Offsite Response Organizations (ORO) demonstrated all demonstration criteria for the Evaluation Area Criterion to the level required in the extent-of-play agreement with no Level 1 or 2 Findings, and/or Plan Issues assessed in the current exercise and no unresolved prior Findings or Issues.
- **L1 – Level 1 Finding:** An observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant.
- **L2 – Level 2 Finding:** An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety. Listing of the demonstrated exercise criteria under which a Level 2 Finding was assessed during the current exercise or Level 2 Finding assessed during prior exercises remain unresolved. Included is a description of any Level 2 Findings assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.

- P – Plan Issue: An observed or identified inadequacy in the ORO’s emergency plan or implementing procedures, rather than in the ORO’s performance.
- N – Not Demonstrated: Exercise criteria that were not demonstrated as scheduled during this exercise and the reason(s) they were not demonstrated.
- Prior Issues – Resolved: Descriptions of Level 2 Findings assessed during previous exercises that were resolved and the corrective actions demonstrated, in this exercise.
- Prior Issues – Unresolved: Descriptions of Level 2 Findings assessed during prior exercises that were not resolved in this exercise. Included in the descriptions is the reason the Level 2 Finding remains unresolved and the recommended corrective actions to be demonstrated before or during the next exercise.

4.2 Summary Results of Exercise Evaluation

The matrix presented in Table 3.1, on the following page(s), presents the status of all exercise criteria from the FEMA P-1028 REP Program Manual of January 2016, which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. The exercise criterion status box is blank if it was not scheduled for demonstration.

This subsection provides information on the evaluation of each participating jurisdiction and functional entity in a jurisdiction-based, issues-only format.

The DHS/FEMA has developed a standardized system for numbering exercise issues. This system is used to achieve consistency in numbering exercise issues among DHS/FEMA Regions and site-specific exercise reports within each Region. It also is used to expedite tracking of exercise issues on a nationwide basis.

The identifying number of Level 1 or 2 Findings, or Plan Issues includes the following elements, with each element separated by a hyphen (-).

- Plant Site Identifier – A two-digit number, corresponding to the Utility Billable Plant Site Code (47 for Perry Nuclear Power Plant).
- Exercise Year – The last two digits of the year the exercise was conducted.
- Demonstration Criterion – The letters and number corresponding to the Demonstration Criterion in the six Exercise Evaluation Areas described in the FEMA P-1028 REP Program Manual of January 2016.
- Issue Classification Identifier – (L1 = Level 1, L2 = Level 2, P = Plan Issue).

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- Exercise Issue Identification Number – A separate two or three-digit indexing number assigned to each issue identified in the exercise.



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Table 3.1 – Summary of Exercise Evaluation

Site: Perry Nuclear Power Plant Exercise Date: September 13, 2016 M: Criterion Met L1: Level 1 Finding L2: Level 2 Finding P: Plan Issue N: Not Demonstrated		OH SEOC JDF OSP HUB (Dispatch)	OH SEOC Assessment Room	OH SEOC Assessment Annex	OH SEOC Executive Room	OH SEOC JIC	OH OEMA & ODH EOF LNOS	OH OEMA & ODH LNO at LAKE CO EOC	OH State PIO at FENOC JIC	OH OEMA LNO at FENOC JIC PIQ	OH ODNR Dosimetry Briefing	OH ODNR Primary A&N – Lake Erie	Lake Co LCSO Comm Center (INP)	Lake Co EOC	Lake Co EOC Executive Group	Lake Co EOC PIO
Emergency Operations Management																
Mobilization	1a1	M		M	M	M	M	M	M				M	M		
Facilities	1b1															
Direction and Control	1c1		M		M		M	M	M	M		M		M	M	
Communications Equipment	1d1	M		M	M	M	M	M	M	M	M	M	M	M		
Equipment and Supplies to Support Operations	1e1	M		M	M	M	M	M	M	M	M	M	M	M		
Protective Action Decision-Making																
EW Exposure Control Decisions	2a1			M	M										M	
PARs	2b1		M		M											
PADs	2b2		P		M										M	
PADs for Disabled/Functional Needs	2c1			M	M										M	
Ingestion PADs	2d1															
RRR Decisions	2e1															
Protective Action Implementation																
EW Exposure Control Implementation	3a1				M						M	M		M		
KI Public/Institutionalized	3b1				M						M	M		M		
PAD Implementation Disabled/Functional	3c1													M		
PAD Implementation Schools	3c2													M		
TACP Establishment	3d1													M		
Impediments	3d2													M		
Implement Ingestion PADs	3e1															
Ingestion Pathway Decisions	3e2															
Implementation of RRR Decisions	3f1															
Field Measurement and Analysis																
RESERVED	4a1															
Field Team Management	4a2															
Field Team Operations	4a3															
Field Team Sampling	4b1															
Laboratory Operations	4c1															
Emergency Notification and Public Info																
Initial Alert & Notification	5a1				M							M		M		
RESERVED	5a2															
Backup Alert & Notification	5a3															
Exception Area Alerting	5a4															
Subsequent Information & Instructions	5b1				M	M			M	M				M		M
Support Operations and Facilities																
Reception Center Operations	6a1															
EW Monitoring & Decontamination	6b1															
Congregate Care	6c1															
Contaminated Injured Transport & Care	6d1															

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Table 3.1 – Summary of Exercise Evaluation (Cont'd)

Site: Perry Nuclear Power Plant Exercise Date: September 13, 2016 M: Criterion Met L1: Level 1 Finding L2: Level 2 Finding P: Plan Issue N: Not Demonstrated		Lake Co EOC Assessment Room	Lake Co EMT DC Briefing	Lake Co FMT Coordination & Comm	Lake Co FMT #1	Lake Co FMT #2	Lake Co PIO at FENOC JIC	Lake Co Madison SD EV-2 DC Briefing	Lake Co Madison SD EV-2 Interview	Lake Co Kirkland FD M&D EW DC Briefing	Lake Co Kirkland FD M&D Evacuees	Lake Co Kirkland FD M&D Evacuee Vehicles	Lake Co American Red Cross Evacuee Registration	Lake Co Health Dept. – KI Distribution	Lake Co American Red Cross – Congregate Care	Lake Co Madison Twp PD TCP DC Briefing	Lake Co Madison Twp PD TCP
Emergency Operations Management																	
Mobilization	1a1																
Facilities	1b1														M		
Direction and Control	1c1														M		
Communications Equipment	1d1			M	M	M		M	M						M	M	M
Equipment and Supplies to Support Operations	1e1	M	M	M	M	M		M	M	M	M	M	M	M		M	M
Protective Action Decision-Making																	
EW Exposure Control Decisions	2a1	M															
PARs	2b1																
PADs	2b2																
PADs for Disabled/Functional Needs	2c1																
Ingestion PADs	2d1																
RRR Decisions	2e1																
Protective Action Implementation																	
EW Exposure Control Implementation	3a1	M	M		M	M		M		M	M	M				M	M
KI Public/Institutionalized	3b1							M						M			
PAD Implementation Disabled/Functional Needs	3c1																
PAD Implementation Schools	3c2								M								
TACP Establishment	3d1																M
Impediments	3d2																
Implement Ingestion PADs	3e1																
Ingestion Pathway Decisions	3e2																
Implementation of RRR Decisions	3f1																
Field Measurement and Analysis																	
RESERVED	4a1																
Field Team Management	4a2			M													
Field Team Operations	4a3				M	M											
Field Team Sampling	4b1																
Laboratory Operations	4c1																
Emergency Notification and Public Info																	
Initial Alert & Notification	5a1																
RESERVED	5a2																
Backup Alert & Notification	5a3																
Exception Area Alerting	5a4																
Subsequent Information & Instructions	5b1						M										
Support Operations and Facilities																	
Reception Center Operations	6a1										M	M	M				
EW Monitoring & Decontamination	6b1																
Congregate Care	6c1														M		
Contaminated Injured Transport & Care	6d1																

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Table 3.1 – Summary of Exercise Evaluation (Cont'd)

Site: Perry Nuclear Power Plant Exercise Date: September 13, 2016 M: Criterion Met L1: Level 1 Finding L2: Level 2 Finding P: Plan Issue N: Not Demonstrated		Lake Co Madison Village PD TCP/ACP DC Briefing	Lake Co Madison Village PD TCP/ACP	Lake Co Concord FD Backup Rt. Alt DC Briefing	Lake Co Concord FD Backup Rt. Alt	Lake Co LakeTran RTA DC Briefing	Lake Co Fairpoint SD EV-2 Interview	Ashtabula Co ACSO Dispatch (INP)	Ashtabula Co EOC	Ashtabula Co EOC Executive Room	Ashtabula Co EOC PIO	Ashtabula Co County PIO at FENOC JIC	Ashtabula Co Geneva PD TCP/ACP DC Briefing	Ashtabula Co Geneva PD TCP/ACP	Ashtabula Co Lakeside High School M&D DC Briefing	Ashtabula Co Lakeside High School M&D - Evacuees	Ashtabula Co Lakeside High School M&D - Evacuee Vehicles
Emergency Operations Management																	
Mobilization	1a1							M	M								
Facilities	1b1															M	
Direction and Control	1c1								M	M						M	
Communications Equipment	1d1	M	M	M	M	M	M	M	M				M	M	M		
Equipment and Supplies to Support	1e1	M	M	M	M	M	M	M	M				M	M	M	M	M
Protective Action Decision-Making																	
EW Exposure Control Decisions	2a1									M							
PARs	2b1																
PADs	2b2									M							
PADs for Disabled/Functional Needs	2c1									M							
Ingestion PADs	2d1																
RRR Decisions	2e1																
Protective Action Implementation																	
EW Exposure Control Implementation	3a1	M	M	M	M	M	M		M				M	M	M	M	M
KI Public/Institutionalized	3b1					M	M		M								
PAD Implementation Disabled/Functional	3c1								M								
PAD Implementation Schools	3c2						M		M								
TACP Establishment	3d1		M						M					M			
Impediments	3d2								M								
Implement Ingestion PADs	3e1																
Ingestion Pathway Decisions	3e2																
Implementation of RRR Decisions	3f1																
Field Measurement and Analysis																	
RESERVED	4a1																
Field Team Management	4a2																
Field Team Operations	4a3																
Field Team Sampling	4b1																
Laboratory Operations	4c1																
Emergency Notification and Public Info																	
Initial Alert & Notification	5a1								M								
RESERVED	5a2																
Backup Alert & Notification	5a3				M												
Exception Area Alerting	5a4																
Subsequent Information & Instructions	5b1								M		M	M					
Support Operations and Facilities																	
Reception Center Operations	6a1															M	M
EW Monitoring & Decontamination	6b1																
Congregate Care	6c1																
Contaminated Injured Transport & Care	6d1																

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Table 3.1 – Summary of Exercise Evaluation (Cont'd)

Site: Perry Nuclear Power Plant Exercise Date: September 13, 2016 M: Criterion Met L1: Level 1 Finding L2: Level 2 Finding P: Plan Issue N: Not Demonstrated		Ashtabula Co Lake Co. Health Dept. KI Distro	Ashtabula Co Harpersfield FD Backup Rt. Alert. DC Briefing	Ashtabula Co Harpersfield FD Backup Rt. Alert.	Geauga Co GCSO Dispatch (INP)	Geauga Co EOC	Geauga Co EOC and Executive Room	Geauga Co EOC PIO	Geauga Co EOC TCP DC Brief	Geauga Co EOC OSHP TCP/ACP	Geauga Co PIO at FENOC JIC	Geauga Co Chardon Village FD M&D Emergency Workers – DC Briefing	Geauga Co Chardon Village FD M&D Emergency Workers	Geauga Co Chardon Village FD M&D Emergency Worker Vehicles & Equip.
Emergency Operations Management														
Mobilization	1a1				M	M								
Facilities	1b1													
Direction and Control	1c1					M							M	
Communications Equipment	1d1		M	M	M		M		M	M			M	
Equipment and Supplies to Support	1e1	M	M	M	M	M			M	M		M	M	M
Protective Action Decision-Making														
EW Exposure Control Decisions	2a1						M							
PARs	2b1													
PADs	2b2						M							
PADs for Disabled/Functional Needs	2c1						M							
Ingestion PADs	2d1													
RRR Decisions	2e1													
Protective Action Implementation														
EW Exposure Control Implementation	3a1		M	M		M			M	M		M	M	M
KI Public/Institutionalized	3b1	M				M								
PAD Implementation Disabled/Functional	3c1					M								
PAD Implementation Schools	3c2					M								
TACP Establishment	3d1					M				M				
Impediments	3d2					M								
Implement Ingestion PADs	3e1													
Ingestion Pathway Decisions	3e2													
Implementation of RRR Decisions	3f1													
Field Measurement and Analysis														
RESERVED	4a1													
Field Team Management	4a2													
Field Team Operations	4a3													
Field Team Sampling	4b1													
Laboratory Operations	4c1													
Emergency Notification and Public Info														
Initial Alert & Notification	5a1						M							
RESERVED	5a2													
Backup Alert & Notification	5a3			M										
Exception Area Alerting	5a4													
Subsequent Information & Instructions	5b1							M			M			
Support Operations and Facilities														
Reception Center Operations	6a1													
EW Monitoring & Decontamination	6b1												M	M
Congregate Care	6c1													
Contaminated Injured Transport & Care	6d1													

4.3 Criteria Evaluation Summaries

4.3.1 Risk Jurisdictions – State of Ohio

4.3.1.1 State of Ohio – SEOC JDF OSP Hub (Dispatch)

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Initial Notification Point (INP) successfully demonstrated the ability to receive notification of an incident at the PNPP and to alert and notify appropriate response personnel. The demonstration was conducted at the Ohio State Highway Patrol Dispatch Center, 2855 W. Dublin-Granville Road, Columbus, Ohio.

At 0759 hours, the INP received a call from the PNPP via the 5-way PNPP dedicated line that informed the dispatcher of an Alert Emergency Classification Level (ECL) incident that was declared at 0754 hours. The dispatcher completed an initial notification form, acknowledged receipt of the information to the caller and the call ended at 0800 hours.

At 0802 hours, the dispatcher retrieved a list of Duty Officers for the Ohio Emergency Management Agency (OEMA) and made contact via commercial telephone with the appropriate on-call person from OEMA. This contact was established at 0803 hours. The OEMA Duty Officer, working from his regular office across the hall, retrieved the original form from the INP Dispatcher in person at 0805 hours and confirmed the information with the receiving dispatcher.

At 0804 hours, the INP sent a message to mobilize staff to the Executive Room, Operations Room, Assessment Room and the Joint Information Room. At 0810 hours, confirmation was displayed via a computer screen to the evaluator demonstrating that the message was successfully sent.

At 0805 hours, the OEMA Duty Officer reported that the Assessment Room located in the Emergency Operations Center assumed responsibility to answer all subsequent calls on the 5-way dedicated line from the PNPP.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Initial Notification Point (INP) successfully demonstrated that at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The demonstration was conducted at the Ohio State Highway Patrol Dispatch Center, 2855 W. Dublin-Granville Road, Columbus, Ohio.

At 0759 hours, the INP received notification of a simulated Alert status from PNPP on a landline telephone handset which was connected to the primary five-way communications system used for initial notifications among the PNPP, the INP and the Lake, Ashtabula, and Geauga Counties. Commercial telephone and the statewide 800 MHz Multi-Agency Radio Communications System (MARCS) served as backup communication methods. At 0806 hours, a dispatcher successfully demonstrated MARCS radio checks by contacting Ohio State Highway Patrol posts located at Dublin and Concord. Both communications systems demonstrated operated correctly with no failures noted.

The communications center was also equipped with a high band radio system, a Law Enforcement Automated Data System (LEADS), multiple commercial telephone lines, cellular telephones (State issued and personal), Internet connectivity, Electronic mail and a facsimile machine. Both MARCS and LEADS were available to each of the eight dispatch positions and the high band radio was available in a standalone hard wired transceiver configuration. All dispatchers were trained in the use of each system.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016,

the State of Ohio Initial Notification Point (INP) successfully demonstrated the availability of equipment, maps, displays, monitoring instruments, potassium iodide (KI), and other supplies sufficient to support emergency operations. The demonstration was conducted at the Ohio State Highway Patrol Dispatch Center, 2855 W. Dublin-Granville Road, Columbus, Ohio.

A survey of the supplies and equipment located at the INP during exercise play revealed that the facility was well equipped to effectively manage initial notification functions for any scenario, including those originating from PNPP. Maps, procedures, and phone lists were updated to include the Ohio State Highway Patrol monitoring center, who served in a backup role for the exercise. No potassium iodide (KI) or monitoring instruments were stored at the location.

A dedicated 5-way telephone that established primary communication between the PNPP, the INP and the Counties of Lake, Geauga and Ashtabula.

The INP had eight computer stations and one facsimile machine. A bookcase was located in the middle of the dispatcher area that shelved plans, procedures and notification forms.

The PNPP dedicated 5-way telephone also included notification forms underneath it for quick usage. The INP had numerous maps and visual displays that were effectively utilized during the course of the demonstration.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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

4.3.1.2 State of Ohio – SEOC Assessment Room

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Assessment Room Annex successfully demonstrated that key personnel with leadership roles could provide direction and control to that part of the overall response effort for which they were responsible. The demonstration was conducted in the State Assessment Room Annex located in the State Emergency Operation Center (SEOC), 2855 West Dublin-Granville Road, Columbus, Ohio.

The Radiological Assessment Branch Director was overall in charge of all dose assessment activities. He held the first situational update to his staff at 0848 hours and declared the Dose Assessment function operational at 0906 hours. He held update briefings at 0952 hours, at 1007 hours upon PNPP declaration of a site area emergency, and at 1210 hours upon PNPP declaration of a General emergency. He also have the First Energy Nuclear Operating Corporation liaison provide a briefing to his staff at 1107 hours.

The Radiological Assessment Branch Director reviewed and approved protective action recommendations (PARs) on behalf of the Assessment Branch and briefed these PARs and those from PNPP to the Executive Group.

The Dose Assessment Group supervisor provided guidance to the Radiological Assessment Branch whenever the Branch Director was briefing the Executive Group or otherwise not accessible.

The Information and Planning Section Chief provided direction and control for activities conducted in the State Assessment Room. These activities maintained situational awareness and communicated status to the Executive Group, risk Counties, the Joint Information Center, and other operations. Though the Information and Planning Section did not perform radiological dose assessment, it did perform overall situational analysis and reporting and provided Geographic Information Systems (GIS) mapping.

Position instructions and logs were available at all work stations. The Radiological Assessment Runner distributed messages and status reports to work stations and file folders quickly and continuously throughout the exercise.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 2.b.1: Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654/FEMA-REP-1, 1.10 and Supplement 3)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Assessment Room Annex successfully demonstrated the ability to make appropriate protective action recommendations (PARs). The PARs were based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. The demonstration was conducted in the State Assessment Room Annex located in the State Emergency Operation Center (SEOC), 2855 West Dublin-Granville Road, Columbus, Ohio.

The Systems Operator monitored plant conditions throughout the exercise and used monitored release rates and weather conditions to model radiation doses to members of the public with the Meteorological Information and Dose Assessment System (MIDAS). There was a very small release in progress at the declaration of an Alert Emergency Classification Level (ECL) by PNPP, and the Systems Operator ran his first assessment at approximately 0952 hours. Several projections were run throughout the exercise, including updates upon declaration of the Site Area Emergency and General Emergency ECLs. All projections run during this exercise were very close (statistically identical) to those from PNPP. All concentrations, exposure rates, and doses varied by less than a factor of one between the State of Ohio and PNPP dose projection models.

These actions resolved previous Plan Issue: 03-16-2b1-P-01.

The Systems Operator compared field team survey readings to model predictions and found them to be within 20% of the model. Because the measured exposure rate was so close to the model predicted exposure rate, the Systems Operator did not back calculate using field data. However, he did explain how he would do this if measurements varied significantly from predictions. All projections run by the Systems Operator were checked and verified by another systems operator.

Upon declaration of an ECL of General Emergency (GE) by PNPP, the Systems Operator's dose assessment predicted that no Protective Action Guides (PAGs) would be exceeded. This matched PNPP's projections. However, NRC and FEMA guidance recommend a minimum evacuation of two miles surrounding the plant and five miles in the downwind direction at the declaration of a GE. The PNPP Protective Action Recommendation (PAR) was to evacuate two

miles surrounding the plant and 10 miles in the downwind direction. The Dose Assessment Section developed a PAR to evacuate Subareas 1, 2, and 3, and Lake Erie within the 10-mile EPZ, while PNPP had issued a PAR to evacuate Subareas 1, 2, 3, 4, 5 and 6, and Lake Erie within the 10-mile EPZ. The Branch Chief briefed both PARs to the Executive Group and explained that the State Dose Assessment recommendation was consistent with guidance from the NRC and FEMA. Later research indicated that the PNPP default PAR likely identified this type of an event as “rapidly escalating,” which resulted in the addition of Subareas 4, 5, and 6.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Assessment Room Annex successfully demonstrated a decision-making process involving consideration of appropriate factors, and necessary coordination was used to make precautionary and/or protective action decisions for the general public, including the recommendation for the use of potassium iodide (KI). The demonstration was conducted in the State Assessment Room Annex located in the State Emergency Operation Center (SEOC), 2855 West Dublin-Granville Road, Columbus, Ohio.

The decision to recommend that members of the public take KI was made by the Dose Assessment Group Supervisor as the representative of the Ohio Department of Health in the Radiation Assessment Branch. At approximately 1213 hours, the Radiation Assessment Branch Director briefed the Executive Group with a protective action recommendation that included evacuation of Subareas 1, 2, and 3, and Lake Erie within the 10-mile Emergency Planning Zone (EPZ), and recommended the ingestion of KI for members of the public in those Subareas as well. The Executive Group communicated that recommendation to the Risk Counties.

The KI recommendation was provided as the default position according to the Ohio plans and procedures. Based on how the scenario unfolded, there was no discussion of a trigger point to recommend KI for members of the public. An update to Ohio Department of Health Procedure 10-BEHRP-01, dated August 12, 2016, included the guidance to advise KI use by

institutionalized populations and emergency workers when there is “significant probability of a radioactive material release results in a CDE of 5 rem child thyroid”. This procedure is consistent with FDA guidance. However, no similar guidance is provided to recommend KI use for members of the public. Consequently, prior plan issue 03-16-2b2-P-02 SEOC remains unresolved.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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

4.3.1.3 State of Ohio – SEOC Assessment Annex

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio State Emergency Operations Center (OH SEOC) Assessment Room personnel successfully demonstrated the use of effective procedures to alert, notify and mobilize emergency personnel and to activate and staff emergency facilities. The demonstration was conducted in the OH SEOC facilities located at 2855 West Dublin-Granville Road, Columbus, Ohio.

At 0752 hours, the initial notification of an Alert Emergency Classification Level (ECL) was made by PNPP to the Ohio Emergency Operations Center/Joint Dispatch Facility (OH EOC/JDF). This facility was staffed 24-hours a day by the Ohio State Highway Patrol (OSHP). The notification was made over the PNPP five-way dedicated telephone line. The Radiological Assessment Branch Director and the Assessment Annex Room personnel, who were pre-positioned in locations nearby the OH SEOC in accordance with the extent-of-play agreement,

were notified by the Duty Officer at 0800 hours. Annex Room personnel who were not at the OH SEOC were notified by telephone. Staffing of the OH SEOC Assessment Annex Room was supported by the Ohio Department of Health (ODH), Ohio Environmental Protection Agency (OEPA), and the Ohio EMA, Radiological Assessment Branch.

Assessment Annex Room staff began arriving at 0815 hours (these individuals were Ohio EMA staff who were pre-positioned in accordance with the extent-of-play agreement). The Radiological Assessment Branch Director notified ODH and OEPA personnel by telephone at 0828 hours. Following arrival of the Dose Assessment QA Systems Operator (ODH staff) at 0906 hours, the minimum staffing was determined to be present and the facility was declared operational.

At 0815 hours, the Assessment Annex Room assumed the role of the OH SEOC/JDF and received notifications over the five-way dedicated telephone line from PNPP of the changes to the ECL and/or plant conditions. The OH SEOC Assessment Room received notification of the ECLs as follows: Alert at 0805 hours, Site Area Emergency at 1007 hours, and General Emergency at 1202 hours. The Assessment Room received notification of the Governor's declaration of a State of Emergency at 1024 hours. The Assessment Room personnel were notified of the ECLs when the call came in over the five-way dedicated line from PNPP. There was no need to verify the call from PNPP as a dedicated telephone line was used.

The Director of the Radiological Assessment Branch indicated that a 24-hour staffing chart (two 12-hour shifts) would be developed for the Assessment Room if the first shift exceeded eight hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio State Emergency Operations Center (OH SEOC) Assessment Room personnel successfully demonstrated that communications capabilities were managed in support of emergency operations. The demonstration was conducted in the OH SEOC facilities located at

2855 West Dublin-Granville Road, Columbus, Ohio.

The primary method of communications with the Assessment Room personnel who were not located at the OH SEOC was the landline telephone. Backup communications were through the cellular telephone or State two-way radio system (Motorola Multi-Agency Radio Communications Systems or MARCS). The Field Team Communicator used the landline telephone to communicate with the Field Team Coordinator who was located at the Lake County EOC.

During the exercise, landline telephone communications were used extensively and no system failures were noted. The MARCS back-up radio communications system was successfully tested during the exercise. Log entries were made of the communications transmitted and received.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio State Emergency Operations Center (OH SEOC) Assessment Room personnel successfully demonstrated the use of equipment, maps, dosimetry, potassium iodide, and other supplies sufficient to support emergency operations. The demonstration was conducted in the OH SEOC facilities located at 2855 West Dublin-Granville Road, Columbus, Ohio.

Since the State EOC was well outside the 10-mile Emergency Planning Zone (EPZ) for the PNPP, radiation survey equipment, dosimetry, and potassium iodide was not used or needed in this facility.

The Assessment Room consisted of two large areas separated by a glass wall. One area was occupied by Situation Analysts and Geographical Information System (GIS) Operators. The other area, known as the Assessment Room Annex, was occupied by dose assessment personnel. The Assessment Room and Annex were well equipped with both desktop and laptop computer workstations that were linked to the mainframe network. These computers were used for the following activities: performing dose projections, maintaining activity logs, GIS mapping, accessing the Nuclear Data System feed from PNPP, and sending/receiving electronic mail.

Each work station in the Assessment Room and Annex was equipped with a digital telephone. There was a dedicated multi-line telephone line for prompt notification from PNPP that was located at the Formal Line Communicator's workstation in the Annex. This workstation was equipped with two landline telephones. It also contained the prompt notification telephones for Beaver Valley and Davis-Besse.

The Assessment Room and Annex were equipped with two large Canon multi-purpose scan, facsimile, print, and copy machines with color capability. The Assessment Room had six wall-mounted video terminals that could display a variety of materials from external sources (e.g., TV stations) and internal sources such as a GIS work station. The Annex had a large projection screen that was able to drop down from its ceiling storage location. Displays from any one of the computer workstations could be projected on the screen. During the exercise, the screen was used to alternatively display the 10-mile EPZ with the Subareas and the current plant data from the PNPP Nuclear Data System. A large 10-mile EPZ map showing the six evacuation Subareas was mounted to the wall. Numerous other laminated maps for display of items of interest, such as evacuation routes and relocation centers for PNPP, Davis-Besse, and Beaver Valley, were available. They simply needed to be removed as needed from their storage location, unrolled, and mounted to the wall. There were two white, dry-erase status boards: one with a table for displaying the field monitoring team data and another for posting the Emergency Classification Level, dose projections, and meteorology data. Wall-mounted digital clocks were present in the Assessment Room and Annex.

The entire OH SEOC was equipped with a diesel generator that provided backup power for lighting, ventilation, and the telephone system. The computer work stations were linked to an uninterruptable power supply system.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654/FEMA-REP-1, C-6; J-10.e, f; K.3.a, 4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016,

the Ohio State Emergency Operations Center Assessment Room personnel successfully demonstrated the use of a decision making process to ensure that an exposure control system, including the use of potassium iodide (KI), was in place for emergency workers, with provisions to authorize radiation exposure in excess of administrative limits. The demonstration was conducted in the State Assessment Room and Annex located in the State Emergency Operations Center (SEOC), 2855 West Dublin-Granville Road, Columbus, Ohio.

Emergency Workers (EWs) entering the 10-mile Emergency Planning Zone (EPZ) would be issued dosimetry and potassium iodide (KI) by the local Dosimetry Coordinator at the County EOC or the Radiological Instrument Maintenance and Calibration facility. A job-specific radiological briefing would be conducted by the local Dosimetry Coordinator. The State of Ohio used an administrative exposure limit of 1 Roentgen (R) to allow for subsequent calculation of Total Effective Dose Equivalent (TEDE). The 1 R exposure limit was low enough to ensure that EWs maintained their exposure within the Environmental Protection Agency Guideline of 5 rem. During the exercise, ratios of the Total Effective Dose Equivalent to Deep Dose Equivalent were calculated using Meteorological Information and Dose Assessment System (MIDAS) dose projection software. As the ratio increased beyond its initial value of approximately one, EW exposure limits were reduced by a factor of two as read on the Direct-Reading Dosimeters.

The recommendation for EWs in Subareas 1, 2, and 3 to ingest KI was made by the Radiological Assessment Branch Director as part the Protective Action Recommendation (PAR) presented the Executive Group at 1209 hours. There was a release in progress; however, the projected thyroid doses did not exceed established Protective Action Guides at or beyond the site boundary. The PAR considered the Emergency Classification Level (ECL) of General Emergency, degrading plant conditions, and the established procedure that at a General Emergency ECL, KI is normally recommended for affected Subareas.

When the KI ingestion decision was made, the State Field Monitoring Team Communicator (MTC) was instructed by the Radiological Assessment Branch Director to contact the local Field Team Coordinator and advise him to inform State Field Monitoring Team (FMT) members to ingest KI. The MTC made the requested contact immediately following receipt of the request to do so; however, further action to contact with the FMTs was simulated, since according the extent-of-play agreement, State FMTs would not be staffed for this exercise. The KI decision was documented on the "County Protective Action Decisions" form. Other State and local EWs were informed of the Ohio Department of Health (ODH) recommendation to ingest KI via predetermined communication channels during dissemination of the "County Protective Action

Decisions” form.

The Ohio Department of Health representative in the State Emergency Operations Center was responsible for approving an EW to exceed Ohio’s administrative radiation exposure limits of 1 R (for all EWs), 2 R (for protection of property) and 5 R (for lifesaving). During the exercise, one call was received to request an extension of an EW’s exposure above administrative limits for a County Field Team member. The individual’s dose was currently 1.1 R, The individual was needed to continue mission-critical work in the EPZ, and a replacement individual was not available. The ODH representative completed RP-1097, “Individual Emergency Worker Radiological Dose Limit Increase Worksheet.” The ODH representative determined that a total exposure of 1.64 R could be authorized based on the exposure rate and time expected to complete the mission. Based on interview, it was learned that verbal authorization for the exposure increase would then have been communicated to the EW through the local Dosimetry Coordinator along with considerations for minimizing exposure such as travel routes and potential changes in radiological conditions. If an exposure limit above 25 rem had been requested, as part of the approval process, ODH would require a confirmation from the individual that they were informed of the risks and that they were volunteering for the task and additional exposure.

Resolution of Prior Level 2 Finding 03-16-2a1-L2-01 SEOC – Assessment Room Criterion 2.a.1

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

Successfully demonstrated – This associated criterion requires no narrative.

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

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

4.3.1.4 State of Ohio – SEOC Executive Room

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness' Partial Participation, Plume Exposure Pathway Exercise conducted on September 13, 2016, the State of Ohio successfully demonstrated the ability to alert, notify and mobilize the staff of the State Emergency Operations Center (EOC) Executive Room in a timely manner. The demonstration was conducted in the State EOC located at 2855 W. Dublin-Granville Road in Columbus, Ohio.

At 0752 hours, an Alert Emergency Classification Level (ECL) was declared by the First Energy Nuclear Operating Company (FENOC).

The PNPP Executive Group Liaison was prepositioned in the Executive Room prior to 0800. All other Executive Room staff arrived after initial notification to include: Executive Group Administrative Support (0800), Department of Public Safety Legal Advisor (0840 hours), EOC Manager (0857 hours), EMA Assistant Director (0857 hours), Assistant Director of Public Safety (0857 hours), EMA Executive Director (0908 hours), Ohio Department of Health Representative (0924 hours). The Ohio EMA Executive Director declared the EOC sufficiently staffed and operational at 0925 hours. The Ohio Public Safety Director arrived at 0955 hours.

A 24-hour roster was maintained in the State EOC Watch Center.

All initial and follow-up notification of changes in the ECL's were received in the Assessment Room over the dedicated PNPP 5-way phone line. Assessment Room staff would then provide the Executive room staff with a copy of the Initial Notification Form or the Follow-Up Notification Form for each classification change or update. At 0954, a Site Area Emergency (SAE) was declared. The Executive Director asked the three counties via the 5-way PNPP 5-way line at 1159 if there were any impediments in any of the three counties' transportation routes and if any resources were needed. There were no impediments or resources needed at that time. As transportation impediments did occur and were communicated via the PNPP 5-way line, there were no resources requested. The PNPP Executive Room Liaison advised the Executive Director of a General Emergency (GE) ECL at 1204 from verbal conference with the EOC Assessment Room. The GE had occurred at 1150 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated the capability to provide direction and control to that part of the overall response effort for which she was responsible. The demonstration was conducted in the SEOC located at 2855 West Dublin-Granville Road, Columbus, Ohio.

The ED was in charge and acted as the Governor's Authorized Representative and provided overall direction and control for the State's response. The ED assumed a leadership role upon arriving in the ER. She then conducted a briefing in the ER with her immediate senior support staff. This ER staff was on site at this time, since their normal duty stations are in the same building.

The Public Information Officer (PIO) was in the SEOC Joint Information Center (JIC) in an adjacent room and the assessment staff was in another adjacent room. Key ED functions included coordination and review of Assessment Room (AR) technical analyses and recommendations, approval of news releases, coordination with the three 10-mile Emergency Planning Zone (EPZ) Counties (Ashtabula, Geauga, and Lake), oversight of response operations, conduct and overview of update briefings to ER staff, notification of the adjacent State of Michigan and Canada, and coordination with the Governor's office. All of these activities were developed with input from support staff, were performed successfully, and timely decisions were made.

At 0845 hours, the AR verified that an Alert Emergency Classification Level (ECL) had been declared at 0752 hours. The assembled ER staff was briefed by the ER Liaison. Response activities were coordinated with the three Risk Counties over the Executive Decision Line (EDL) beginning at 0847 hours. At 0857 hours, the Assistant ED conducted a staff update briefing, and at 0908 hours he briefed the Ohio Department of Public Safety Assistant Director, who was a member of the ER staff. The ED conducted numerous briefings during the exercise. At 0853 hours, she briefed the Governor's office on the current status of the plant, and the response efforts underway in both the SEOC, and in the three Counties. At 0913 hours, she conducted a staff briefing, which resulted in placing a state aircraft on standby, in dispatching Field

Monitoring Teams, and in placing a State mobile communications unit on standby. At 0924 hours, she advised the Counties that the SEOC was declared fully operational. At 0928 hours, she briefed the ER staff that the State JIC was operational. At 0939 hours she briefed the staff that the PIO was onsite at the PNPP JIC, but had not yet established operations. Numerous coordination contacts were made between the ER and the Counties, via the “Always Open” EDL, to keep each other up to date on the status of operations. At 1023 hours, the ED advised the Counties of the actions underway to close State parks and recreational areas, and to clear waterways, and of the Governor’s Declaration of Emergency in the three Counties, which was signed at 1020 hours. At 1023 hours, the ED coordinated with the Counties to advise them of the Agricultural Advisory, and explained its parameters. Following input from the AR, the ED briefed the ER staff of the plant status at 1042 hours. At 1159 hours, the ED coordinated with the Counties to determine if there were any impediments to evacuation that would require State resources, and was advised that there were none. Beginning at 1204 hours and continuing until 1217 hours, there was continuous coordination on the EDL between the ED, ER, AR, and the three Counties to determine the State PAR and the Counties’ PAD.

The ED and the ER staff followed the checklists in the Ohio REP plan and procedures as the situation escalated through the ECLs. State and County plans and procedures were available and used by ER staff members.

There were no conflicts within the SEOC which required the ED's intervention. A message log/board was maintained and was available to all ER staff. It included State, and local actions, AR Activities, ECL status, event details, plant conditions and weather parameters.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated that at least two communications systems were available, at least one operated properly, and that communication

links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The demonstration was conducted in the SEOC located at 2855 W. Dublin-Granville Road, Columbus, Ohio.

In accordance with the extent-of-play agreement, the primary communications system was a dedicated line on the commercial telephone hardwired network. Backup communications systems included cellular telephones, a facsimile machine, electronic mail, and Web EOC. Other backup communications systems available in the SEOC were the National Warning System (NAWAS), handheld 800 MHz radios, Multi-Agency Radio Communications System (MARCS), and the Shared Resources High Frequency Radio Program (SHARES). The radio systems were independent from the commercial telephones.

Communications checks by ER personnel with the three Counties were completed upon the arrival of ER staff. All communications systems were functional at the commencement of the exercise. There were no communications system failures during the exercise.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated that equipment, maps, displays, and other supplies were sufficient to support emergency operations. The demonstration was conducted in the SEOC located at 2855 W. Dublin-Granville Road, Columbus, Ohio.

Equipment in the ER included a long table with six laptop computers, seven commercial hardwired multi-line telephones, and 11-cellular telephones, and a dedicated conference line which included the three Counties.

Displays included four flat-screen television monitors mounted on the walls, a computerized actions and events system, large whiteboards mounted on the ER Walls, which were used to display plant conditions, weather data, current and past emergency classification levels, State

actions, such as the Governor's Emergency Declaration, Protective Action Recommendations (PARs) with the Subareas affected by the PAR, and when and which parklands and waterways were ordered cleared. Other information included County Emergency Declarations, County Protective Action Decisions (PADs), specific precautionary and protective action (e.g., evacuate, school relocations, etc.), and which Subareas the PAD affected. Also included were alert and notification information, such as time for siren sounding, the Emergency Alert System (EAS) message, and the time the EAS message was broadcast. Maps on the wall included the 10-mile Emergency Planning Zone (EPZ) and the 50-mile EPZ. Computer and projector driven displays included plant conditions on a 15-foot wide and five feet tall white board, and a system providing Web EOC information.

Dosimetry equipment and potassium iodide were not provided in the SEOC, since it was not located within the 10-mile emergency planning zone.

The other administrative supplies were adequate to support emergency operations.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654/FEMA-REP-1, C-6; J-10.e, f; K.3.a, 4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated the use of a decision making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of potassium iodide (KI), was in place for Emergency Workers (EW), including provisions to authorize exposure in excess of administrative limits or protective action guides. The demonstration was conducted in the SEOC located at 2855 W. Dublin-Granville Road, Columbus, Ohio.

Ohio is a Home Rule State, therefore, Protective Action Decisions (PADs) were made by the three Risk Counties. In accordance with plans and procedures, while the Counties had the PAD authority, the State provided support and the decision for recommending the ingestion of KI. As

stated in the extent-of-play agreement, the SEOC dose Assessment Group (AG) developed recommendations based on their technical evaluation of available data. The recommendations were briefed to the Executive Group (EG) and subsequently to the three Risk Counties.

The authorization of exposure levels to emergency workers in excess of pre-authorized limits did not arise during this exercise. The Direct-Reading Dosimeter (DRD) correction values were provided to the ED by the AG. The ED discussed this within the EG, concurred with the information and conveyed it to the three Counties via the Executive Decision Line (EDL). The correction values were to change 5 R to 2 R, to change 2 R to 1 R, and to have 1 R remain as 1 R. These actions provided an additional level of safety, in order to help preclude any need to require EWs to incur exposure levels in excess of pre-authorized limits.

At 1150 hours, the utility declared a General Emergency (GE) Emergency Classification Level.

The AG authorized the recommendation for KI ingestion by EWs, institutionalized individuals, and the public. This information was conveyed to the three Counties at 1217 hours.

The decision makers did not consider authorization of exposure levels in excess of pre-authorized levels. There was no rationale during this exercise that would have considered such an analysis. For this reason, there were no EWs that received radiation doses above pre-authorized levels.

The KI decision making process involved close coordination among assessment and decision making staff. During this exercise, while there was close coordination in the SEOC and with the counties over the EDL, the PAD made by the Counties differed from the PAR made by the State.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 2.b.1: Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654/FEMA-REP-1, 1.10 and Supplement 3)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated that appropriate Protective Action Recommendations (PAR) were based on available information on plant

conditions, field monitoring data, and licensee and Ohio Department of Health dose projections, as well as knowledge of onsite and offsite environmental conditions. The demonstration was conducted in the SEOC located at 2855 West Dublin-Granville Road, Columbus, Ohio.

The SEOC Assessment Group (AG) developed PARs and provided them to the ED. The ED then provided the PARs to the three Counties' decision makers on the Executive Decision Line (EDL), followed by an electronic mail or facsimile copy.

The SEOC made one PAR during the exercise, following the receipt from the Utility of a declaration, at 1150, of a General Emergency (GE) Emergency Classification Level. The PAR was presented by the Assessment Room (AR) staff to the ED at 1215 hours. The ED concurred with the AR recommendation at 1217 hours and immediately forwarded the PAR to the Counties for their consideration and ultimate decision. During the exercise, there was frequent consultation between ER and AR staff and any questions or possible concerns were addressed. As a result, there was good coordination within the SEOC in developing and approving the PAR and providing it to the Counties.

The PAR provided by the State to the Counties at 1217 was to evacuate in Subareas 1, 2, and 3, and the Lake. It also recommended potassium iodide (KI) for the public, institutionalized individuals, and emergency workers in the evacuated areas. The Counties made the PAD decision to follow the utilities PAR to evacuate Subareas 1,2,3,4,5,6, and the Lake. They also decided to provide KI in all evacuated areas.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated a decision making process involving consideration of appropriate factors and necessary coordination to make Protective Actions Decisions (PADs) for the general public, including the recommendation for the use of potassium iodide (KI). The demonstration was conducted in the SEOC located at 2855

West Dublin-Granville Road, Columbus, Ohio.

The State of Ohio is a Home Rule State in which the State makes Protective Action Recommendations (PARs) for the general public, and the PADs are the responsibility of the three Risk Counties (Ashtabula, Geauga, and Lake). The State was responsible for the following precautionary actions: the clearing of State park and wildlife areas, and the clearing of Lake Erie, in the conjunction with the U.S. Coast Guard (USCG). The State was also responsible for implementing precautionary railway and airspace restrictions, in conjunction with railroad companies and the Federal Aviation Administration (FAA), and for issuing Agricultural Advisories. The State was also responsible for issuing protective actions, concerning KI, for emergency workers if needed. The KI PAR was provided to the three Counties, via the executive conference line.

During the Site Area Emergency (SAE) Emergency Classification Level (ECL), the ED discussed several precautionary actions with members of the Executive Group. Several precautionary action decisions were made during the discussions.

The U.S. Coast Guard was contacted to implement a Notice to Mariners that restricted water operations on Lake Erie within 10-miles of PNPP at 1020 hours.

The State closed State parks, recreation areas, wildlife areas, and lakes at 1022 hours.

The FAA was contacted to issue a Temporary Flight Restriction in the airspace around PNPP and to issue a Notice to Airmen 1025 hours.

Railroads were contacted to reroute rail operations within 25-miles of PNPP at 1025 hours.

A livestock and poultry Agricultural Advisory was issued, to put such activities on stored feed and water at 1033 hours.

These actions were communicated to the three Counties via the Executive Discussion Line (EDL) at 1014 hours.

In accordance with the extent-of-play agreement, appropriate PARs were based on technical information from the SEOC Dose Assessment Group (DAG). The recommendation for the ingestion of KI for the general public, institutionalized individuals, and emergency workers (EWs) was the responsibility of the Ohio Department of Health. The General Emergency ECL was declared at 1150 hours. At 1213 hours, the DAG briefed the ED that the PAR was to evacuate Subareas 1, 2, 3, and Lake Erie. The recommendation was based on Release Data. Following a short discussion in the ER, the ED advised the three Counties of the PAR, including

a recommendation for the ingestion of KI by the public, institutionalized individuals, and EWs within the evacuated areas, via the EDL, at 1217 hours. The Counties made the PAD decision to follow the utilities PAR to evacuate Subareas 1,2,3,4,5,6, and Lake Erie. They also decided to provide KI in all evacuated areas.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated that Protective Action Decisions (PADs) were made, as appropriate, for groups of persons with disabilities and access/functional needs (PDAFN). The demonstration was conducted in the SEOC located at 2855 West Dublin-Granville Road in Columbus, Ohio.

The State's role in the decision-making process was to make Protective Action Recommendations (PARs) for PDAFN. Under Home Rule authority, Ashtabula, Geauga, and Lake Counties made the PADs after consultation with the ED.

As PARs for the general population were being formulated, the Executive Group discussed the needs of PDAFN, including individuals in nursing homes, assisted living centers, and jails. The PAR was provided to the Counties at 1217 hours over the Executive Decision Line. The PAR was to evacuate Subareas 1, 2, 3, and Lake Erie, and to administer potassium iodide to those evacuated.

The Counties' PAD was to evacuate Subareas 1, 2, 3, 4, 5, 6, and Lake Erie and to administer KI to those evacuated. The County' PAD was based on the PAR from the utility, was more conservative based on local decision makers' choice, and was fully authorized under Ohio law.

The Counties implemented this PAD for PDAFN in accordance with County plans and procedures.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

Successfully demonstrated – This criterion requires no narrative.

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

Successfully demonstrated – This associated criterion requires no narrative.

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

Successfully demonstrated – This associated criterion requires no narrative.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ohio Emergency Management Agency Executive Director (ED), located in the State Emergency Operations Center (SEOC) Executive Room (ER), successfully demonstrated the ability to provide accurate emergency information and instructions to the public and the news media in a timely manner. The demonstration was conducted in the SEOC located at 2855 West Dublin-Granville Road in Columbus, Ohio.

The ED and the Assistant ED were engaged in various activities to provide emergency information to the media and to the public. A media release and three news releases were reviewed and approved during the exercise. Likewise, the Governor's State of Disaster Proclamation was reviewed and approved by the ED. Additionally, they communicated with the

SEOC Public Information Officer (PIO) and Assessment Room continuously throughout the exercise.

The following information was developed in the SEOC and was reviewed and approved by the ED:

Media Release, 0928 hours. The State provided information to the Media in order to assist them in efficiently and effectively getting emergency information to the public. This release notified the Media that the State JIC had been activated. It further advised that an emergency had occurred at the PNPP and that an Alert ECL had been declared. The release provided a telephone number for the Media-only to call to obtain any additional information.

News Release No. 1, 1001 hours. This release advised the public that the power plant had declared an Alert at PNPP at 0752 hours. It stated that the plant was stable, that the State and local officials were in route to the PNPP JIC at the Auburn Career Center in Painesville, Ohio, that should plant conditions warrant, the area's siren system would sound, and the Emergency Alert System would provide safety information and safety instructions. The public was advised that a public inquiry information line was being set up and the number was provided.

News Release No. 2, 1054 hours. This release pertained to the Governor's Declaration of a State of Emergency for Lake, Ashtabula, and Geauga Counties, and indicated that this action was taken in response to a Site Area Emergency being declared at the plant at 1020 hours. It stated that precautionary actions had been taken to clear Lake Erie, that schools had been relocated that an Agriculture Advisory had been issued, and that air and rail traffic had been restricted around the plant.

News Release No. 3, 1229 hours. The release advised the public that a General emergency had been declared. It stated that county officials had recommended an evacuation from Subareas 1, 2, 3, 4, 5, 6, and Lake Erie. It also provided specific descriptions for the boundaries of the Subareas.

Other public emergency information activities in the ER included briefings from the PIO covering actions being taken in the SEOC JIC work room, in the SEOC Public Inquiry workroom, and in the PNPP JIC in Painesville, Ohio.

Prior Level 2 Finding 03-16-5b1-L2-02 was resolved by demonstration during this exercise. During the 2016 Beaver Valley Power Station Full Participation REP Exercise, the SEOC Executive Director authorized the release inaccurate emergency information and instructions to

the public and the news media, which could have been confusing to the public and first responders. Executive Room guidance was revised and provided to FEMA for review. Training was provided to for JIC and Executive Group staff. There were two persons were designated who reviewed each release drafted in the JIC Workroom, and two persons were designated in the Executive Group Room who reviewed releases prior to their approval by the Executive Director. During the exercise, news releases accurately reflected the current information and actions being taken by the State of Ohio in response to the simulated incident at the PNPP. These actions resolved prior Level 2 Finding 03-16-5b1-L2-02.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.a.1, 1.c.1, 1.d1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 5.a.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: 5.b.1
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.1.5 State of Ohio – SEOC JIC

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

Successfully demonstrated – This associated criterion requires no narrative.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio successfully demonstrated sufficient communications systems to provide adequate response support for an incident at PNPP. The demonstration was conducted in the Ohio Emergency Operations Center, Joint Information Center (SEOC/JIC) located at 2855

Dublin-Granville Rd in Columbus, Ohio.

At 0810 hours, the SEOC JIC partially activated upon notification of Alert status at PNPP with three personnel. Primary communications linkages were established via landline telephone with the Public Information Staff at the Lake County Emergency Operations Center, and subsequently with the PNPP Joint Information Center (JIC) in Concord, Ohio. The test of the landline between the SEOC JIC and the Lake County Public Information Staff was observed at 0820 hours, concluding at 0823 hours. No failures were observed.

Press releases were compiled at this location, submitted to the Ohio State Emergency Management Director (EMD) for approval and upon approval forwarded to the PNPP JIC for public release. Press releases were simultaneously sent via email (simulated) to a comprehensive list of Ohio media outlets. Following the arrival of two subsequent staff from the Ohio Department of Health after the declaration of the Site Area Emergency, public inquiry calls were also received at this location via landline telephone.

The SEOC JIC was equipped with eight (8) computer stations, each equipped with networked landline telephones. The room had dependable Wi-Fi service and each computer was capable of Internet connectivity; to include email and WebEOC access. Each staff member reported to the JIC with a personal cellular phone. The JIC Manager and PIO each had State issued cellular telephones. The SEOC JIC was equipped with a facsimile machine with scan and copying capabilities. The landline telephone served as primary communications for the SEOC JIC with email and cellular phones serving as secondary systems.

Cellular telephones and landlines were used throughout the exercise without failure. Due to reports from the Lake County EOC of transmission and/or receiving lags with the facsimile machine, the SEOC JIC Administrative lead began posting all releases to WebEOC in real-time, which effectively alleviated the issue. It was noted that this actually served to improve communications capabilities between the SEOC JIC and its customers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial

Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio successfully demonstrated the possession of adequate equipment, maps and displays to provide a timely and effective response to an incident at PNPP. The demonstration was conducted in the Ohio Emergency Operations Center, Joint Information Center (SEOC/JIC) located at 2855 Dublin-Granville Rd in Columbus, Ohio.

A survey of the supplies and equipment located at the SEOC JIC during exercise play revealed that the facility was well equipped to effectively manage the development of a host of informational products related to incidents originating at the PNPP. Press releases were compiled at this location, submitted to the Ohio State Emergency Management Director (EMD) for approval and upon approval forwarded to the PNPP JIC in Concord for public release. Press releases were simultaneously sent via email (simulated) to a comprehensive list of Ohio media outlets.

Four large white dry-erase boards were observed on the walls for use during message compilation or to post messages as needed. They were used frequently throughout exercise play to track trends, current plant conditions, and phone numbers.

On the south wall of the room was a large screen which could be used to monitor television news outlets or configured to show real-time satellite imagery of the PNPP. During the demonstration, the PNPP was depicted on the main screen. Around the room, there were two flat screen monitors on each wall that could be used to monitor activities within other sections of the EOC or media information from additional outlets. There was a supply cabinet full of standard office supplies available to the staff and each staff member was supplied with a copy of the JIC operating procedures updated with the current revisions.

Public inquiry calls were also received at this location via landline telephone. An ample supply of public information hotline forms which documented both the nature of the inquiry and included boxes to identify and track trends were available for use by the operators.

Also observed in the facility were eight computer workstations, each equipped with networked landline telephones. The room had Wi-Fi service and each computer was capable of

Internet connectivity; to include email and WebEOC access. Each staff member reported to the JIC with a personal cellular phone. The JIC Manager and PIO each had State issued cellular telephones. The facility was equipped with a facsimile machine with scan and copying capabilities.

Lastly, the SEOC/JIC was supplied with large-format map sets for each of the three nuclear facilities in the state. Observed for the PNPP site were maps that included: 50 mile Ingestion Pathway Zone (IPZ), 10 mile Emergency Planning Zone (EPZ), 2016 Ohio Department of Transportation road map, 10 mile EPZ map with evacuation routes, 10 mile EPZ map of Traffic Control Points, map indicating Congregate Care Center locations and a map depicting subareas of EPZ and County lines.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

Successfully demonstrated – This associated criterion requires no narrative.

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

- a. MET: 1.a.1, 1.d.1, 1.e.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

4.3.1.6 State of Ohio – OEMA and ODH LNOs at the FENOC EOF

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

Successfully demonstrated – This associated criterion requires no narrative.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Liaisons demonstrated the capability to provide direction and control to that

part of the overall response effort for which they were responsible. The demonstration was conducted at the First Energy Nuclear Operating Company Emergency Operations Facility (EOF) located at 7755 Auburn Road, Painesville, Ohio.

The First Energy Nuclear Operating Company Emergency Coordinator was in charge of the EOF. He performed briefings at frequent intervals (approximately every 30 minutes) and when plant conditions changed. The State EOF Liaisons from the Ohio Department of Health (ODH) and the Ohio Emergency Management Agency communicated plant conditions and dose assessment updates from the EOF to the Lake County Emergency Operations Center (EOC) and the State EOC. The Liaisons kept their counterparts up-to-date with current plant status information via commercial telephone and facsimile. In addition to the briefings, licensee dose projection runs were promptly distributed to the Liaisons. The ODH Liaison transmitted seven licensee dose projections via facsimile to counterparts at the Lake County EOC and the State EOC. The Liaisons brought applicable plans and procedures with them to the EOF.

Protective Action Decisions (PADs) were made by the Counties. Following the Emergency Classification Level of General Emergency at 1150 hours, the licensee made a Protective Action Recommendation (PAR) to evacuate Subareas 1, 2, 3, 4, 5, 6, and the Lake, based on plant conditions. The State of Ohio made the PAR to evacuate Subareas 1, 2, 3, and the Lake, based on dose assessment values. The Counties made the PAD to evacuate Subareas 1, 2, 3, 4, 5, 6, and the Lake. The Liaisons received the State PAR via facsimile at 1236 hours and the County PAD at 1301 hours. The Liaisons promptly communicated information to their counterparts and asked questions as needed. There were no resource requests or unresolved conflicts.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Liaisons demonstrated the capability to manage communications in support of emergency operations. The demonstration was conducted at the First Energy Nuclear Operating Company Emergency Operations Facility (EOF) located at 7755 Auburn Road, Painesville,

Ohio.

State EOF Liaisons from the Ohio Department of Health (ODH) and the Ohio Emergency Management Agency participated at the exercise at the EOF. The Liaisons communicated plant condition and dose assessment updates from the EOF to the Lake County Emergency Operations Center (EOC) and the State EOC via facsimile and Avaya landline telephones. The primary method of communications was the three-way informal telephone landline with headset. Backup methods included cellular telephones, Motorola Multi-Agency Radio Communications Systems (MARCS) base radio, MARCs portable radio, and a Canon facsimile machine. The ODH Liaison functionally checked the MARCS radio. The ODH Liaison verified that facsimiles sent from the EOF were received. No communication failures were observed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Liaisons demonstrated the capability to provide sufficient equipment and supplies to support emergency operations. The demonstration was conducted at the First Energy Nuclear Operating Company Emergency Operations Facility (EOF) located at 7755 Auburn Road, Painesville, Ohio.

The State Liaison from the Ohio Department of Health (ODH) was issued dosimetry and KI prior to his arrival at the EOF. All dosimetry was to be returned to the Dosimetry Coordinator at the ODH office. The ODH representative wore a CD V-730 (0-20 R) Direct-Reading Dosimeter (DRD) with annual leak test due on 04/01/17, a CD V-742 (0-200 R) DRD with annual leak test due on 04/01/2017, and a Mirion Technologies Thermoluminescent Dosimeter issued on 04/01/2016. The DRDs were zeroed prior to issue and a dosimeter charger was available, if needed. While the DRDs covered a large range of exposure, it would be difficult to read any exposures received on even the lowest range DRD (0-20 R). However, the ODH Liaison brought a Canberra UltraRadiac MRAD 113 electronic dosimeter with annual calibration due on 02/16/2017, which could be used as needed for the μ R per hour exposure range.

The ODH Liaison brought 10 ThyroSafe™ potassium iodide (KI) tablets (65 milligrams)

available in blister packs. The expiration date for the KI was 12/31/2019. The ODH Liaison carried a ThyroSafe™ package insert sheet, which contained directions for use, dosages of two tablets for adults, side effects, and purpose of KI. The EOF was located outside the 10-mile Emergency Planning Zone (EPZ); therefore, dosimetry and KI would only be required if the Liaisons drove through the plume while responding. The Ohio Emergency Management Agency (OEMA) Liaison did not bring dosimetry or KI and explained that his entire route from home was outside the EPZ and he would not be required to traverse inside the EPZ.

Displays included a PNPP 10-mile EPZ map and projections of “Station Priority Board”, “Radiological Data Summary”, and “Emergency Response Overview”. Each workstation was equipped with notepads, pens, and other office supplies. Both Liaisons brought portable computers from their respective offices.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

4.3.1.7 State of Ohio – OEMA and ODH LNOs at Lake County EOC

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Liaison Group (O-LG) to Lake County successfully demonstrated the use of effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

At 0752 hours, PNPP declared an Alert Emergency Classification Level (ECL). At 0800 hours, the Ohio Emergency Management Agency (OEMA) 24-hour Communications Center in

Columbus, Ohio received notification of the Alert ECL at PNPP via the five-way dedicated telephone. Via telephone, the OEMA notified the directors or assigned EOC representatives of OEMA, Ohio Department of Health (ODH), Ohio Environmental Protection Agency (OEPA), and other agencies. The individual agencies were responsible to notify their staff members.

At 0804 hours, the five-way dedicated phone line notification was received by Lake County EOC. Lake County made the decision to fully staff the EOC. At 0900 hours, the O-LG personnel who were pre-positioned near the Lake County EOC in accordance with the extent-of-play agreement, were present in the EOC. Normal response times to the Lake County EOC for the OEMA, ODH, Regional OEPA, and the OEMA Resident Radiological Analyst were 4.5, 4.5, 2.0 and 1 hour, respectively.

An OEMA representative, who was located in the main room of the Lake County EOC, was responsible to activate control of the Lake and harbor traffic and update the Lake EOC on key actions taken by the State EOC in Columbus. There were also representatives of the Ohio State Highway Patrol and the Ohio National Guard who were liaisons for their agencies and they and were located in the main room of the Lake EOC. The O-LG in the Assessment Room and in the main room of the Lake County EOC were notified of the ECLs of Site Area Emergency and General Emergency at 1007 hours and 1202 hours, respectively. A 24-hour staffing roster was available and reviewed.

The exercise plans and procedures in use were the Ohio REP Emergency Operations Plan (2016); REP Incident Response Plan (04/2015); and RAD-REP-0354 ODH-BEHRP County EOC Liaison 5/2016.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Liaison Group (O-LG) to Lake County successfully demonstrated that key personnel with leadership roles for the ORO provided direction and control to that part of the overall response effort for which they were responsible. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The Ohio Emergency Management Agency Resident Radiological Analyst was the Coordinator of the Assessment Room in the Lake County EOC. He also served as the Coordinator of the other Ohio State Liaisons in the main room of the Lake County EOC, as the Lake County General Health District (LCGHD) Radiological Officer, and as the County Dosimetry Coordinator. Most of the O-LG were located in the Assessment Room at the Lake County EOC. Also located in the Assessment Room were the Lake County Communicator, who answered the five-way dedicated telephone line, and the LCGHD Field Monitoring Team Coordinator. The LCGHD field monitoring teams were staged in the vehicle garage next to the Lake County EOC.

The Assessment Room Coordinator conducted periodic briefings of Assessment Room personnel and provided them instructions when necessary. The Assessment Room Coordinator also provided briefings to the Executive Room and the main room of the Lake County EOC when there was a change to the Emergency Classification Level or plant conditions. His briefings were effective and he demonstrated significant knowledge of the developing events.

The Assessment Room Coordinator consulted frequently with the Ohio Emergency Management Agency Radiological Branch Liaison and the Ohio Environmental Protection Agency Liaison who were performing dose assessment. These individuals were quite knowledgeable in the use of the PNPP EDATA (plant equipment data system) and Meteorological Information and Dose Assessment System (MIDAS) dose assessment software. They provided a significant resource to the Assessment Room Coordinator and also to their counterparts in the State EOC in Columbus, Ohio. The exercise plans and procedures in use were the Ohio REP Emergency Operations Plan (2016); REP Incident Response Plan (04/2015); and RAD-REP-0354 ODH-BEHRP County EOC Liaison 5/2016.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Liaison Group (O-LG) to Lake County successfully demonstrated that at least two communication systems were available, at least one operated properly, and communication

links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

In accordance with procedure, the primary method of communications for the O-LG with the State EOC Assessment Room personnel in Columbus, Ohio was the commercial dedicated landline telephone. Backup communications were through cellular telephones or State Multi-Agency Radio Communications System (MARCS).

The Ohio Liaison Group Field Monitoring Team (FMT) Coordinator in the Lake County EOC was not present as the Ohio FMTs were not participating. The Ohio Department of Health Liaison communicated with his counterpart in the Perry Emergency Operations Facility using the MARCS radio. He communicated with his counterpart in the State EOC in Columbus using the landline telephone. Backup communications were cellular telephones or the MARCS radio. He also used his laptop computer to send and receive messages through electronic mail.

The O-LG personnel involved in dose assessment used two facsimile machines: one for incoming and one for outgoing documents. They used the cellular telephone contact their counterparts in the State EOC at Columbus. During the exercise, all of the above methods of communication were tested or utilized. None of the communication systems failed.

Communications transmitted and received were logged. The plans and procedures in use were the Ohio REP Emergency Operations Plan (2016); REP Incident Response Plan (04/2015); and the RAD-REP-0354 ODH-BEHRP County EOC Liaison 5/2016.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio Liaison Group (O-LG) to Lake County successfully demonstrated that equipment, maps, dosimetry, potassium iodide and other supplies were sufficient to support emergency operations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

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Since the Lake County EOC was well outside the 10-mile Emergency Planning Zone (EPZ) for PNPP, (dosimetry and potassium iodide were not needed for personnel in this facility. The Ohio Emergency Management Agency (OEMA), Resident Radiological Analyst maintained a stockpile of 3500 potassium iodide packets for use by emergency workers who were deployed into the 10-mile EPZ. Each packet consisted of 10 tablets of 65 milligrams each. The expiration date was 12/31/2019. This stockpile was in addition to the stockpile maintained by the Lake County General Health District for the general public.

Two Status Boards for the meteorological data and the results of the field monitoring team surveys were in use by the Ohio Emergency Management Agency (OEMA) Radiological Branch and the Ohio Environmental Protection Agency (OEPA) Liaisons. A television display showed the Lake County EOC Log of key events. Computers with the PNPP EDATA system (plant equipment data) and the Meteorological Information and Dose Assessment System (MIDAS) dose assessment software were used by the OEMA Radiological Branch and the OEPA Liaisons. A laptop computer with electronic mail, a landline telephone, and a State Multi-Agency Radio Communications System (MARCS) radio were used by the Ohio Department of Health Liaison. A Brother MFC3220 facsimile machine was used for outgoing documents and a HP Laser Jet Pro printer/facsimile machine was used for incoming documents. Copy machines were available in the main room of the Lake County EOC. A map showing the 10-mile EPZ with the pre-designated field monitoring team locations was also used. The plans and procedures in use were the Ohio REP Emergency Operations Plan (2016); REP Incident Response Plan (04/2015); and the RAD-REP-0354 ODH-BEHRP County EOC Liaison 5/2016.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

4.3.1.8 State of Ohio – State PIO at FENOC JIC

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio demonstrated the capability to ability to alert, notify, and mobilize emergency personnel and activate the Joint Information Center (JIC). The demonstration was conducted at the Auburn Career Center, located at 8140 Auburn Road, Painesville, Ohio.

At approximately 0940 hours, the State of Ohio Public Information Officer (PIO) arrived and signed in at the JIC Security desk located in the lobby of the Auburn Career Center facility. He proceeded immediately to the State/County Work Area, a.k.a., the Networking Room. Upon arrival, he signed in on the State/County Personnel Status Board in the Work Area, and then called his counterpart at the State Emergency Operations Center (SEOC) to confirm his presence at the JIC. Shortly thereafter, the State of Ohio PIO received an initial briefing on plant conditions from the FENOC Government Liaison, who was assigned to the Work Area.

The State PIO had been pre-positioned locally, and reported receipt of the notification to activate the JIC via his cell phone at 0926 hours.

Prior to his arrival, the Work Area had been cleared of desktop computers and classroom-related items by First Energy Nuclear Operating Company (FENOC) administrative personnel. At 0958 hours, FENOC administrative personnel began unloading plastic bins of supplies, displays, and communications equipment. The setup was complete, including communications testing, by 1015 hours. Setup proceeded under the direction of the FENOC Information Supervisor, who also arrived in the JIC at approximately 0940 hours.

At the time of the arrival of the State PIO, the PNPP was at an Alert Emergency Classification Level (ECL). Subsequent escalations to a Site Area Emergency (SAE) and General Emergency (GE) were communicated to the State PIO by his counterpart in the SEOC. The three County PIOs also received notification of an ECL escalation via their counterparts in their respective Emergency Operations Centers (EOCs). As soon as critical information, like this, was received, the State or County PIO, whoever received the information first, reported the information aloud to the rest of the Work Area. The SAE was first known to have been declared at 1034 hours, and the GE at 1203 hours.

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There was some confusion with regard to the latter. The Lake County PIO initially received the report that PNPP had escalated to a GE, but thought he heard that the GE had been declared at 1115 hours. There was some discussion and concern expressed within the Work Area as to why it may have taken nearly an hour to get the information to the JIC. The State PIO and the Lake County PIO spoke with the FENOC JIC Manager and were told that the GE had been declared at 1150 hours. They then confirmed this information with their respective EOCs.

At 1032 hours, the State of Ohio (and the Ashtabula PIO) attended the initial facility-wide briefing of PNPP conditions, and status of JIC activation, conducted by the FENOC JIC Manager in the FENOC Work Area, a.k.a., the Fish Bowl. The FENOC JIC Manager facilitated introductions and reported on plant conditions. During this briefing, at 1034 hours, he reported that the ECL at PNPP had been escalated to an SAE. He also gave a safety talk with regard to the JIC and its operations. During the briefing, the State PIO stated that a State of Emergency had been declared for Lake, Ashtabula and Geauga Counties, and the Ashtabula County PIO stated that an Emergency Proclamation declaring a State of Emergency had been issued individually in his and the other two counties at 1015 hours. He added that schoolchildren were being relocated to “receiving schools”. The JIC Manager announced that the JIC was on track to be operational at 1100 hours, and that the first media briefing would be scheduled once the JIC was operational. He added that two FENOC news releases were under review: one on the opening of the JIC, the other for the SAE.

Subsequently, the Lake County PIO arrived at 1038 hours, and the Geauga County PIO arrived at 1104 hours. Both first assembled at their respective EOCs, and were deployed from that location to the JIC. For example, the Lake County PIO was notified to deploy at 1013 hours.

The JIC was declared operational at 1102 hours. This status was announced in the FENOC Work Area, by the JIC Manager. The FENOC Government Liaison informed State and County staff in their Work Area. The FENOC Government Liaison also announced that the first pre-brief was scheduled at 1110 hours in the Pre-Brief Room, and the first media briefing was tentatively scheduled for 1130 hours.

Minimum staffing needed to declare the JIC operational were present and in place, and included the following FENOC staff: the JIC Manager, Technical Spokesperson, Technical Coordinator, Statement Writer, Media Relations Supervisor, Technical Advisor, Manager of Corporate Communications (located at the Corporate Office), and the Information Liaison (located at either the Technical Support Center or the Emergency Operations Facility).

Notifications and activation of the JIC were conducted in accordance with the utility procedure, JIC-0003, “Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation,” Revision 5, dated September 19, 2014, and the Suggested Operating Guidelines for Public Information Officers, individually issued for Lake, Ashtabula, and Geauga Counties, as revised in May 2014.

Twenty-four hour staffing rosters and plans were initiated upon the advice of the JIC Manager at approximately 1230 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio, working with personnel from FirstEnergy Nuclear Operations Company (FENOC), demonstrated the capability of those key personnel with leadership roles to provide direction and control in the Joint Information Center (JIC). The demonstration was conducted at the Auburn Career Center facility located at 8140 Auburn Road, Painesville, Ohio.

The JIC Manager (a FENOC employee) was the first JIC staff member to arrive at the JIC location at approximately 0940 hours. As part of his managerial role, he oversaw the setup of the JIC, and the operational testing of communications equipment, including facsimile machines. From the time of his initial notification, he maintained a log of all of his communications.

At 1032 hours, the JIC Manager began the first facility-wide briefing in the FENOC Work Area, a.k.a., the Fish Bowl. The FENOC JIC Manager facilitated introductions and reported on plant conditions. At 1034 hours, he announced to the room that PNPP had escalated to a Site Area Emergency (SAE) Emergency Classification Level (ECL). He focused on personal safety with regard to the JIC and its operations, and establishing open lines of communication, both within the facility and among “external” points of contact.

During the briefing, the JIC Manager recognized the State PIO, and he stated that at 1020 hours, a State of Emergency had been declared by the Governor for Lake, Ashtabula and Geauga Counties. The Ashtabula County PIO followed and said that an Emergency Proclamation

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declaring a State of Emergency had been issued individually in his and the other two counties at 1015 hours. He added that schoolchildren were being relocated to “receiving schools”. The JIC Manager announced that the JIC was on track to be operational at 1100 hours, and that the first media briefing would be scheduled once the JIC was operational. He added that two FENOC news releases were under review: one on the opening of the JIC, the other for the SAE ECL.

At 1102 hours, the JIC was declared operational. Minimum staffing needed to declare the JIC operational was present and in place at this time, and included the following FENOC staff: the JIC Manager, Technical Spokesperson, Technical Coordinator, Statement Writer, Media Relations Supervisor, Technical Advisor, Manager of Corporate Communications (located at the Corporate Office), and the Information Liaison (located at either the Technical Support Center or the Emergency Operations Facility).

This status was announced by the JIC Manager to those in the FENOC Work Area, and communicated in the State/County Work Area by the FENOC Government Liaison. From this point on, the JIC Manager made periodic announcements to the room, the FENOC Work Area, on plant conditions and related information, as conditions evolved. And, if State or County representatives were not present, the FENOC Government Liaison verbally transmitted the information to those in the State/County Work Area.

At 1110 hours, prior to the first media briefing, the FENOC JIC Manager facilitated a pre-briefing in the JIC Pre-Brief Room among FENOC personnel, and PIOs from the State of Ohio and the three counties. At this and subsequent pre-briefings, the JIC Manager, with the assistance of the Information Supervisor for PNPP, consistently framed the purpose(s) of the briefing, identified who would participate and the order of that participation, led the discussion on rumors and trends, and chose the graphics to be projected during the following media briefing.

The first media briefing commenced at 1130 hours in the JIC Auditorium. The JIC Manager did not participate in the media briefings; instead, he remained primarily in the FENOC Work Area. The JIC Information Supervisor for PNPP was assigned as moderator. As part of her duties, she introduced the presenters, and communicated the rules guiding the media briefing to the assembled mock media. Other participants at this and subsequent media briefings were the PNPP Technical Spokesperson, the State of Ohio PIO, and Lake, Geauga and Ashtabula County PIOs.

Immediately upon conclusion of the media briefing at 1152 hours and after all other media

briefings, the JIC Manager led a post-brief discussion in the Pre-Brief Room. This discussion addressed lessons learned from the previous media briefing, and ensured that a response was planned for information requiring follow-up.

The role of the State of Ohio PIO was to disseminate news releases prepared by the State Emergency Operations Center (SEOC), notify the JIC of any protective action recommendations, present information on behalf of the Governor and State agencies at media briefings, and support the efforts of the Lake, Ashtabula, and Geauga County PIOs. The State of Ohio PIO regularly coordinated with his counterpart at the SEOC, and with the County PIOs in the State/County Work Area. He was supported in the JIC by a representative from the State of Ohio Department of Health.

Activation and operation of the JIC were conducted in accordance with the FENOC procedure, JIC-0003, "Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation," Revision 5, dated September 19, 2014, and the Standard Operating Guidelines for Public Information Officers, individually issued for Lake, Ashtabula, and Geauga Counties, as revised in May 2014.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio, working with personnel from FirstEnergy Nuclear Operations Company (FENOC), demonstrated the capability to establish appropriate communications links and manage communications capabilities in the Joint Information Center (JIC). The demonstration was conducted at the Auburn Career Center facility, located at 8140 Auburn Road, Painesville, Ohio.

The State of Ohio and Lake, Ashtabula and Geauga County Public Information Officers (PIOs) and their staffs were collocated in the JIC in the State/County Work Area, a.k.a., the Networking Room. In this room, there were eight (8) landline telephone jacks: one general line with a unique phone number for each of the three counties, one dedicated line between a given County

PIO and their respective Emergency Operations Center (EOC), and two general lines for use by the State PIO and the representative from the State Department of Health. Only Lake County had an instrument connected to each of their jacks. The State and the other two counties used the communications capabilities of their individually issued cell phones and laptops to communicate with their respective EOCs. Lake County also utilized individually issued cell phones and laptops. The WiFi access code for the facility was printed prominently on a dry erase board.

Landline telephones, cell phones and laptops were supplemented by the use of handheld radios. Though desktop computers were available, no desktop computers were set up at the individual work stations. In addition, there were three facsimile machines.

The Federal Work Area, which accommodated, among others, the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA), was equipped with four telephone jacks. Federal agencies had access to facsimile machines, located in the State/County Work Area. It was assumed that most, if not all, would bring their own laptops and cell phones.

The Media Workroom was equipped with six landline telephone jacks. It was also assumed that most, if not all, media would bring their own communications equipment.

Instruments and cords for each jack were stored, and readily available for use, if needed.

FENOC administrative staff was responsible for the setup and testing of all communications equipment stored in the JIC. Individual personnel were responsible for the operability of their individually issued devices. All communications equipment and telephone lines were demonstrated operable prior to the exercise.

Communications traffic was managed without delay. One individual, employed by FENOC, was assigned as administrative support to the State/County Work Area to manage the receipt and transmittal of documents via facsimile machine, and to make and distribute copies.

The layout of the communications equipment described is provided in Attachments 12, 15, 16, and 18 of the FENOC procedure, JIC-0003, "Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation," Revision 5, dated September 19, 2014.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio, working with personnel from FirstEnergy Nuclear Operations Company (FENOC), demonstrated the capability to maintain the equipment and supplies necessary to support the operations of the Joint Information Center (JIC). The demonstration was conducted at the Auburn Career Center, located at 8140 Auburn Road, Painesville, Ohio.

The JIC was comprised of an access control area inside the front entry doors of the Auburn Career Center, an Auditorium with a balcony which served as the Media Briefing Room, a Media Workroom located behind the auditorium, and rooms designated as the State/County Work Area, a.k.a., the Networking Room, the FENOC Work Area, a.k.a., the Fish Bowl, the Federal Work Area, the Pre-Brief Room, the Media/Rumor Control Phone Room, the Media Monitoring Room, and storage areas.

All workrooms and areas were equipped with sufficient tables, chairs, clocks, communications equipment, and general office supplies. The State/County Work Area, in particular, had tables, chairs, and supplies to accommodate up to five staff each from the State of Ohio, and Lake, Ashtabula and Geauga Counties. It was also equipped with a printer, copier, communications equipment, wall-mounted dry-erase boards, a free-standing sign-in board, a clock, a cardboard “clock” indicating the next media briefing, and general office supplies.

The FENOC Work Area was comprised of work stations (long tables and chairs), and small round conference tables and chairs. The room also included communications equipment, clocks, maps, general office supplies, and a full complement of FENOC procedures and instructions related to JIC operations. There were five (5) boards displayed: a FENOC Sign In Board; Radiological Status – Offsite Radiological Data; Emergency Status Board – Meteorological Data/Facility Status; Site Personnel Status; and a News Statement Bulletin Board. All were prominently displayed. A large dry erase board was installed at the front of the room. Maps included two for the 10-Mile Emergency Planning Zone (EPZ) and one for the 50-Mile Ingestion Pathway.

The Federal Work Area had tables, chairs, and supplies to accommodate a minimum of two representatives from four federal agencies. Any additional personnel were to be accommodated

at an additional unassigned desk, and a conference table with four chairs.

The Auditorium and its balcony had fixed seating, a large flat (projector) screen that projected maps, plant cutaways, photos and other information; backup oversized hardcopy maps and easels; audio visual equipment with the capability to film and record media briefings as well as run video; outlets and electronic support for media operations; a podium and laptop for use by the moderator; tables on the stage positioned end-to-end with a modesty skirt and chairs for the presenters; tabletop, handheld and wireless microphones for the presenters; a microphone for those asking questions in the audience, a cardboard “clock” indicating the next media briefing, and general office supplies.

The Media Workroom was equipped with six large round tables with four chairs each, and a long table which served as a distribution point for press kits, brochures, and news releases. News releases were organized in small plastic file bins. Displayed in the Media Workroom was a cardboard “clock” indicating the next media briefing, a list of the PIOs present at any given briefing, a Boiling Water Reactor cutaway poster, and an EPZ map.

The Access Control area had a long table and two chairs, sign in sheets, and badges. Signage was placed outside and throughout the facility to direct media and JIC staff (e.g., identifying JIC entrance, Auditorium, restrooms).

Tables and chairs, and general office supplies were provided in the Pre-Brief Room.

The JIC facility was maintained by FENOC. Equipment and office supplies were stored onsite. Storage rooms were located throughout the facility. In addition, most participating organizations brought some office supplies, including procedures and checklists, and individually issued communications equipment.

The physical layout of each room and area, complete with the location of tables, chairs, communications equipment, and some displays were provided in Attachments 12 through 20 of the FENOC procedure, JIC-0003, “Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation,” Revision 5, dated September 19, 2014.

Though the JIC was located near the edge of the 10-mile EPZ, and a waiver was granted to not require the use of potassium iodide (KI) and dosimetry at the facility, the three counties carried with them individually issued dosimetry kits, including KI tablets. Upon their arrival and at an interval of 30 minutes, the County PIOs and their staffs read their dosimetry, documented the

results, and occasionally reported their results to their respective Emergency Operations Center. All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the State of Ohio demonstrated the capability to provide accurate emergency information in a timely manner to the public and news media in the Joint Information Center (JIC). The demonstration was conducted in the Auburn Career Center, located at 8140 Auburn Road, Painesville, Ohio.

At approximately 0940 hours, the State of Ohio Public Information Officer (PIO) arrived and signed in at the JIC Security desk located in the lobby of the Auburn Career Center facility. He proceeded immediately to the State/County Work Area, a.k.a., the Networking Room. Upon arrival, he called his counterpart in the State Emergency Operations Center (SEOC) to confirm that he had arrived, establish communications, and receive the most current information. Shortly thereafter, the State of Ohio PIO received an initial briefing on plant conditions from the FENOC Government Liaison, who was assigned to the Work Area.

At 1032 hours, the State of Ohio PIO attended the initial facility-wide briefing of PNPP conditions, and status of JIC activation, conducted by the FENOC JIC Manager in the FENOC Work Area, a.k.a., the Fish Bowl. During the briefing, the State PIO said that a State of Emergency had been declared by the Governor for Lake, Ashtabula and Geauga Counties. The JIC Manager announced that the JIC was on track to be operational at 1100 hours, and that the first media briefing would be scheduled once the JIC was operational.

At 1102 hours, the JIC was declared operational. This was announced in the State/County Work Area by the FENOC Government Liaison. He also announced that the first pre-brief was scheduled at 1110 hours in the Pre-Brief Room, and the first media briefing was tentatively scheduled for 1130 hours.

At 1110 hours, prior to the first media briefing, the FENOC JIC Manager facilitated a pre-briefing in the JIC Pre-Brief Room among FENOC personnel, and PIOs from the State of Ohio

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and the three counties. The PNPP Technical Spokesperson shared that an Alert Emergency Classification Level (ECL) was declared at 0752 hours, a Site Area Emergency (SAE) was declared at 0954 hours, and that there had been a “non-routine” release. The Lake County PIO discussed the precautionary measures to shelter livestock and poultry, and to relocate schoolchildren. The other two counties followed suit. The Lake County PIO noted the States of Emergency declared by the Counties at 1015 hours, and the State at 1020 hours. The State PIO said that he had nothing to add. The Communications Coordinator noted that Rumor Control personnel were receiving calls related to plant conditions and the likelihood of evacuation.

The JIC Information Supervisor for PNPP was assigned as moderator for the media briefings. Other participants at this and other media briefings were the PNPP Technical Spokesperson, the State of Ohio PIO, and Lake, Geauga and Ashtabula County PIOs. It was decided that this media briefing would relay information surrounding the declaration of the SAE ECL, plant conditions, and offsite implications. The JIC Information Supervisor said that once basic plant information was shared, the counties, beginning with Lake County, would present information affecting local area residents. They were to be followed by the State, and then the Technical Spokesperson, who was to provide more detailed plant information. At the conclusion of the presentations, questions were to be entertained from the assembled mock media.

At approximately 1120 hours, the pre-brief concluded and the PIOs left to check in with their respective EOCs. At 1125 hours, the presenters reconvened in the hallway outside of the Auditorium and had a brief discussion, summarizing talking points and messaging.

The first media briefing commenced at 1130 hours. During this media briefing, the County PIOs recounted the actions taken thus far in each of their respective counties. The State PIO indicated that he had nothing to add. During the question-and-answer period, the Lake County PIO answered all questions posed by the mock media related to offsite actions and recommendations. The media briefing ended at 1152 hours. The next media briefing was scheduled for 1220 hours.

Immediately after this and other media briefings, the JIC Manager, with the assistance of the Information Supervisor for PNPP (the moderator), led a post-brief discussion among presenters in the JIC Pre-Brief Room. This discussion was comprised of lessons learned from the previous media briefing and responses planned for media questions requiring follow-up.

At 1203 hours, the Lake County PIO initially received the report that PNPP had escalated to a General Emergency (GE) ECL, and communicated this to those in the State/County Work Area. The second media briefing was scheduled for 1220 hours, but a short delay was requested so that

the Lake County PIO could receive confirmation by email of the planned siren sounding and Emergency Alert System (EAS) broadcast. At 1222 hours, it was confirmed that the sirens would be activated at 1222 hours and the EAS message would commence at 1225 hours. Shortly thereafter, the pre-brief for the second media briefing commenced.

At this pre-brief, the Lake County PIO discussed the sirens and EAS broadcast, the relocation of schoolchildren and the opening of care centers. The other counties followed. The State PIO said that he had nothing to add. The PNPP Technical Spokesperson provided information on plant conditions. The Communications Coordinator reported that calls had been received regarding the safety of essential personnel remaining at the plant, the magnitude of the release, possible injuries incurred, and whether the incident at the plant was an act of sabotage or terrorism.

At 1225 hours, the second media briefing commenced. During this briefing, the State PIO discussed activities at the SEOC, and shared the public access, or hotline, number for the State. In the question-and-answer period following individual presentations, the State PIO was asked one question. Had the Governor called out the National Guard? He replied that no requests for assistance had been received from the counties. He noted that a representative of the National Guard was working at the SEOC. And, he emphasized the Governor's interest and continued involvement in response activities. The media briefing ended at 1247 hours. The next media briefing was scheduled for 1315 hours.

During the post-brief discussion, the Lake County PIO noted that the mock media seemed to be particularly "docile" and well-behaved in their questioning. Everyone seemed to agree.

At 1305 hours, a pre-brief was facilitated by the JIC Manager in anticipation of the third media briefing. The PNPP Technical Spokesperson shared information on plant conditions. The County PIOs discussed the status of individual accidents within their jurisdictions, evacuation progress, and in Lake County's case the location of field monitoring teams. The Communications Coordinator reported that calls had been received regarding the magnitude of the release, and observations that people could "see" the plume.

At 1316 hours, the third media briefing commenced. After the report on plant conditions by the Technical Spokesperson and information shared by the three counties, the State PIO indicated that he had nothing to add.

In the question-and-answer period following individual presentations, the State PIO answered, in part, two questions. One, was there any federal agency involvement? The State PIO replied that Federal Emergency Management Agency representatives were currently located at the SEOC.

The PNPP Technical Spokesperson said that Nuclear Regulatory Commission representatives were located at the Emergency Operations Facility (EOF) and on the PNPP site. Two, what was the quality of the drinking water? The Lake County PIO said that water was being tested. The State PIO stated that drinking water was being monitored by the Environmental Protection Agency and their counterpart within the State. The Ashtabula County PIO said that there would be testing by FENOC and State representatives. The Lake County PIO added that well water testing, in particular, would be supported on the County level. The third media briefing concluded at 1336 hours. A post-brief followed.

The exercise was terminated at 1340 hours.

The State of Ohio, with the assistance of FENOC administrative support, distributed a total of four media / news releases at the JIC during this exercise.

A Media Release, issued at 0928 hours, announced the activation of the State JIC due to a non-routine airborne release of radioactive material and the declaration of an Alert ECL at the PNPP. The media release stated that “the plant was stable”, and provided a telephone number for media inquiries.

News Release No. 1, issued at 1001 hours, reported that the State was responding to an incident at the PNPP, which resulted in an Alert ECL declaration at 0752 hours. The news release noted that the Alert had been declared due to a non-routine airborne release of radioactive material, and added that the plant was stable. It stated that the SEOC was open and operational, and that State personnel had been dispatched to the EOF and the JIC. It recommended that residents listen to their local EAS radio or television station, and refrain from using the telephone unless there was a personal emergency. The news release publicized the telephone number of the State’s public inquiry information line, and referred people to their website and social media presence for updates.

News Release No. 2, issued at 1054 hours, addressed the State of Emergency issued by the Governor for the Counties of Lake, Ashtabula, and Geauga. The release listed the following precautionary actions taken: the restriction of boating traffic on Lake Erie and the restriction of access to parklands within 10 miles of the PNPP; relocation of schoolchildren, the sheltering of livestock and poultry; the Federal Aviation Administration clearance of airspace within a 10-mile radius of the PNPP; and the rerouting of rail traffic within a 25-mile radius of the plant. It recommended that residents stay indoors, listen to their local EAS radio or television station, and refer to their emergency preparedness brochure. Further, it reported that an SAE ECL had been

declared at the PNPP. The news release concluded by publicizing the telephone number of the State's public inquiry information line, and referred people to their website and social media presence for updates.

News Release No. 3, issued at 1229 hours, reported that a GE ECL had been declared at the PNPP, and that an evacuation was recommended from Subareas 1, 2, 3, 4, 5, 6 and Lake Erie. It was also recommended that evacuees, emergency workers, and institutionalized individuals within these Subareas take their KI tablets. If the tablets were not immediately available, it was noted that KI tablets were available at reception and evacuation centers. The news release provided specific boundaries for the evacuation Subareas. It recommended that residents near the plant, but not under evacuation orders, should continue to monitor their local radio and television EAS stations for updated information. The news release concluded by publicizing a toll-free public inquiry hotline telephone number, and referred people to their website and social media presence for updates.

Throughout the exercise, procedures were referred to, positional checklists completed, and logs were maintained. Most communications among JIC staff were verbal and not written. News releases were clearly numbered.

Activation and operation of the JIC were conducted in accordance with the utility procedure, JIC-0003, "Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation," Revision 5, dated September 19, 2014, and the State EOC Public Information Office JIC Procedure.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

4.3.1.9 State of Ohio – OEMA LNO at FENOC JIC PIQ

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, personnel with key leadership roles for the Public Inquiry Hotline and the Media Monitoring group successfully demonstrated effective command control in support of emergency operations at the FirstEnergy Nuclear Operating Company (FENOC) PNPP, Joint Information Center (JIC). The demonstration was conducted in the Auburn Career Center, located at 8140 Auburn Road, Concord, Ohio.

The public Inquiry Hotline group consisted of four staff members, two each responding to calls from the public and from the media. The supervisor provided direction and control to the staff as needed. She attended internal JIC briefings and the pre-briefings of the spokespersons prior to their news conferences and then briefed the staff on new releasable information to share with callers. She assured that they had all news releases issued by FENOC, the State of Ohio, and the three participating counties. She attended the three spokesperson briefings, took thorough notes, and shared with the call-takers new information they could, in turn, share with callers. This assured that the call-takers had the most accurate and up-to-date information.

In turn, she periodically questioned whether the call-takers had identified any rumors or trends and, as appropriate brought those to the attention of JIC management to be addressed in news release or news briefings.

All call-takers had copies of briefing books, procedures, and other materials needed to effectively perform their jobs.

No conflicts arose requiring intervention.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Public Inquiry Hotline and the Media Monitoring group successfully demonstrated that at least two communication systems were available, at least one operated properly, and communication links were established and maintained at the FirstEnergy Nuclear Operating Company (FENOC) PNPP, Joint Information Center (JIC). The demonstration was conducted at the Auburn Career Center, located at 8140 Auburn Road, Concord, Ohio.

Communication equipment in the JIC room dedicated to the Public Inquiry Hotline consisted of a bank of eight commercial telephones, four each to receive calls from the general public, managed by two Rumor Control staff, and four others to receive calls from the media, handled by the two Media Response Staff. With twice the number of phones as staff, there was plenty of redundancy. The system was set up so that, within each of the two groups, phones rolled over to other phones should a call taker be occupied with another call.

The Media Monitoring group was set up in a nearby room. In addition to monitoring television stations, there was a telephone and the two staff members each had Internet-accessible laptops to monitor inquiries through State and County websites, Twitter, and Facebook accounts.

The general public was directed to call a toll-free number (440) 269-7104 with their questions and concerns. This toll-free number was publicized in FENOC news releases and pre-distributed public information materials. The media was directed to call a different number (1-440-358-8008) publicized in the FirstEnergy Nuclear Operating Company news releases and media packet materials.

The PNPP JIC facility was a shared facility with the Auburn Career Center. All Public Inquiry Hotline and Media Monitoring equipment and supplies – including telephones and laptops -- were stored on carts in a storage room at the Auburn Career Center. The supplies were delivered to pre-designated workrooms and set up (just as in an actual event) by the staff at each position. All the equipment and telephone connections were demonstrated to be operable prior to use in the exercise. There were no delays that disrupted emergency operations.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Public Inquiry Hotline and the Media Monitoring group successfully demonstrated availability of communication supplies, technical equipment, maps, displays, and office supplies in support of emergency operations at the FirstEnergy Nuclear Operating Company (FENOC) PNPP, Joint Information Center (JIC). The demonstration was conducted in the Auburn Career Center, located at 8140 Auburn Road, Concord, Ohio.

The PNPP JIC was located in a shared facility with the Auburn Career Center. The Hotline room contained permanent furniture including two eight-foot rectangle tables, chairs, a copy machine, white board, and dedicated commercial telephone lines for the exclusive use of the Media and the Rumor Control Inquiry Hotline staff. Inventoried supplies in large plastic bins were located in a locked storage room and delivered to the Hotline room upon activation of the JIC. The bins designated “PNPP Public Inquiry Hotline” were provided to the Hotline team and distributed by the Communications Coordinator while the team set up and tested the telephone connections.

The bins contained general office supplies, eight commercial telephones used to receive calls from the general public and from the media; printed Emergency Preparedness Information containing Emergency Planning Zone (EPZ) maps which were referred to when answering questions regarding specific sheltering locations; information regarding reception and care centers; relocation and receiving school locations; transportation pick-up points, and general information about nuclear technology. Each team member had been issued their own controlled copy of the Perry Operational Manual with JIC procedures for Emergency Public Information Organization Instruction – Communication. The Public Inquiry staff and Media Monitor group had their procedures with them when they arrived at the JIC. They logged all calls, tracked the trends and rumors, and often referred to their procedures and printed emergency information.

The Media Monitoring group responsible for monitoring social media, State and County websites, and local television and radio stations, also had an inventoried supply bin that contained a telephone, and general office supplies and two laptops. The Media Monitoring group was provided with four television monitors on rolling carts. Their room was equipped with a large conference table, chairs, phone jacks, extra electrical outlets, and a white board. They utilized their procedures, logged all news stories and potential rumors.

Because the Auburn Career Center is located just outside the 10-mile EPZ, no dosimetry or potassium iodide (KI) was issued or stored at this location.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, staff of the Public Inquiry Hotline and the Media Monitoring group provided accurate emergency information and instructions to the public and news media in a timely manner in support of emergency operations at the FirstEnergy Nuclear Operating Company (FENOC) PNPP, Joint Information Center (JIC). The demonstration was conducted in the Auburn Career Center, located at 8140 Auburn Road, Concord, Ohio.

The Hotline at the PNPP JIC was one of five hotlines demonstrated during the exercise. The other four were operated in association with the EOCs of each of the three affected counties – Lake, Geauga, and Ashtabula, with the State of Ohio also operated its own JIC and hotline at its EOC in Columbus. The telephone numbers for the counties and the State were widely publicized in the emergency Preparedness Information brochure mailed annually to all EPZ households, in local telephone directories, on their respective websites, and in news releases. The PNPP hotline numbers were provided in a FENOC news release.

The Hotline function was located in a room on the second floor of the career center, part of the overall JIC operation. Staff of the Public Inquiry Hotline – all FENOC personnel -- consisted of a Communications Coordinator who provided supervision, two Media Response personnel who took calls from the media, and two Rumor Control personnel who receiving incoming calls from the general public. Per the Extent-of-Play Agreement and JIC procedures, JIC activation began around 1000 hours. Once the Hotline room was set up and the telephone lines were tested for operability, the team and Communications Coordinator reviewed procedures. The Coordinator reminded her staff to provide only information approved for public release, consisting primarily of background information in their briefing books, news releases, and additional information she provided after attending staff and media briefings. She assured that each staff member had a generous supply of Notification Logs, Activity Logs, and support documentation to help answer questions from callers. The Public Inquiry Hotline area was operational and ready to receive calls when the overall JIC was declared operational at 1102 hours.

A simulation cell (SIMCELL) consisting of members of the mock media and the public made calls into each of the various hotlines, including the PNPP hotline. Most of the media callers also served as the mock media during the news briefings so there was a lull in calling while the briefings were underway.

A total of only 32 calls (simulated from Sim Cell callers) were received—17 from the media and 15 from members of the general public, all between about 1105 hours and when the calls stopped at 1315 hours. On average each call-taker received about four calls per hour. Since most calls lasted a minute or two, handling the calls was not much of a challenge; each could easily have handled many more.

Trends identified included issues related to ingesting potassium iodide and areas recommended for evacuation. An unfounded rumor concerned whether the incident at the plant was a possible result of sabotage or terrorist activity.

All information provided to callers by the Public Inquiry Hotline staff were accurate and consistent with protective action decisions and emergency classification levels. In formulating their answers, the staff frequently referred primarily to news releases, as well as their procedures, the most recent publication of the Emergency Preparedness Information booklet, and local maps. English was the only language demonstrated.

One concern, noted in the 2014 after action report, was the high ambient noise level in the room from a constantly running computer server and a periodic, and quite noisy, copying machine. It appears that no systematic effort was made to address this concern.

The Media Monitoring group was set up in another room, down the hall from the Hotline room. As with other JIC operations, it began operating at 1102 hours. The two staff members dedicated to this function monitored inquiries through the local outlets of four stations – CNN, Fox News, NBC, and ABC, as well as the websites of local newspapers, and social media sites including Twitter, and Facebook via the two available laptops. Controller injects simulated all incoming broadcasts and messages. News trends and rumors were reported to the Media Relations Supervisor to be addressed in a media briefing or a news release.

A number of trends and rumors were identified and addressed including sabotage at the plant (no evidence), onsite injuries (there were none), and that police and fire vehicles had been dispatched to the plant (inaccurate). Trends and rumors were subsequently addressed during the media briefings and individual questions were addressed through a callback from the person of contact.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.c.1, 1.d.1, 1.e.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

4.3.2.10 State of Ohio – ODNR Dosimetry Brief

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

Successfully demonstrated - This associated criterion requires no narrative.

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

Successfully demonstrated - This associated criterion requires no narrative.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday,, September 14 2016, the Ohio Department of Natural Resources (ODNR), Division of Parks and Watercraft, demonstrated the capability to issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with plans and procedures. The interview was conducted out-of-sequence from approximately 1000 hours to 1200 hours, at the

ODNR, located at 1150 E. 49th St, Cleveland, Ohio

This exercise was conducted as a tabletop. The ODNR Supervisor gave a radiological briefing to the ODNR Sergeant following distribution of dosimetry and potassium iodide (KI) contained within a kit in a plastic bag. The briefing followed the Dosimetry Coordinator's Briefing Guide contained in the Lake Erie Restriction and Clearance Procedures. The briefing was thorough and complete. ODNR staff have an Electronic Personal Dosimeter (EPD) as part of their routine equipment, and thus the primary method of radiological monitoring is not part of a event driven kit. The briefing included direction to check and zero the dosimetry, including the back-up Direct Reading Dosimeters, direction to read and report the EPD readings every 30 minutes or as requested, turn-back levels of 5 R and 1 R/hr dose rate, maximum levels of 25 R, form completion, KI ingestion of a 130 mg adult dose, only when directed, side effects and potential allergic reactions from KI.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the Ohio Department of Natural Resources (ODNR), Division of Parks and Watercraft, demonstrated the capability to implement a decision to ingest potassium iodide (KI) for emergency workers. The interview was conducted out-of-sequence from approximately 1000 to 1200 hours, at the ODNR located at 1150 E. 49th St, Cleveland, Ohio.

This exercise was conducted as a tabletop. A strip of 10 KI single foil wrapped 65 mg tablets are provided as part of a dosimetry kit distributed to all ODNR personnel conducting emergency response,. The ODNR Supervisor stated that all staff responding to a request to clear or evacuate Lake Erie will receive a dosimetry kit if equipment is not provided at their home location. A radiological briefing prior to deployment instructed the responders to ingest one adult dose of 130 mg only when instructed, and record the ingestion on an Exposure Record Form. There are 24 dosimetry kits available at the ODNR. Additional supplies of KI, if needed, can be obtained from the Ohio Department of Health located in the Lake County Emergency Operations Center.

All activities described in the demonstration criterion were carried out in accordance with the

plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

4.3.2.11 State of Ohio – ODNR Primary A&N – Lake Erie

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the State of Ohio, Department of Natural Resources (ODNR) Division of Parks and Watercraft successfully demonstrated that key personnel with leadership roles could provide direction and control to that part of the overall response effort for which they were responsible for. The demonstration/interview was conducted out-of-sequence from approximately 1000 hours to 1200 hours, at the ODNR Division of Parks and Watercraft Office, located at 1150 E. 49th Street, Cleveland, Ohio.

The demonstration/interview was conducted as a table-top discussion exercise, led by a State designated Controller who provided exercise injects to prompt actions/responses from participants. In attendance were two representatives from the ODNR, Division of Parks and Watercraft, and three representatives from the Ohio Emergency Management Agency. The ODNR, Division of Parks and Watercraft Officer-in-charge (OIC) served as the main spokesperson and had overall leadership responsibility for the ODNR, Division of Parks and Watercraft operations direction and control.

At 1006 hours, the Controller provided an exercise inject that Lake County Emergency Operation Center (EOC) had contacted the OIC and informed him that the PNPP had declared a Site Area Emergency, Emergency Classification Level (ECL).

The OIC immediately referred to his plans and procedures and notified all ODNR, Division of

Parks and Watercraft personnel to report to their respective field offices.

The OIC made contact with the United States Coast Guard (USCG) field offices (Buffalo and Detroit) to discuss potential areas of operations. Additionally, he made contact with surrounding stations in Fairpoint and Ashtabula and made them aware of his staffing operations for future coordination/support if needed.

As personnel arrived (one crew member was present for demonstration purposes), the OIC briefed the current situation as it related to the ECL, radiation release status, assignments, USCG support, radio talk-groups, and current Boating advisory (1.1).

The OIC, acting as the Dosimetry Coordinator issued Exposure Control Procedures via the checklist and handed out Dosimetry Packets and provided the dosimetry brief.

At 1046 hours, the Controller provided an exercise inject that the PNPP had declared a General Emergency ECL and there was a radiation release and the Ohio Department of Health had approved the ingestion of KI.

The OIC made contact with the USCG to discuss areas of operation and response vessels, and established a safe harbor for vessels to report to after departing the area.

The OIC advised all ODNR personnel of the escalation in the ECL and advised personnel to read their dosimetry, report an initial reading, and take their first dose of KI. Personnel were also instructed to take a reading every 30 minutes and report their readings back to the DC.

The OIC instructed all ODNR Watercraft boat crews to report to their designated areas of operations and immediately begin notifying boaters.

The OIC maintained continuous contact with the Ohio Emergency Management Agency, the State Emergency Operations Center, and District 9/USCG to ensure direction and control over the ODNR areas of responsibility.

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures, and extent-of-play agreement

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

Successfully demonstrated – This associated criterion requires no narrative.

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

Successfully demonstrated – This associated criterion requires no narrative.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the State of Ohio, Department of Natural Resources (ODNR) Division of Parks and Watercraft successfully demonstrated the issuance of appropriate dosimetry, potassium iodide (KI), and procedures and the management of radiological exposure to emergency workers in accordance with the plans and procedures.

The ODNR emergency workers periodically and at the end of each mission read their dosimeters and recorded the readings on the Emergency Workers Dosimetry Exposure Logs. The demonstration was conducted out-of-sequence from approximately 1000 hours to 1200 hours, at the ODNR, Division of Parks and Watercraft Office, located at 1150 E. 49th Street, Cleveland, Ohio.

The demonstration/interview was conducted as a table-top discussion exercise led by a State designated Controller who provided exercise injects to prompt actions/responses from participants. In attendance were two representatives from the ODNR, Division of Parks and Watercraft, and three representatives from the Ohio Emergency Management Agency. The ODNR, Division of Parks and Watercraft Officer-in-charge (OIC) served as the main spokesperson.

The discussion/demonstration began at 1006 hours, with a Controller inject that the Lake County Emergency Operation Center (EOC) had contacted the OIC and informed him that the PNPP had declared a Site Area Emergency, Emergency Classification Level (ECL). The OIC acting as the Dosimetry Coordinator (DC) briefed the ODNR boat crew using their plans and procedure document titled “ODNR Division of Watercraft Clearing/Evacuation, Lake Erie EPZ Checklist.”

Each boat crew member was issued one dosimetry packet (kit) containing one CD V – 739 Direct Reading Dosimeter with a range of 0-200 R, one Permanent Record Dosimeter (PRD), one Dosimetry Report Form, 10 65mg tablets of KI, and one KI instruction sheet. The KI had an expiration of December, 2019.

The boat crew member demonstrated the correct zeroing of the DRDs and indicated that he would check the DRDs at least every 30 minutes and record the DRD reading. The DC stated that he would record the reading on the Emergency Worker Dosimetry Exposure Control Log. The boat crew member had knowledge of the dose rate of 1 R, exposure limit of 25 R and the turn-back limit of 5 R and that any permission to exceed the exposure limit for life-saving mission must come from the State through the ODNR representative at the State Emergency Operation Center (SEOC).

As a part of the interview, the DC stated that they had enough KI packages for every boat crew members (24 kits) which covered their seven crew members and extras for support personnel if needed. He also stated they could request additional resources from the SEOC if needed.

The ODNR boat crew member knew the correct way to use the PRD, appropriate use of KI, where to report for monitoring and decontamination (Lakeside Junior High School), and where to return dosimetry equipment at the end of the mission. The ODNR boat crew member also demonstrated the correct operational check of the monitoring equipment (CD-V-700).

All activities described in the demonstration criterion were carried out in accordance with the plans, procedures, and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the State of Ohio, Department of Natural Resources (ODNR) Division of Parks and Watercraft successfully demonstrated the capability to make potassium iodide (KI) and appropriate instructions available once the decision to use KI was made and maintain appropriate record keeping of the administration of KI for institutionalized individuals. The demonstration/interview was conducted out-of-sequence from approximately 1000 hours to 1200 hours, at the ODNR Division of Parks and Watercraft Office, located at 1150 E. 49th Street, Cleveland, Ohio.

The demonstration/interview was conducted as a table-top discussion exercise, led by a State designated Controller who provided exercise injects to prompt actions/responses from participants. In attendance were two representatives from the ODNR, Division of Parks and Watercraft, and three representatives from the Ohio Emergency Management Agency. The ODNR, Division of Parks and Watercraft Officer-in-charge (OIC) served as the main spokesperson.

The discussion/demonstration began at 1006 hours, with a Controller inject that the Lake County Emergency Operation Center (EOC) had contacted the OIC and informed him that the PNPP had declared a Site Area Emergency, Emergency Classification Level (ECL). The OIC acting as the Dosimetry Coordinator (DC) briefed the ODNR boat crew using a copy of their plans and procedures document titled "ODNR Division of Watercraft Clearing/Boat Crew Exposure Control Procedures Checklist." Each boat crew member was issued one dosimetry packet (kit) containing one CD V – 739 Direct Reading Dosimeter with a range of 0-200 R, one Permanent Record Dosimeter (PRD), one Dosimetry Report Form, 10 65mg tablets of KI, and one KI instruction sheet. The KI had an expiration of December, 2019.

The boat crew member demonstrated the correct zeroing of the DRDs and indicated that he would check the DRDs at least every 30 minutes and record the DRD reading on the Emergency Worker Dosimetry Exposure Control Log. The boat crew member had knowledge of the dose rate of 1 R, exposure limit of 25 R and the turn-back limit of 5 R and that any permission to exceed the exposure limit for life-saving mission must come from the State through the ODNR representative at the State Emergency Operation Center.

The DC provided instruction regarding the usage of KI. He stated that it protect the thyroid and provided instructions regarding the appropriate dosage; potential side effects (Including skin rash, metallic taste, and upset stomach); and symptoms of allergic reactions (e.g., fever, joint pains, shortness of breath). He also reminded the workers that if any allergic reaction should occur, they should immediately report such symptom to him (DC) immediately.

At 1046 hours, via Controller inject that the Lake County EOC contacted the OIC and informed him that the PNPP had declared a General Emergency ECL and there was a radiation release and the Ohio Department of Health had approved the ingestion of KI.

At 1047 hours, the DC instructed the crew member to take two 65 mg (130 mg) tablets of KI and record it on their Dosimetry Report Form.

As a part of the interview, the DC stated that they had enough KI packages for every boat crew

members (24 kits) which covered their seven crew members and extras for support personnel if need. He also stated they could request additional resources from the SEOC if needed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures, and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the State of Ohio, Department of Natural Resources (ODNR) Division of Parks and Watercraft demonstrated the capability to perform activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The demonstration/interview was conducted out-of-sequence from approximately 1000 hours to 1200 hours, at the ODNR Division of Parks and Watercraft Office, located at 1150 E. 49th Street, Cleveland, Ohio.

The demonstration/interview was conducted as a table-top discussion exercise led by a State designated Controller who provided exercise injects to prompt actions/responses from participants. In attendance were two representatives from the ODNR, Division of Parks and Watercraft, and three representatives from the Ohio Emergency Management Agency. The ODNR, Division of Parks and Watercraft Officer-in-charge (OIC) served as the main spokesperson.

Per Ohio's plans and procedures, the United States Coast Guard (USCG) has the primary responsibility for clearing Lake Erie with the ODNR, Division of Parks and Watercraft providing assistance as requested.

The discussion began at 1006 hours, with a Controller inject that the Lake County Emergency Operation Center (EOC) had contacted the OIC and informed him that the PNPP had declared a Site Area Emergency, Emergency Classification Level (ECL). The OIC followed the procedures outlined in the "ODNR, Division of Parks and Watercraft Lake Erie Restriction & Clearance checklist to demonstrate the steps that ODNR would take to alert and notify the public on Lake

Erie.

The OIC demonstrated coordination with the USCG field offices (Detroit and Buffalo) representatives to issue a “Notice to Mariners” via VHF Channel 16 to clear commercial and recreational boating traffic from Lake Erie within 10-mile Emergency Planning Zone (EPZ). To provide further clarification, the OIC relayed “Clearing” of the Lake means that boaters should return to their marina or origin and leave the area of the PNPP in an orderly fashion. This information was contained in the Boating Advisory 1.1.

The OIC indicated that USCG Sector Buffalo would broadcast the “Notice to Mariners” repeatedly until the information needed to be updated or the emergency had been terminated.

At 1046 hours, the Controller provided an exercise injected that the PNPP had declared a General Emergency (GE) ECL. The OIC coordinated with the USCG representatives to revise the “Notice to Mariners” to reflect the need to evacuate the 10-mile EPZ on Lake Erie. The OIC explained that “Evacuation” of the Lake means that boaters should proceed to a marina that is outside (either east or west) of the 10-mile EPZ. This information was referred to in Boating Advisory 1.2.

At the GE ECL, the OIC reported that he would dispatch boat crews to begin directly notifying boaters to evacuate using a public address system on the ODNR, Division of Parks and Watercraft boats. The OIC briefed that if weather or water conditions made the public address system ineffective, the boat crew would make direct contact with each vessel on the water and provide a paper copy of Boating Advisory 1.2.

The advisory contained appropriate FEMA requirements including the identification of the offsite response organization in charge of issuing the alert signal, and instructional message, identification of the PNPP emergency, reference to specific emergency information for use by the public, and a closing statement requesting that the potentially affected population tune to local television and radio stations for further information

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures, and extent-of-play agreement.

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

- a. MET: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 5.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None

- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

4.3.2 Risk Jurisdictions – Lake County

4.3.2.1 Lake County – LCSO Communications Center (INP)

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Central Communications Dispatch Center (LCCCDC) used effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. The demonstration was conducted at the LCCCDC, collocated with the Lake County Emergency Operations Center (EOC), at 8505 Garfield Road, Mentor, Ohio.

The LCCCDC was staffed with trained and certified call-takers, dispatchers, and a supervisor who facilitated the alert and notification activities. The Communications Center operates under the authority of the County Sheriff's Department and serves as the 24-hour, Initial Notification Point for the PNPP.

At 0757 hours, the LCCCDC Officer received a call from the Utility, via the 5-Way Dedicated Telephone Line. In addition to the LCCCDC and the Lake County EOC, this dedicated phone line has connectivity to Ohio Emergency Management Agency (EMA), Ohio State Highway Patrol, and Geauga and Ashtabula County Emergency Operations Centers. The call was completed at 0759 hours. In the event the 5-Way Dedicated Telephone was inoperative, the commercial telephone would be used.

The notification that an Alert Emergency Classification Level (ECL) had been declared at the Plant at 0752 hours and other essential information was annotated on a Form 32A, Nuclear Plant Incident Notification Form. Immediately upon completion of the call the information was handed to the LCCCDC supervisor.

At 0803 hours, The LCCCDC supervisor, in collaboration with the Lake County Emergency Management Director and County Radiological Officer, determined that there was a need to Alert ECL and mobilize all positions to support the EOC activation. The Supervisor instructed the Dispatcher, who used the checklist that provided procedures for an incident at PNPP, to start

the call down procedure alerting staff to respond to the EOC. The Lake County LCCDC used a mass notification system, Mobilization Plus, to notify the EOC Staff. At 0808 hours, the Alert ECL went out to Executive Group/Public Information Officer Liaison and EOC Staff and within 5 minutes, forty-six staff had replied that they will respond the EOC. This information was available via a report extracted by the System. The TV/radio stations that receive EAS messages were also notified and placed on stand-by.

The EOC was declared operational at 0811 hours. At that time two dispatchers relocated their operation from the LCCDC to the EOC to answer/respond to activities that are associated with the Communications Center and relate to the Plant on the 5-way dedicated telephone. The staff began arriving immediately after the alert notification message, due to their daily work function in the Emergency Management Office.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Central Communications Dispatch Center (LCCDC) had at least two communication systems available in support of emergency operations, at least one operated properly, and communication links were established and maintained with appropriate locations. The demonstration was conducted at the LCCDC, collocated with the Lake County Emergency Operations Center (EOC), at 8505 Garfield Road, Mentor, Ohio.

The LCCDC operated under the authority of the County Sheriff's Department and serves as the 24-hour, Initial Notification Point for the PNPP. The primary means of notification at the INP was a 5-way dedicated telephone line. This dedicated system connected the PNPP Control Room with the LCCDC, the Lake County EOC (Dose Assessment Room), the Ohio Emergency Management Agency (EMA), the Ohio State Highway Patrol, and Geauga and the Ashtabula County Emergency Operations Centers.

At 0757 hours, the 5-way dedicated telephone line was used to declare the initial Emergency Classification Level of Alert and furnish other essential information to the Off-Site Response

Organizations. The 5-way dedicated telephone line was successfully used without any communication interruption or failure to communicate the Emergency Classification Levels of Site Area Emergency (SAE) and General Emergency (GE). In situations where the 5-way dedicated telephone line was inoperable, the notifications would be relayed by commercial telephone, facsimile or radioed by other notified counties. When Lake County's EOC was declared operational, all subsequent notifications from the Utility, using the 5-way dedicated telephone line, were received in the Dose Assessment Room.

In addition to the 5-way dedicated telephone line, an E911 Trunked phone system (50 lines) and the 7 digit AT&T commercial line, the LCCCDC had 2 satellite phones, 800 MHz radio system and a bank of Walkie-Talkie, communication links.

The Lake County Amateur Radio Association operated out of a separate office and had capability to communicate with the State and counties in the event of a total loss of connectivity.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

Successfully demonstrated – This associated criterion requires no narrative.

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

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

4.3.2.2 Lake County – EOC

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial

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Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the capability to use of effective procedures to alert, notify, and mobilize emergency personnel, and to activate the Emergency Operations Center (EOC) in a timely manner. The demonstration was conducted at the Lake County EOC, located at 8505 Garfield Road, Mentor, Ohio.

At 0757 hours, the Lake County EOC was notified of an Emergency Classification Level (ECL) of Site Area Emergency at the PNPP. Notifications to appropriate organizations providing EOC liaisons were made promptly via the Mobilization Plus (Reverse 9-1-1) computerized notification console upon notification by the Lake County Emergency Management Agency to make a full staff notification to report to the EOC. Notifications began at 0801 hours, and the Emergency Management Director (EMD) received his call via cell phone at 0809 hours. The EOC staff members began to arrive shortly after the notification was received because they work in the EOC facility.

The key positions identified in the Lake County Plan were the Executive Group which all arrived in a matter of minutes, the Assessment Group comprising the Ohio Department of Health Liaisons, Lake County General Health District Liaison, State Field Monitoring Team Coordinator, Ohio Emergency Management Agency Computer Operator and Five-Way Dedicated Telephone Line Communicator; EOC staff comprising liaisons from Job and Family Services, Geographic Information System, Amateur Radio, Ohio State University Extension, Fire/EMS, Transportation, County General Health District, County Radiological Officer, County School Services, American Red Cross, Emergency Medical Officer, County Engineer, Law Enforcement, Ohio State Highway Patrol, Ohio National Guard (pre-positioned), PNPP Emergency Operations Facility, County Utility Department, Ohio Emergency Management Agency, Ohio Environmental Protection Agency, Central Communications, First Energy, County Historian, Public Inquiry and EOC Messenger. Lake County did show adequate personnel available to maintain 24hour for the EOC operations.

At 0844 hours the Ops Coordinator conducted a brief of the current status of the PNPP and the Emergency Classification Level (ECL) of Alert had been declared as well as stating the EOC was considered Operational except for the Emergency Medical Services (EMS) Liaison that had not arrived. At 0911 hours, the EMS Liaison arrived and the Operations Coordinator declared the EOC operational.

All notifications after the EOC was operational came through the bridge line as well as email communications to the Executive Group. At 1007 hours the EOC was notified of an ECL change

to Site Area Emergency and at 1202 hours, they received notification of an ECL change to a General Emergency. All ECL changes were immediately communicated to the Operations Coordinator and briefed in the EOC as well as being updated on status boards located in the EOC.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exercise conducted on Tuesday, September 13, 2016, the Lake County Emergency Agency demonstrated that key leadership personnel provided direction and control to that part of the overall response effort for which they were responsible. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

Overall responsibility for emergency response in Lake County in the event of an incident at the PNPP belonged to the Lake County Commissioners. The Commissioners were assisted by the Emergency Management Agency Director (EMAD) who served as the Chief of Staff for the Commission. They were also assisted by the Lake County Sheriff and the Lake County Public Information Officer (PIO). During this exercise the aforementioned group served as the Executive Group while a Deputy Director of the EMA functioned as the Operations Chief (OC). The Executive Group performed their duties within a separate room from the main portion of the EOC while the OC facilitated emergency response activities performed by the agencies represented within the EOC. External information received was processed by the Executive Group as were actions taken by represented agencies. The Executive Group made decisions as required after consulting with Ashtabula County, Geauga County, PNPP personnel and the Ohio State EOC.

This evaluation concerns the actions taken within the EOC main operations room; actions taken and decisions made by the EMAD and the Executive Group were evaluated under separate criterion and were not observed by this evaluator.

At 0757 hours, the Lake County EOC was advised of the declaration of an Alert Emergency Classification Level (ECL) by the PNPP. A reverse 911 notification system was activated and

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responders began to arrive at the EOC at 0814 hours. At 0828 hours the EMAD met with the County PIO and directed him to compile a news release to let the public know of the event. At 0833 hours, the EMAD established telephonic contact with Ashtabula and Geauga Counties and the State of Ohio Emergency Management Agency. This was accomplished via a five-way landline telephone. It was determined that each of these entities had received the necessary information from the PNPP and each advised that they were in the process of activating their EOCs.

At 0844 hours, the OC conducted an initial brief for those emergency response representatives that had arrived; advising them of the current situation as known and directing them to be reviewing their Standard Operation Guidelines (SOGs) for the Alert ECL. Standard safety practices for EOC activation were discussed and logistical information was given. At 0859 hours, representatives within the EOC were advised by the OC to remember to verbalize the fact that they were involved in a drill during each telephone or radio communication. At 0911 hours, the OC announced that the Lake County EOC was operational with all required emergency functions being represented.

The OC conducted briefings in a very clear, succinct style and information was relayed to the EOC personnel in a timely manner. Subsequent briefs were held on a regular basis in order to keep the entire EOC group aware of actions being taken by other agencies. There were eight briefings held between 0911 hours and the end of the exercise at 1311 hours. Each of these briefings contained pertinent information and was clearly audible throughout the EOC. Participants remained quiet during briefings and the public address system allowed a clear transfer of information. During several of these briefings each agency representative was asked to describe their actions taken as well as being allowed to announce any unmet needs.

All agency representatives were reminded that copies of all plans, procedures and SOGs were available for their use and advised to be sure the copies being utilized were the latest revisions. The proper distribution and retention of messages was discussed during the initial briefing and representatives were asked to maintain message logs as well as numbering each message compiled. Runners were available to pick up and deliver messages and did an excellent job of keeping that process smooth and effective.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County Emergency demonstrated the adequacy of the communications systems at the Emergency Operations Center (EOC). The demonstration was conducted at the Lake County EOC, located at 8505 Garfield Road, Mentor, Ohio.

The EOC utilized a 5-Way Dedicated Telephone Line (DTL), for primary communication with the PNPP. The DTL allowed communication between PNPP, Lake, Geauga, Ashtabula Counties, Ohio Emergency Management Agency (OEMA)/Ohio State Highway Patrol (OSHP) and verification was done by agency identification once a call was initiated. The Lake County Radiological Emergency Response Plan required that the DTL be tested monthly and the Executive Decision Line (EDL) tested quarterly. The EDL was a special conference line that connected Lake, Geauga, and Ashtabula Counties, the Ohio State EOC and the PNPP Emergency Operations Facility (EOF).

The EOC also had commercial telephones available for each department represented at the EOC. The 800 MHz radio was the primary communication system for departments with field activities. Cellular phones, e-mail systems and facsimile machines were also utilized throughout the exercise.

Amateur Radio Operators staffed the EOC for Radio Amateur Civil Emergency Service (RACES), and Amateur Radio Emergency Service (ARES), capabilities. The RACES/ARES operators provided back-up communication with the State of Ohio, local area hospitals, field monitoring teams as well as Geauga and Ashtabula County EOCs.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial

Participation, Plume Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the availability of equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies to support an effective emergency response to PNPP. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The Lake County EOC was a secured building that functioned daily as the offices for several Lake County Agencies including the Emergency Management Agency. The EOC contained a large central room with several adjacent offices and conference rooms. The main room was well organized for EOC purposes and displayed several large maps along the perimeter walls. These depicted: PNPP 10-mile Emergency Planning Zone (EPZ) w/Subareas; Lake County Highways; highway bridges with weight restrictions; aerial photographs of the PNPP and 50-mile EPZ (for ingestion pathway). Also prominently displayed were electronic signs indicating the present Emergency Classification Level (ECL) and the Homeland Security Threat Level. There were several large white-boards and cork bulletin boards mounted along the walls. The EOC was equipped with three LCD projectors that projected large images that were clearly visible from all work stations. These were used to display an ongoing record of actions taken and/or decisions made. Also available was a digital map of the area of the plant and of the plant itself. There were four large flat screen monitors mounted strategically throughout the main portion of the EOC that mirrored the images being projected at the front of the room. This assured that all responders present could see the information as needed from their work station.

There were 33 separate workstations set up, each with a landline telephone available and several equipped with 800 MHz radios. There were three facsimile machines in the main room with several more available in adjacent offices. The EOC had wireless internet service that provided dependable internet service throughout the exercise and was available to all representatives.

Even though Lake County had pre-distributed KI to the public and institutionalized individuals, the Lake County EOC stored a large amount of Potassium Iodide (KI) for public use in the event of a radiological event. On this date several large containers were observed that appeared to be full of ThyroSafe™, 65 mg, foil packages of ten each, KI. This evaluator was provided documentation showing there were approximately 55,000 doses stored in this facility. They were within their effective dates with an expiration date of 2019. These were said to have been for public use but would also have been available to Emergency Workers should exigent circumstances arise. A separate cache of dosimetry, survey instruments and KI, exclusively for the use of Lake County Emergency Workers, was evaluated under separate criterion and was not

observed by this evaluator.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the ability to issue appropriate dosimetry, potassium iodide (KI) and procedures to effectively manage radiological exposure to emergency workers. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

During this exercise the management of radiological exposure to emergency workers was the responsibility of the Lake County Radiological Officer (RO). At 0900 hours, while Lake County was under an Alert Emergency Classification Level (ECL) the RO was requested to perform a radiological briefing and provide dosimetry to two Public Information Office representatives. These were not regular emergency workers but it was anticipated that they may at some point in time need to traverse a plume release in order to relocate to the Joint Information Center (JIC). The JIC was located outside of the 10-mile Emergency Planning Zone (EPZ) but within Subarea 6 which is partially in the 10-mile EPZ. At 0904 hours the RO conducted a briefing for the two PIO representatives that covered the following topics: purpose and operation of dosimetry; positioning of dosimetry; schedule of dosimetry reading (every 30 minutes); proper reading and recording methods for Direct Reading Dosimeters (DRD); exposure limits for routine activities; administrative limits of 2R; the location of decontamination centers and location for returning dosimetry at the end of their assignment. He also discussed the ingestion of Potassium Iodide (KI), its purpose, contraindications and the fact that ingestion of KI had to be on the approval of the Ohio State Health Department. He inquired as to any iodine allergy known to the individuals and received a negative answer from each. Each were advised that they could not exceed the 2R limit without special permission from the RO; the RO would have to have the approval of the Ohio State Health Department to authorize any increase in exposure limits for emergency

workers.

The RO documented the issuance and successfully zeroed the issued DRDs. He also had the PIO representatives to re-check the DRDs to be sure they were properly zeroed before their departure. He documented the readings and advised them to contact him every 30 minutes to report their readings if and when they were deployed. The issued equipment included the following: one Permanent Record Dosimeter (PRD) in the form of a Landauer, Escort, Optically Stimulated Luminescent Dosimeter (OSLD); one CD V-730, 0-20R DRD and one CD V-742 0-200R DRD. All DRDs bore calibration dates of 1-15-2016 with an expiration date of 1-15-2017. They were issued ten doses of ThyroSafe™, KI in 65 mg tablet form. There were also furnished with a KI fact sheet that expounded upon the ROs description of KI. The KI bore an expiration date of 2019. The OSLD indicated an issuance date of January 1, 2016 with an expiration date of December 31, 2016.

Sometime prior to 1200 hours the PIO representatives were deployed (simulated) to the JIC and called in their readings as zero. This process was repeated at 1207 hours and again at 1241 hours. At 1214 hours, the Ohio State Health Department issued a statement reducing the turn back value from 2R to 1R. This reduction was relayed to the two PIO representatives in the field and the message was acknowledged. These readings were logged by the RO and retained for documentation. The exercise was terminated at approximately 1300 hours and no further contact was received.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the availability of potassium iodide (KI) and appropriate instructions for the use of KI by institutionalized individuals and the general public should that recommendation be made. They also demonstrated the ability to maintain appropriate records of KI administration to institutionalized individuals. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

In accordance with plans and procedures KI had been previously made available to residents of

the 10-mile Emergency Planning Zone (EPZ) within Lake County. The Ohio Emergency Management Agency (OEMA) Resident Radiological Analyst (RRA) in Lake County was responsible for the pre-emergency placement of KI in facilities where individuals were institutionalized. Upon interview it was determined that each of these facilities was furnished a dosimetry packet which contained sufficient KI for staff, patients or inmates. The packets also contained Permanent Record Dosimetry (PRD) in the form of a Landauer, Escort, Optically Stimulated Luminescent Dosimeter (OSLD) in sufficient quantities for the staff only. Each facility was also provided with Direct Reading Dosimeters (DRDs) to use as an area monitor. The KI that was furnished was ThyroSafe™ 65 mg tablets in foil packages of 10 each. These bore an expiration date of 2019. The DRDs furnished to these facilities were; one CD V-730, 0-20R and one CD V-742 0-200R. All DRDs bore calibration dates of 1-15-2016 with an expiration date of 1-15-2017.

The RRA maintained a supply of approximately 1300 packets of KI (13,000 doses) exclusively to replenish or supplement the emergency workers and institutionalized individuals. This supply was kept in a climate-controlled room within the Lake County EOC. Each facility housing individuals was responsible for keeping records of issuance and ingestion of KI and it was noted that individuals should ingest KI only upon the approval of the Ohio Department of Health. Training was furnished to the institution management by the Lake County RRA at the time of distribution. The training included the purpose of KI; proper dosage; contraindicated individuals and possible side effects.

At 1216 hours, after the Emergency Classification Level (ECL) of General Emergency was declared, a Special News Bulletin (D) was issued by the Lake County EMA that advised all individuals in Subareas 1, 2, 3, 4, 5 and 6 to ingest KI if they possess it. This action was approved and recommended by the Ohio Department of Health. The Special News Bulletin was followed at 1222 hours, by the sounding of sirens and an Emergency Alert System (EAS) announcement at 1225 hours. The EAS message repeated the request to those members of the public within the affected Subareas to ingest KI.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the ability to implement protective actions for Persons with Disabilities and Access/ Functional Needs (PDAFN) other than schools within their areas subject to protective actions. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

Overall responsibility for emergency response in Lake County in the event of an incident at the PNPP belonged to the Lake County Commissioners. The Commissioners were assisted by the Emergency Management Agency Director (EMAD) who served as the Chief of Staff for the Commission. They were also assisted by the Lake County Sheriff and the Lake County Public Information Officer (PIO). During this exercise the aforementioned group served as the Executive Group while a Deputy Director of the EMA functioned as the Operations Chief (OC). The Executive Group performed their duties within a separate room from the main portion of the EOC while the OC facilitated emergency response activities performed by the agencies represented within the EOC. External information received was processed by the Executive Group as were actions taken by represented agencies. The Executive Group made decisions as required after consulting with Ashtabula County, Geauga County, PNPP personnel and the Ohio State EOC.

The implementation of protective action for PDAFN was the responsibility of the Lake County Job and Family Services (LCJFS). The LCJFS was represented within the Lake County EOC by two individuals; after receiving a text notification to report to the EOC they arrived at 0840 hours, and began reviewing the Standard Operating Guides. At 0844 hours they met with the EMAD and requested a copy of the list of persons that had been identified as PDAFN. This list was compiled and maintained at the EOC with the assistance of the LCJFS. The County of Lake has identified 21 total locations for PDAFN consideration. At 0919 hours, the confidential list was obtained, observed by this evaluator, and simulated phone calls were made to advise the named individuals of the Alert Emergency Classification Level (ECL) declaration at PNPP. Individuals were asked to confirm their personal need should an evacuation be necessary. These needs were documented for future use. The individuals were also advised to monitor local radio and television reports for further information and requested to attempt to make transportation arrangements if possible. At 0949 hours, contact was established with the transportation supervisor and the fire representative within the EOC and tentative transportation needs were relayed to them. The transportation supervisor made actual calls to seven transportation suppliers, to include: The Perry School District; The Madison School District; The Riverside

School District; Lake-Tran Transportation Company and The Mentor Local School District. They advised that they had commitments for a minimum of 375 busses that would be available to assist in the relocation or evacuation of PDAFN individuals, several of these vehicles were handicap and wheel chair accessible.

At 1010 hours, Lake County was advised of an escalation in ECL to the Site Area Emergency (SAE). Standard Operating Guides dictate that child care centers close at SAE so phone calls were immediately made to facilitate this action (simulated). At 1216 hours, upon the escalation of ECL to a General Emergency, the evacuation of Subareas 1, 2,3,4,5 and 6 was ordered. The LCJFS staff proceeded to identify the PDAFNs located in the affected Subareas and made simulated calls to these individuals to determine transportation needs. These individuals were also advised that a recommendation had been made by the Ohio Department of Health that they ingest KI if they had it on hand. It was established that transportation assistance was needed for one person in Subarea 4 and one in Subarea 6. The transportation supervisor was advised of these needs and busses were dispatched at 1244 hours, to accomplish this task (simulated). Exercise activities were terminated at 1311 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the ability to implement protective actions for schools. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

Overall responsibility for emergency response in Lake County in the event of an incident at the PNPP belonged to the Lake County Commissioners. The Commissioners were assisted by the Emergency Management Agency Director (EMAD) who served as the Chief of Staff for the Commission. They were also assisted by the Lake County Sheriff and the Lake County Public Information Officer (PIO). During this exercise the aforementioned group served as the Executive Group while a Deputy Director of the EMA functioned as the Operations Chief (OC). The Executive Group performed their duties within a separate room from the main portion of the EOC while the OC facilitated emergency response activities performed by the agencies

represented within the EOC. External information received was processed by the Executive Group as were actions taken by represented agencies. The Executive Group made decisions as required after consulting with Ashtabula County, Geauga County, PNPP personnel and the Ohio State EOC.

After receiving notification through the reverse 911 notification system, three representatives of the Lake County School Services arrived at the EOC. At 0904 hours, while still within the Alert Emergency Classification Level (ECL) calls were made to each of the 14 school districts and Child Care Centers located in Lake County. These calls informed the District Superintendents and Care Center Operators of the declaration of the Alert ECL and recommended that they review their Standard Operating Guides. They were also requested to prepare for an escalation of ECL to the Site Area Emergency (SAE). Lake County plans call for the re-location of school students at the SAE declaration. Each School Superintendent was responsible for implementing his/her relocation plan and were responsible for the acquisition of sufficient transportation to complete this activity. All schools had been assigned a host school outside of the 10-mile Emergency Planning Zone and those pairings had been made public through informational bulletins.

At 0924 hours the notification of schools had been completed and this completion was communicated to both the Executive Group and the Public Inquiry (PI) group within the EOC. The information was also shared with the Lake County PIO.

At 1010 hours, the PNPP escalated the ECL to SAE. Upon notification of this development the School Services staff immediately began notification (simulated) to the aforementioned schools District Superintendents, advising them of the need to relocate their students to their pre-determined host schools. It should be mentioned that the EMAD visited the School Services to be sure that the required relocation notification was being conducted. This notification process was completed at 1024 hours, and the completion was reported to the EMAD, PIO and PI groups. The host schools were also notified that they should prepare to receive the relocated students.

At 1036 hours, all students had arrived at their host schools and this was reported to the appropriate groups within the EOC. It should be noted that the School Services staff also made contact with the American Red Cross (ARC) representatives and assisted with the contact for schools to be used as shelters for the evacuating public should that become a necessity.

All activities described in the demonstration criterion were carried out in accordance with the

plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the capability to the ability to select, establish and staff traffic and access control points (TACP) at the Emergency Operations Center (EOC) in a timely manner. The demonstration was conducted at the Lake County EOC, located at 8505 Garfield Road, Mentor, Ohio.

The Lake County Sheriff's Office EOC Representatives, Law Enforcement Coordinators (LEC), are responsible for TACP's in coordination with other local law enforcement agencies. The Lake County Engineer (CE) was responsible for barricades and signs needed for access control. The LEC have 800 MHz radio and cell phone communications available. The radio was their primary means to contact their officers in the field.

The LEC also had a binder that had maps of the TACP's and assignments broken down by the Subareas. The binder also contained a list of the equipment and personnel required and the specific agencies responsible for each designated TACP. The LEC also used a variety of maps and displays created by the GIS staff.

During the Alert Emergency Classification Level (ECL), which was declared at 0744 hours, in Lake County, the LEC put all officers on standby for the possibility of manning TACPs. The CE contacted her personnel and indicated she had crews available to move barricades and signs. Both the LEC and CE continued to follow their respective SOG's in preparation for possible evacuations in conjunction with the Ohio State Highway Patrol (OSHP) and local law enforcement agencies.

At 1007 hours, a Site Area Emergency (SAE) ECL was announced in the EOC and the LEC began contacting all local law enforcement agencies and the OSHP to inform them of the escalation of the ECL to a SAE. He also contacted the Lake Metro Parks Authority (MPA), Ohio Department of Natural Resources and U.S. Coast Guard to begin notification and evacuation of water ways, local and State Parks. The MPA was used to evacuate and close local area parks.

At 1202 hours, a General Emergency (GE) ECL was declared and a Protective Action Decision

(PAD) was made to evacuate Subareas 1, 2, 3, 4, 5, 6, and Lake Erie out to 10-miles. The LEC notified agencies responsible for TACP's to deploy in the evacuation areas and coordinated with the CE to begin the distribution of barricades and signs. The LEC also provided access and security support to reception centers and emergency worker monitoring and decontamination center. It was determined 54 personnel would be needed from the combined agencies to man the TACPs. The agencies needed to man the TACPs included from Lake County (24), Geauga County (6), Ashtabula County (11), Painesville Police Department (1), OSHP Post 4 (4), and OSHP Post 28 (8). The LEC also requested 63 barriers and 48 road closed signs from the CE.

During an interview with the LEC, he described the information communicated to officers in the field regarding the proper use of dosimetry, knowledge of the turn-back limits and that the recommendation by the State of Ohio for emergency workers to take potassium iodine. He also stated that officers in the field would be directed as to the locations of the Willoughby High School Reception Center, North High School Reception Center and Emergency Worker Monitoring and Decontamination Center.

The LEC officer stated that if any additional barricades or signs were needed they would be available and could be requested from the Ohio Department of Transportation by the OSHP. Any changes to the PAD or additional PAD's were communicated to agencies by radio. Notification of rail, water and air traffic is a state function.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the capability to the ability to identify and mitigate impediments to evacuation at the Emergency Operations Center (EOC) in a timely manner. The demonstration was conducted at the Lake County EOC, located at 8505 Garfield Road, Mentor, Ohio.

The General Emergency (GE) Emergency Classification Level (ECL) at the PNPP was received by Lake County at 1202 hours and the evacuation of Subareas 1, 2, 3, 4, 5, 6, and Lake Erie out to 10-miles was decided by Lake County officials at 1214 hours.

At 1229 hours, the Lake County Sheriff's Office EOC Representatives, Law Enforcement

Coordinators (LEC), received information by of an injection from an exercise controller; that there was a dump truck that had dumped an entire load of asphalt at the intersection of Highway 20 and Haines Road. This intersection was identified as being on a designated evacuation route for Lake County and would require re-routing and traffic access control points (TACP). As a result of the crash the intersection was impassable. The incident will take several hours to mitigate.

The OSHP and LEC discussed and coordinated the response. The LEC contacted the Lake County Engineer (CE) to request barricades and equipment for blocking traffic and rerouting traffic around the impediment by using the closest available intersections to the east to go north on Green Street to Chapel and back to the evacuation route. For traffic west of the impediment by directing traffic south on McMackin Road to Woods Road and then east on River Road to State Route 528. The Lake County Sheriff and OSHP personnel and vehicles were used to control access.

This crash created the need for additional TACP's. The Geospatial Information Service (GIS) was able to use the current TACP map and projected it on a large display that the LEC and OSHP representatives could draw and write on in order to see what equipment and manpower was needed to block and reroute traffic. The GIS then implemented the drawings and created new updated maps that showed the location of the blockades and new TACP's.

The LEC provided the Lake County EOC Executive Group, Public Information Officer and Public Inquiry Officer the message at 1245 hours, with a map and detailed description the alternate evacuation routes around Highway 20 and Haines Road. The message was then announced to the entire EOC.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the capability to activate the prompt alert and notification system at

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the Emergency Operations Center (EOC) in a timely manner. The demonstration was conducted at the Lake County EOC, located at 8505 Garfield Road, Mentor, Ohio.

At 1202 hours, the EOC was notified of the declaration of a General Emergency Emergency Classification Level at PNPP with a Protective Action Recommendation (PAR) to evacuate Subareas 1, 2, 3, 4, 5, 6, and Lake Erie out to 10 miles from the PNPP.

At 1209 hours, the Public Information Officer had prepared the Emergency Alert System (EAS) message at the direction of the Emergency Management Director (EMD). The EMD also notified the State of Ohio that Lake County Commissioners had directed him to go with the PNPP recommended PAR at 1212 hours, based on the release information, direction, and wind speed. At 1211 hours, the EMD again stated that Lake County would be following the PAR made by PNPP unless the State made a PAR within the next 3 minutes.

At 1214 hours, the decision to initially alert and notify the public was made by the Lake County EMD with the concurrence of the Lake County Commissioners and Geauga and Ashtabula Counties. The Protective Action Decision (PAD) was to evacuate Subareas 1, 2, 3, 4, 5, 6, and Lake Erie out to 10 miles from PNPP. This decision was made based on the Protective Action Recommendation of PNPP because the State Assessment Group hadn't yet completed verifying the PNPP radiological release data and made an independent PAR.

Siren sounding was scheduled for 1222 hours, and the EAS message broadcast was scheduled for 1225 hours and this was also coordinated with Ashtabula and Geauga Counties. The EAS message was handed to the Communication Officers of the Lake Sheriff's Department who promptly used the EAS encoder in Central Communications area. The message was recorded at 1216 hours, and completed at 1218 hours.

The Communications Officer simulated sounding sirens at 1222 hours. The EAS message was demonstrated by playing the message as a non-broadcasted message that simulated the same procedures as the actual broadcast using a review demonstration test of the message rather than hitting the submit button

The Communication Officer also had the appropriate information needed for a radio bridge call to the radio stations WTAM and WCPN in case there was any issue with the EAS encoder.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the ability to provide accurate emergency information and instructions to the public and the news media in a timely fashion. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The Lake County Public Inquiry (PI) section is located within the EOC and was staffed by volunteers from the Retired Seniors Volunteer Program (RSVP). These individuals monitored a bank of three incoming landline phones and it was noted that during an actual event this number could be increased. At 0846 hours, during the Alert Emergency Classification Level (ECL) the public inquiry group was on site and preparing to receive calls by reviewing their Suggested Operating Guidelines (SOG). At 0911 hours, they received a brief from the Lake County Operations Chief (OC) and the Lake County Public Information Officer (PIO). The supervisor of the PI group conducted a discussion with all of the members and reiterated status of the plant and actions that had been taken by Lake County. They reviewed information that was to be given and agreed that the callers would be advised that no action was necessary at the present time but they were to monitor local radio and television stations for further information.

At 0918 hours, the PI group received their first call from an individual wishing to know what was going on at the plant. The caller was reassured that the situation was being monitored by the Lake County Emergency Management Agency (EMA) and other appropriate agencies. He was told to monitor local news media and that the public was not being asked to take any protective measures at that time. The caller advised that he had heard about an accident at PNPP on the radio. The second call, received at 0925 hours also indicated that the caller had heard of an accident at PNPP on the radio. This was interpreted as a trend and it was reported to the Lake County PIO as such. Two calls from out of State media were received during a short period and this was also reported to PIO as a trend. Between 1235 hours and 1248 hours several calls were received reference KI, this was also reported to the PIO as a trend.

During the exercise the PI group received a total of 27 phone calls from the public. On each occasion, accurate and timely information was given to the callers. Public Inquiry staff referred to current news releases, Emergency Alert Messages and the Lake County 2016 Emergency Preparedness Information booklet when researching answers. They received up to date

information on a regular basis from the OC and the Lake County PIO. Questions which they were unable to answer were relayed to the proper agency and it was assured that the callers got an answer to all questions. Callers were occasionally called back to deliver an answer that took an inordinate amount of time to research.

The Lake County PIO issued a total of 11 Press releases during this exercise beginning with Press Release #1 at 0828 hours. Each release was accurate, clear and consistent with decisions made regarding protective actions to be taken. Locations mentioned were clearly described using local landmarks and commonly known boundaries. The public was constantly referred to the EMA Emergency Preparedness Information booklet and also advised where further information could be obtained; Lake County Web-site and local telephone directory.

A Special Information Bulletin #9 issued at 1035 hours, advised the public of the relocation of school students. It gave very succinct instructions to parents and clearly identified each receiving host school, where students were to be picked up.

At 1222 hours, the siren system was activated and an EAS message was broadcast at 1225 hours. This message informed the public of the General Emergency declaration at PNPP and advised those persons within five miles of PNPP and ten miles downwind to the south and southeast of the PNPP to evacuate the area. They were told to monitor the EAS channel for further information and to refer to the information in the local telephone book or their copies of the Emergency Preparedness Information booklet. A subsequent Special Information Bulletin #8 was issued at 1235 hours informing the public of the location of two shelters being opened for Lake County evacuees; one at South High School in Willoughby and one at North High School in Eastlake. All messages were consistent with decisions made in the Executive Group and this decision making process was evaluated under separate criterion. This process was not observed by this evaluator.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None

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

4.3.2.3 Lake County – EOC - Executive Group

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Emergency Operations Center demonstrated the capability of personnel in key leadership roles to provide direction and control to that part of the overall response effort for which they were responsible. The demonstration was conducted in the Lake County Emergency Operations Center (EOC), located at 8505 Garfield Road, Mentor, Ohio.

During this event, the Lake County Emergency Management Director (EMD), the County Sheriff, a Public Information Office (PIO) Liaison and two County Commissioners made up the EOC Executive Group. The Executive Group worked in an office adjacent to the EOC and the Accident Assessment Room. The Executive Group was functional and could make essential decisions prior to the EOC being operational at 0911 hours. The configuration of the Executive Group would change according to the type of emergency, its size and complexity. All County Commissioners would remain in the facility throughout an emergency event. The facility had sleeping rooms, cooking appliances and showers for prolonged operations.

The PNPP had declared an Alert Emergency Classification Level (ECL) at 0752 hours, which was communicated to the EOC at 0757 hours. The Utility Representative in the EOC reviewed the condition of the plant and actions being taken to correct the problem with the Executive Group. The EMD directed the Executive Group to review their Alert checklist and look ahead to the next steps.

The initial call using the Executive Decision Line (EDL) was made at 0840 hours. This conference line connected the Lake County Executive Group with the Ohio Emergency Management Agency (OEMA), and Geauga and Ashtabula County Emergency Operations Centers (County Executive Groups). The decision makers decided to keep the line open throughout the exercise. The PIO validated the emails for each of the Offsite Response Organizations (OROs). Lake County was the Lead County for the activation of the Emergency Alert System (EAS)/sirens, and preparing messages and news releases. The Executive Group

discussed all Protective Action Recommendations (PARs), Protective Action Decisions (PADs) and Early Precautionary Action Recommendations prior to implementing those actions. All releases, PNPP EAS information, and bulletins were emailed to each of the OROs. The Executive Group also continued to communicate with the PNPP Liaison working with the Accident Assessment group in the adjacent room.

The Lake County Emergency Management Director (EMD) guided the critical activities and provided the group with a brief background on policy and procedures regarding each PAD and PAR, and checklist actions. The Executive Group discussed actions according to their checklist and made decisions directly with the function working in the EOC, but did not directly manage the activities within the EOC.

At 0901 hours, the Executive Group directed that the School Representatives should relocate the school students when the PNPP ECL increased to the Site Area Emergency (SAE) ECL. The EOC was declared fully operational at 0911 hours. The Lake County Executive Group opened the EDL, to share situational awareness at 0930 hours. At 1007 hours, the Executive Group was notified that the PNPP had declared a SAE ECL at 0954 hours.

Each ORO provided a brief statement of their activities and potential gaps and discussed the recommendation to submit a request to the Ohio State Emergency Management Agency for the Governor to Declare a State of Emergency. At 1015 hours, the Lake County Commissioners declared a local State of Emergency.

At 1202 hours, the Executive Group and EOC Staff were notified that the PNPP had declared a General Emergency (GE) ECL at 1150 hours, and that a release of radioactivity was in progress. The PNPP PAR was to evacuation Subareas 1, 2, 3, 4, 5, 6 and that portion of Lake Erie within 10 miles of the plant. At 1217 hours, the State of Ohio EOC recommended evacuation on Subareas 1, 2, 3, and Lake Erie and that KI should be taken by emergency workers, institutionalized individuals and the general public.

Through discussions over the EDL, the county Executive Groups discussed the State's recommendation. After a reasonable time, the decision was made to keep the initial decision to evacuate Subareas 1, 2, 3, 4, 5, 6 and the 10 mile portion of Lake Erie near the PNPP. Also the decision was made to order the use of KI for emergency workers, institutionalized individuals and the general public. The Ohio Department of Health adjusted the total radiation dose limit from 5R to 2R and the turn-back limit from 2R to 1R.

All activities described in the demonstration criterion were carried out in accordance with the

plan, procedures and extent-of-play agreement.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654/FEMA-REP-1, C-6; J-10.e, f; K.3.a, 4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Emergency Operations Center demonstrated the capability to use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of potassium iodide (KI), was in place for Emergency Workers (EW), including provisions to authorize radiation exposure in excess of administrative limits or Protective Action Guides. The demonstration was conducted at the Lake County Emergency Operations Center (EOC), at 8505 Garfield Road, Mentor, Ohio.

At 1049 hours, the Lake County Public Information Officer (PIO) was assigned to a task that potentially could lead him to work within the 10-mile Emergency Planning Zone. Because there was a threat for a release of radiation he was directed to receive equipment and monitors and attend a Dosimetry Briefing. The Lake County EOC Radiological Officer (RO) provided the briefing in the EOC.

The briefing included a description of the dosimetry packet, permanent record dosimeter, pocket dosimeters (0-20 R and 0-200 R), and Potassium Iodide (KI). The PIO verified that both pocket dosimeters read zero and practiced the process to zero the instrument.

The RO provided direction on the proper placement of dosimetry, to include wearing it in the outermost garment, front torso of the body and to read it at least every 30 minutes and report the readings. The RO recorded the PIO phone number to obtain readings, if required. The RO advised the PIO of exposure limits and the turn-back dose.

The RO explained the reason for the use of KI and that it should be taken only when the PIO was working inside the EPZ and as soon as possible after a release and directed to take it, by the supervisor, Team Lead, or the Ohio Department of Health in the EOC. The RO explained the side effects and to report any allergic reactions to his Team Lead

The Ohio Department of Health was responsible for the decision to recommend that EWs ingest

KI. At 1150 hours, PNPP declared a General Emergency (GE) Emergency Classification Level (ECL), Lake County was notified at 1202 hours. At 1215 hours, the decision was made to recommend that EWs ingest KI. Turn-back values were revised: $5R = 2R$ and $2R = 1R$. At that time the RO called the PIO and advised him to take KI (simulated) and recorded the readings.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Emergency Operations Center demonstrated the capability to implement a decision-making process involving consideration of appropriate factors and that necessary coordination was used to make precautionary and/or protective action decisions for the general public (including the recommendation for the use of potassium iodide (KI)). The demonstration was conducted in the Lake County Emergency Operations Center (EOC) facilities, located at 8505 Garfield Road, Mentor, Ohio.

The direction and control of offsite emergency activities in Lake County was the responsibility of the County Commissioners. The Commissioners received advice and support from the Emergency Management Agency Director (EMAD), the Deputy Sheriff, and the Public Information Officer Liaison, who, with the Commissioners, comprised the EOC Executive Group. The EMAD briefed the group on several occasions throughout the exercise to review their checklists and look ahead to the actions and decisions required to deal with the next Emergency Classification Level (ECL).

At 1203 hours, the Executive Group received a protective action recommendation from the PNPP and the State of Ohio. The recommendation was to evacuate. The Lake County Commissioners waited a reasonable amount of time for the State to issue a Protective Action Recommendation (PAR) before initiating protective actions at the County level. The Director of the Ohio Department of Health (ODH) made the decision for the general public and Emergency Workers to take KI. The ODH through the local health department made KI available to the general public by pre-distribution and by having supplies available at care centers.

At 1202 hours, the State Radiological Analyst advised the EMAD that PNPP had declared a General Emergency (GE) ECL at 1150 hours. The Executive Group Room discussed the GE ECL and the licensee PAR to evacuate Subareas 1-6 and Lake Erie, and to administer KI to the general public and Emergency Workers. The EMAD activated the Executive Discussion Line to discuss and coordinate the PAR with Ashtabula County, Geauga County and the State of Ohio. In the discussions, factors taken into account were the licensee PAR, assessment of plant conditions, the fact that there was a radiological release in progress, recommendations from the State Radiological Analyst, meteorological conditions, and the portion of the 10-mile Emergency Planning Zone that was affected. The Executive Group determined that they concurred with the PNPP recommended PAR, and along with Geauga and Ashtabula Counties made the Protective Action Decision in a timely manner at 1227 hours to evacuate ace in Subareas 1-6, and Lake Erie, and to administer KI to the general and Emergency Workers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Emergency Operations Center (EOC) demonstrated that Precautionary and/or Protective Action Decisions were made, as appropriate, for groups of persons with disabilities and access/functional needs. Lake County successfully demonstrated that Protective action Decisions (PADs) were made, as appropriate, for groups of persons with disabilities and access/functional needs (PDAFN). The demonstration was conducted in the Lake County Emergency Operations Center (EOC), located at 8505 Garfield Road, Mentor, Ohio.

At the onset of the Exercise, the Lake County Job and Family Services (LCJ&FS) staff working in the EOC, requested the list of PDAFNs from the Executive Group; contacted the American Red Cross to verify shelter status/locations; called all the Child Care Centers to advise them of the emergency, and reached out to the transportation services to verify any services that would be available to the agency. The staff called (simulated) seven households to verify their need for transportation, if an evacuation order was issued. All seven households had the need for transportation, one required an ambulance or lift-capable vehicle. The school busses were used to transport residents from predesignated pick-up locations. The LCJ&FS staff maintained

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situational awareness with School Representatives, Emergency Medical Officer, Transportation agencies, and the American Red Cross throughout the exercise.

This PDAFN list was managed by the Lake County Emergency Management Agency (EMA). Those residents that had special needs could opt in to the program by completing the Response Card attached to the Emergency Preparedness Information pamphlet and then mail it to the EMA office. The pamphlet is produced by the utility and distributed annually, to residents within the 10-mile Emergency Planning Zone (EPZ)

At 0901 hours the Executive Group met with the School Representatives to discuss with them any impediments or issues that may cause a delay or prevent the evacuation of all schools located within the 10-mile EPZ. There were none. The Executive Group directed the School Representatives to relocate the school students if a PNPP Site Area Emergency (SAE) Emergency Classification Level (ECL) occurred. Also at 1013 hours, the Executive Group gave the order to prepare two shelters at the North and South High schools. To support the activities required to implement PADs for PDAFNs, the Commissioners declared a local State of Emergency at 1010 hours.

At 1007 hours, SAE ECL was declared in the EOC and the School Representatives implemented the PAD to relocate students and the LCJ&FS staff took action to transport PDAFNs (simulated) in accordance with County plans and procedures.

The Emergency Medical Officer contacted hospital and nursing homes, providing the status of the emergency at PNPP and placing them on stand-by. The Staff also validated the availability of host facilities for nursing homes and hospitals in the event an evacuation order was issued.

The County Sheriff's Office would coordinate efforts to relocate the County Adult Detention Facility inmate's and obtain transportation assets to move inmates to the Ashtabula or Geauga Counties' jails or Lake County Police departments, if an Evacuation Order was issued. The Executive Group would agree to such an order to take that action, in coordination and agreement of the Lake County Corrections Division.

Throughout the Exercise, the Executive Group considered possible PARs for the general population and formulated actions specific to the logistical requirements of PDAFN, including individuals in nursing homes, assisted living centers, and jails. The PAR was provided to the Counties at 1203 hours and discussed over the Executive Decision Line. The PAR was to evacuate Subareas 1, 2, 3, 4, 5 and 6 and Lake Erie, and to administer potassium iodide to those evacuated.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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

4.3.2.4 Lake County – EOC - PIO

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Emergency Operations Center (EOC) demonstrated the capability to provide accurate emergency information and instructions to the public and the news media in a timely manner. The demonstration was conducted in the Lake County Emergency Operations Center (EOC) facilities located at 8505 Garfield Road, Mentor, Ohio.

The Lake County Public Information Officer (PIO) and two liaisons reported to the EOC, which was located outside the 10-mile Emergency Planning Zone (EPZ). The staff operated in a room located next to the Executive Group office. The room had a thoroughfare directly to the Executive Group (ExGrp) Room. The PIO was a member of the Executive Group. The PIO office had phones, handheld radios and a pre-programmed printer/facsimile machine set up to provide information to numerous addressees, there was also a laptop.

As the lead county, Lake County PIO prepared Press Releases, bulletins and prepared the EAS message. All documents were emailed to the Ohio Emergency Management Agency (EMA) and Geauga and Ashtabula County Emergency Operations Centers and the PIO at the JIC. The PIO Liaison confirmed the accuracy of the email addresses during the initial conference call via the Executive Discussion Line (EDL)

The public was informed of the emergency conditions and response actions through Press Releases. Information was also disseminated by the use of Special News Bulletins (SNB) or Special Information Bulletins (SIB). Throughout the exercise, the PIO or the PIO Liaison prepared the documents that were submitted to the Commissioner(s) for their review and approval. All documents were initialed by at least one Commissioner prior to dissemination. All documents were pre-scripted and categorized, to the extent that they contained verbiage that would respond to a particular situation/activity. Some additional details were inserted prior to being submitted for approval.

Throughout the exercise the PIO staff prepared and disseminated 12 News Releases, and supporting bulletins: three SNBs (Limited Precautionary Message, Sheltering of Livestock and Poultry and Evacuation Recommendation) and three Special Information Bulletins (Hotline numbers, Care Center status and Relocation of Schools).

At 0856 hours the PIO emailed the initial Press Release (#1) that explained to the public that an emergency was declared at the PNPP, and the emergency was classified as Alert, the lowest Emergency Classification Level (ECL).

At 0959 hours, Press Release #2 was prepared and provided information about the plant status, which remained at the Alert ECL.

At 1001 hours, Press Release #3 was prepared and supplied the public with the status of the plant, upgrade to Site Area Emergency, the second highest ECL and information to obtain additional information.

Press Release #4 notified the public that a Site Area Emergency ECL was declared at the PNPP.

At 1015 hours, Press Release #5 was prepared and let the public know that the Board of Commissioners declared a State of Emergency in Lake County.

At 1022 hours, Press Release #6 was prepared and announced the closures of waterways and State/Federal Parks.

Press Release #7 disseminated information directing farmers to shelter livestock and poultry.

At 1037 hours, Press Release #8 was prepared and announced the relocation of schools located in the 10-mile Emergency Planning Zone.

Press Release #9 supported the action to open the Joint Information Center.

Press Release #10 announce that the PNPP increased the ECL to General Emergency and

evacuation recommendations.

Press Release #11 provided the public with information and directions to Care Centers.

Press Release #12 provided information about Hotline phone numbers.

During the exercise the PIO received a request about how to obtain information concerning the emergency at the plant, in Spanish. The County had a linguist that would translate any information pertinent to the emergency into Spanish, on request. This information was forwarded to the Public Inquiry desk. No news media interviews or briefings were conducted by the County PIO in the EOC during the exercise.

At 1202 hours the EOC announced that at 1150 hours a General Emergency ECL was declared at the PNPP. At that time the PIO completed the Emergency Alert System (EAS) message and submitted it for review to the Commissioners. The message was approved by the Commissioners and then delivered to the Lake County Central Communications Dispatch Center Staff operating in the EOC, for processing.

Information and press releases for the public on protective actions for schools and the general public were transmitted in a timely manner to the JIC and provided to the Public Inquiry section of the EOC.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.5 Lake County – EOC - Assessment Room

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

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During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday September 13, 2016 the Lake County Assessment Room successfully demonstrated the use of equipment, maps, dosimetry, potassium iodide (KI) and other supplies sufficient to support emergency operations. The demonstration was conducted at the Lake County Emergency Operations Center located at 8505 Garfield Road, Mentor, Ohio.

Since the Lake County EOC was outside the 10-mile emergency planning zone for the PNPP (15 miles from the plant), dosimetry and potassium iodide (KI) were not needed for personnel in this facility.

The County Radiological Officer who was the Dosimetry Coordinator stated that emergency workers deployed into the 10 mile EPZ would be issued emergency worker dosimetry packets when they picked up their equipment. Emergency Worker Dosimetry packets consisted of a CD V-730 Direct Reading Dosimeter (0-20 R, calibration date 01/15/2016), a CD V-742 Direct Reading Dosimeter (0 to 200 R, calibration date 01/15/2016), a permanent reading dosimeter (ESCORT Landauer thermo-luminescent dosimeter, issue date 01/01/2016, a Dosimetry Report Form and a packet of 10 KI tablets of 65 mg each with an expiration date of 12/31/2019.

The County Radiological Officer had available a box with three Ludlum 3 counting meters with a Ludlum 44-9 pancake probe. The calibration dates were 01/15/2016.

The County Radiological Officer stated that he had a stockpile of 3500 packets of KI tablets for distribution to emergency workers. The expiration date was 12/31/2019. This was in addition to the stockpile of packets of KI maintained by the Lake County General Health District for use by the general public.

A map showing the 10-mile EPZ with the predesignated field monitoring team locations and an 800 Mega Hertz County radio was in use by the Lake County General Health District Field Team Coordinator.

Two Status Boards for the meteorology data and the results of the field monitoring team surveys were in use by the Ohio Emergency Management Agency and Ohio Environmental Protection Agency Liaisons.

A TV display showed the Lake County EOC Log of key events.

A laptop computer with the PNPP Meteorological Information and Dose Assessment System dose projection model, a desktop computer with the PNPP EDATA system (plant equipment

data) and a cellular phone was in use by the Ohio Emergency Management Agency and Ohio Environmental Protection Agency Liaisons.

A laptop computer with e-mail, a land line phone and a MACRS radio was used by the Ohio Department of Health Liaison.

A 5-way dedicated phone and a backup 5-way dedicated phone system were in use by the Lake County Communicator.

There was a Brother MFC3220 facsimile machine used for outgoing documents and a HP Laser Jet Pro printer/facsimile machine used for incoming documents. Copy machines were available in the main room of the Lake County EOC.

Plans and procedures in use were the Lake County Radiological Emergency Response Plan Revision 24, 2016, Ohio REP Incident Response Plan, and Ohio Emergency Operations Plan (04/2015).

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654/FEMA-REP-1, C-6; J-10.e, f; K.3.a, 4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday September 13, 2016, the Lake County Assessment Room successfully demonstrated the use of a decision making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, was in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits. The demonstration was conducted at the Lake County Emergency Operations Center located at 8505 Garfield Road, Mentor, Ohio.

The Lake County Radiological Officer was the Lake County Dosimetry Coordinator. Based on interview, it was determined that the Dosimetry Coordinator was responsible to assign an administrative exposure limit/turn-back value and to take the necessary actions to ensure that the worker's exposure was kept as low as reasonably achievable. If the worker reached the assigned

exposure limit, and was involved in life saving activity or protecting large populations and could not be relieved, the Dosimetry Coordinator would then contact the Ohio Department of Health (ODH) and request approval for the individual to receive exposure beyond the assigned dosimeter limit/turn-back value. Persons less than 18 years of age, pregnant females, and those allergic to iodine would not be assigned to emergency response duties which involved exposure to radiation.

The administrative exposure limits/turn-back values were as follows: 1 R for standard response functions, 2 R for protection of valuable property, and 5 R for life saving missions or for protecting large populations. These corresponded to the Total Effective Dose Equivalent (TEDE) limits of 5, 10, and 25 rem, respectively. Since the Direct-Reading Dosimeter (DRD) could not measure inhalation dose, the administrative exposure limits included a factor of 5 as the dosimeter correction factor to account for dose from inhalation. Personnel from PNPP, if applicable, would recommended a change to the exposure limit/ turn-back value. This recommendation would be based on a calculated ratio of TEDE to Effective Dose Equivalent. The administrative exposure limits were measurable on the DRDs that were issued.

Potassium iodide tablets were to be taken only when the Ohio Department of Health (ODH) authorized their use, and the worker was instructed by his Dosimetry Coordinator to take KI. The KI tablets were included in the emergency worker's dosimetry packet, which was issued to the worker prior to deployment. These tablets came with instructions for use and side effects.

The process used by ODH to recommend KI was as follows: KI may be recommended on the basis of a confirmed release, actual or projected child thyroid dose of 5 rem, confirmed fuel clad damage, an imminent release, plant conditions indicating further degradation and/or a release. Careful evaluation of plant systems and local conditions would guide KI issuance in a hostile action event. The recommendation for KI administration was for all categories of individuals in the affected Subareas and would be in accordance with U.S. Food and Drug Administration approved dosage guidance. The choice of the individual to take KI was voluntary.

Plans and procedures in use were the Lake County RERP, Rev 24, 2016; Ohio REP Incident Response Plan; and the Emergency Operations Plan, Section X, Radiological Exposure Control, 2015.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP), Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday September 13, 2016, the Lake County Assessment Room successfully demonstrated the issue of appropriate dosimetry and procedures, and the management of radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and recorded the readings on the appropriate exposure record or chart. The demonstration was conducted at the Lake County Emergency Operations Center located at 8505 Garfield Road, Mentor, Ohio.

The Lake County Radiological Officer was the Dosimetry Coordinator in the Lake County Emergency Operations Center. He was responsible to issue dosimetry and to brief the County emergency workers, except for the Lake County General Health District (LCGHD) Field Monitoring Teams who were issued dosimetry and briefed by the LCGHD Field Monitoring Team Coordinator. The administrative exposure limits for emergency workers were as follows: 1 R for standard response functions, 2 R for protection of valuable property, 5 R for life saving missions or for protecting large populations. These corresponded to the Total Effective Dose Equivalent (TEDE) limits of 5, 10 and 25 rem, respectively. The administrative exposure limits were set to include a factor of five for the dosimeter correction factor to account for dose from inhalation that could not be measured by the Direct-Reading Dosimeter (DRD). The administrative exposure limits were measurable on the DRDs that were issued.

The Dosimetry Coordinator used a checklist to brief two emergency workers (EWs) with field assignments in the Joint Information Center as they came in prior to being deployed. The Joint Information Center was within the 10-mile Emergency Planning Zone. The Dosimetry Coordinator filled out the Dosimetry Issue Record Form using the dosimeters in the worker's dosimetry packet. He asked each EW to review the instructions on the Dosimetry Report Form and complete the top portion of the form. The dosimeters were to be read every 30 minutes and the reading was to be recorded. The EW would record the "Mission Limit / Turn-back Value" of 1 R on the Dosimeter Report Form. The EW was not to exceed this limit unless authorized to do

so. The Dosimetry Coordinator asked the EW to review the potassium iodide (KI) Instruction Sheet and reminded them that workers should only take KI when it is recommended by the Ohio Department of Health (ODH), and they are instructed to do so by their Dosimetry Coordinator.

At 1215 hours, the ODH made the decision to take KI. The Dosimetry Coordinator instructed the various Lake County Department Heads to notify their emergency workers to take KI and record this action on the Dosimeter Report Form.

The State of Ohio made the recommendation that the exposure limit be reduced from 5 R to 2 R and from 2 R to 1 R. This recommendation was implemented by Lake County at 1224 hours. At 1320 hours, the process for upgrading a worker's exposure limit beyond 1 R was successfully demonstrated by the Dosimetry Coordinator through an inject of a mini-scenario involving one of the Lake County field monitoring teams.

Plans and procedures in use were the Lake County RERP Revision 24, 2016; Ohio REP Incident Response Plan; and Emergency Operations Plan (04/2015).

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 2.a.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.6 Lake County – FMT - DC Briefing

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Field Monitoring Team (FMT) Coordinator demonstrated the capability to provide equipment, maps, displays, and other supplies for the radiological briefing to support

emergency operations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) Garage located at 8505 Garfield Road, Mentor, Ohio.

The Lake County FMT Coordinator confirmed the distribution of dosimetry kits to both of the Lake County Field Monitoring Teams, including appropriate dosimetry, potassium iodide, and forms. The FMT Coordinator confirmed that operational and inventory checks had been completed successfully. The equipment was stored in the Lake County EOC Garage and was maintained by the State of Ohio. Two dead batteries were replaced from the cache of equipment stored in the garage. The FMT Coordinator issued two handheld radios as part of the 800 MHz County Radio System to each team. Equipment and dosimetry descriptions for the Lake County FMTs is located in the FMT narratives.

The FMT Coordinator was supplied with appropriate PNPP maps and office supplies to support the emergency function.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the capability to issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with plans and procedures. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The Field Monitoring Team (FMT) Coordinator conducted a detailed radiological briefing to both Lake County FMTs following the issuance and operational check of dosimetry. The radiological briefing was outlined in Appendix A of the Standard Operational Guidance, Revision 15, June 2016. The briefing was both thorough and comprehensive. The FMT Coordinator described the operation of the Electronic Personal Dosimeter and the Optically Stimulated Luminescence Dosimeter. He explained the turn-back level of 1 R and the level of 5

R for life saving activities. He discussed the benefits of potassium iodide (KI) and instructed team members to ingest a 130 milligrams dose only when directed and if there are no known allergies. He described the potential side effects of KI, instructions for recording dosimeter readings, and completing provided exposure logs. The briefing also included safety considerations for vehicle operation and personal safety. The FMTs were instructed to read their direct reading dosimeters every 30 minutes or as directed. Communication checks with the 800 MHz radios were conducted prior to deployment and immediately following deployment.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.7 Lake County – FMT Coordination and Communications

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Field Monitoring Team (FMT) Coordinator demonstrated that at least two communications systems were available, at least one of these systems operated properly, and communication links were established and maintained with appropriate locations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC), located at 8505 Garfield Road, Mentor, Ohio.

The FMT Coordinator utilized the Lake County 800-mHz Radio System as the primary communications system with the FMTs. Each team had two radios and used personal cellular

telephones as back-ups to the primary communications system. Cellular telephone numbers for the FMTs were obtained following the radiological briefing and prior to deployment.

Communications with the FMTs throughout the exercise were clear and easily understood. No communication failures were observed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Field Monitoring Team (FMT) Coordinator demonstrated the capability to provide equipment, maps, displays, and other supplies to support emergency operations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The FMT Coordinator operated in the dose assessment area of the EOC, sitting adjacent to the Dose Assessment Coordinator and the State Liaison Officer. He utilized a County road map, with grease pencil overlay, to monitor and direct the FMTs while deployed. All readings and data were recorded on "FMT Results Worksheets", "FMT Exposure Logs" and "FMT Status Update" forms. If needed, the FMT Coordinator had access to landline telephones, event status logs posted in the main room of the EOC, and computers with printer access. Dosimetry and potassium iodide were not required since the EOC was outside the 10-mile Emergency Planning Zone.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Field Monitoring Team (FMT) Coordinator demonstrated the capability to

manage FMTs to obtain sufficient information to help characterize the release and control radiation exposure. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The FMT Coordinator dispatched both FMTs at 0958 hours, following an analysis of the meteorological conditions which were wind direction from 310 degrees, 6 miles per hour, stability class D, and no precipitation expected. Based on the analysis, the FMT Coordinator assigned Field Team 1 to an East-West traverse route on Antioch Road, approximately 1 ¼ miles from the PNPP. He assigned Field Team 2 to a North-South traverse route on River Road, approximately 1 ½ miles from the PNPP. Each route was approximately two miles long. The FMTs arrived at their assigned location at 1036 hours and 1037 hours. The FMT Coordinator provided a status update to the FMTs, at 1037 hours, which included an upgrade to an Emergency Classification Level (ECL) of Site Area Emergency, and confirmation that there was no change to previously provided meteorological conditions. The FMTs were directed to conduct a traverse of their assigned route, monitoring radiological readings, at 1040 hours, 1100 hours, 1205 hours, and 1220 hours with no elevated levels found. The 1205 hours, communication provided the notification of an elevated ECL to a General Emergency and radiological release. The FMTs reported readings to the FMT Coordinator at the conclusion of each traverse, which were background at all times for Field Team 1, and background for Team 2 at the first three traverses. The FMT Coordinator reminded the FMTs to check their dosimeters every half hour starting at 1025 hours. At 1226 hours, FMT 2 reported that they had located the plume, with a reading of 1.83 mR/hr at the centerline, located 1.6 miles from the PNPP. They identified the plume edges at 1.5 and 1.9 miles from the PNPP. The FMT 1 continued to report background readings. The FMT Coordinator provided this data to the Dose Assessment Coordinator who was located in the immediate area.

By Controller inject, at 1240 hours, Team 2 reported (while out of the plume in a safe location) that they had exceeded their turn-back value of 1R and requested direction. The FMT Coordinator contacted the Lake County Radiological Officer (RO), who advised that decisions regarding further deployment must be made by the Ohio Department of Health. The Lake County State Liaison Officer, who maintained continual contact with the State EOC on landline telephones, was advised at 1241 hours to request a decision from the State regarding permission for the FMT to exceed its turn-back value. A conference was held on the telephone with the County RO and the FMT Coordinator, and a decision was made at 1305 hours to allow the FMT to re-enter the plume and take an air sample provided the exposure stayed below 1.64 R. This decision considered the time estimate of approximately 10 minutes to enter the plume, take an air

sample, drive to a safe area, obtain data, and return to the EOC Garage for decontamination. Data was reported to the FMT Coordinator at 1348 hours. The teams were directed to return to the EOC at 1325 hours and 1348 hours. The exercise was terminated at 1350 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- h. MET: 1.d.1, 1.e.1, 4.a.2
- i. LEVEL 1 FINDINGS: None
- j. LEVEL 2 FINDINGS: None
- k. PLAN ISSUES: None
- l. NOT DEMONSTRATED: None
- m. PRIOR ISSUES: RESOLVED: None
- n. PRIOR ISSUES: UNRESOLVED: None

4.3.2.7 Lake County – FMT #1

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County Field Monitoring Team 1 demonstrated at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

Lake County Field Monitoring Team 1 (FMT 1) was equipped with cellular mobile telephones (backup), and portable radios operating on the Ohio MARC 800 MHz radio system. The 800 MHz radios were the primary communication method and functioned properly during the exercise. The FMT 1 members communicated adequately with the Field Monitoring Team Coordinator throughout the exercise.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Field Monitoring Team 1 demonstrated equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI), and other supplies were sufficient to support emergency operations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The Lake County Field Monitoring Team 1 (FMT 1) was well equipped. They had a modified van with built-in workbench, counter space, and storage drawers. The van had 120-volt auxiliary power provided by a 12-volt power inverter and high capacity batteries. The FMT 1 had an Eberline RAS-1 air sampler, calibrated July 8, 2016 and due for recalibration on July 8, 2017. The air sampler was equipped with silver zeolite cartridges for iodine sampling. The silver-zeolite cartridges expire on 07/06/2026.

The FMT 1 van had two built-in Ludlum Model 2200 scaler/rate-meter instruments for counting air samples. One Model 2200 was equipped with an Eberline HP-210 detector for counting paper particulate samples. The other Model 2200 had a Ludlum Model 44-10 sodium iodide detector in a custom made jig for counting the silver zeolite cartridges. Both Model 2200 instruments were calibrated on November 2, 2015 and due for recalibration on November 2, 2016. The Ludlum 2200 instruments were response checked with two radiation check sources: a 1 uCi Cesium-137 button or a zeolite cartridge impregnated with Barium-133.

The FMT 1 had a Ludlum 2241-3 digital radiation survey meter with multiple detectors. The Ludlum 2241-3 was demonstrated with a Model 44-38 side-window GM detector for ambient radiation measurements. The FMT 1 had a Canberra Mini-Rad 213 calibrated on November 2, 2015 and due for recalibration on November 2, 2016. The Mini-Rad was used as an electronic personal dosimeter.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures. Emergency workers periodically and at the end of each mission read their dosimeters and

record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA REP-1, K.3.a, b; K.4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Lake County Field Monitoring Team 1 demonstrated appropriate dosimetry, KI and procedures, and managed radiological exposure to emergency workers in accordance with the plans/procedures. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8550 Garfield Road, Mentor, Ohio.

Lake County Field Monitoring Team 1 was issued Landauer Escort Optically Stimulated Luminescence Dosimeters for permanent record dosimetry (dated 1/1/16 – 12/31/16), ten 65-milligram ThyroSafe™ potassium-iodide (KI) tablets (lot number TU401A, expiration 12/2019), and a Canberra Mini-Rad 213 electronic dosimeter.

The Field Monitoring Team Coordinator briefed the field monitoring teams before they were dispatched. The briefing adequately covered the proper dose of KI, side effects, and contraindications. The Coordinator instructed the team not to take the KI until instructed to do so. The team was instructed to read their electronic dosimeters, communicate their radiation exposures every 30 minutes, notify the Field Team Coordinator if they reached their exposure limit of 1 R (5 rem Total Effective Dose Equivalent), and turn in their dosimetry at the end of their shift. Team members were knowledgeable of their exposure limits and use of KI.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County Field Monitoring Team 1 demonstrated the capability to make ambient radiation measurements. Measurements were made and recorded at appropriate locations, and radioiodine and particulate samples were collected. The demonstration was conducted at the Lake County

Emergency Operations Center (EOC), located at 8505 Garfield Road, Mentor, Ohio.

Lake County Field Monitoring Team 1 (FMT 1) arrived at the Lake County EOC about 0900 hours. The team was briefed by the Field Monitoring Team Coordinator that PNPP had declared an Emergency Classification Level (ECL) of Alert at 0752 hours, and the team had been activated. The FMT's equipment was pre-inventoried and the vans were kept locked in the Lake County EOC garage. The team pulled their van out of the garage and began their preoperational equipment setup and checks. The FMT 1 was very well equipped with multiple radiation survey meters. The meters were operationally checked with appropriate radiation check sources. The Canberra Mini-Rad 213 didn't pass the operational check and required battery replacement.

The team was issued dosimetry packets that contain ten 65 milligram ThyroSafe™ potassium-iodide (KI) tablets, a permanent record dosimeter, and a dosimetry record form. They were adequately briefed on the proper dosage and side effects of KI, and told not to take the KI until they were instructed by the Field Monitoring Team Coordinator, and to transmit their dosimeter readings every 30 minutes, or if they reached their turn-back limits.

The team performed a radio check and left the EOC at about 1000 hours. The Field Monitoring Team Coordinator transmitted the meteorological conditions to the team following the radio check. The team was dispatched to a position at Middle Ridge Road and Route 20, and instructed to traverse east on Middle Ridge Road to the intersection of Dayton and Middle Ridge. The team arrived at their initial monitoring location about 1040 hours and began their traverse. This traverse was completed at about 1055 hours, and the team turned around in the Madison Middle School parking lot and traversed back west to their initial monitoring point at Route 20 and Middle Ridge Road. The team was instructed by the Field Monitoring Team Coordinator to find a safe spot to get lunch, and hold that position until further instructions.

At 1207 hours, the Field Monitoring Team Coordinator notified the team that PNPP had declared an Emergency Classification Level of General Emergency at 1204 hours, and to begin a traverse east on Middle Ridge Road to Dayton Road. The team traveled back to Madison Middle School, arriving about 1215 hours. The Field Team Coordinator transmitted that there had been a protective action decision to evacuate Subareas 1-6 and the Lake, and that emergency workers should take their KI. The team simulated taking KI at 1220 hours.

The team continued traversing along Middle Ridge Road between Route 20 and Dayton Road until they encountered slightly elevated radiation readings at 1235 hours. They contacted the Field Monitoring Team Coordinator and were instructed to find the other side of the plume. The

team finished their traverse at Route 20 and Middle Ridge Rd and continued west on Route 20 about a half mile until they decided the edge of the plume was about the intersection of Route 20 and Middle Ridge Road. The Field Monitoring Team Coordinator told the team to go back 2.5 miles, take an ambient radiation reading, and take an air sample if the radiation readings indicated that they were in the plume.

The team returned to the intersection of Center Rd and Middle Ridge Road and took open and closed window ambient radiation readings with the Ludlum Model 2241-3 survey meter coupled with the Ludlum 44-38 side window GM detector. The readings were taken at about two meters, one meter and 15 centimeters about the ground. The radiation readings were all 1 mR/hr closed window, and 2 mR/hr open window. The team took an air sample with the Eberline RAS-1 air sampler at 60 liters per minute for 5 minutes. The team took another set of ambient radiation readings with the Ludlum 2241-3 meter and 44-38 detector. The second set of readings were the same as the first. The Field Monitoring Team Coordinator instructed the team to travel east out of the plume and count the air samples.

The team simulated traveling to the intersection of Middle Ridge and Townline Roads. The paper particulate filter was carefully removed and counted with the Ludlum 2200 Analyzer and HP-210 detector. The silver zeolite cartridge was counted with the other Ludlum 2200 Analyzer and the Ludlum 44-10 detector. The results were transmitted to the Field Monitoring Team Coordinator. The team was instructed to secure from operations and return to the EOC at about 1330 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 4.a.3
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.8 Lake County – FMT #2

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Evaluated Exercise on Tuesday, September 13, 2016, Lake County General Health District (LCGHD) Field Monitoring Team Number 2 (FMT #2) demonstrated at least two communication systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations.

The primary communications link between FMT #2 and the Lake County Field Monitoring Team Coordinator (FMTC) was the vehicle mounted Motorola XTL-2500 800 MHz radio system using Channel Health. FMT #2 received direction from the FMTC that the Motorola XTL-2500 Radio was the primary mode of communication, a hand held Motorola XTS-2500 800 MHz was the secondary communication system and the last mode of communication was an APPLE State Issued cellular telephone.

The FMT #2 Lead conducted the majority of the radio and cell phone communications. The FMT #2 Lead continually monitored and updated the FMTC with radiological survey and exposure information and actions conducted by FMT #2.

In addition, the FMT #2 had personal cellular “smart phones”. All of the aforementioned communications systems were successfully tested prior to FMT #2 deployment at approximately 0949 hours. There were no communications problems identified in response to the postulated event.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016,

Lake County General Health District (LCGHD) Field Monitoring Team Number 2 (FMT #2) maintained the appropriate equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies to support emergency operations. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) located at 8505 Garfield Road, Mentor, Ohio.

The LCGHD FMT #2 was dispatched from the Lake County EOC Garage. Quantities and types of equipment and supplies were inventoried by FMT #2 team members as specified in the Lake County Field Monitoring Team Standard Operating Guide (SOG) Attachment 7.

The FMT #2 was equipped with an LCGHD four-passenger customized Chevrolet Express van equipped with a Garmin Global Positioning System (GPS), a 110-AC converter for multiple power ports for electronic equipment power, and a mounted Motorola XTL-2500 800 MHz radio. The customized van provided adequate space for FMT #2 personnel as well as space for FMT #2 equipment used for radiological monitoring and airborne sample analysis.

Additionally, FMT #2 had appropriate dosimetry for each FMT member. The personal dosimetry included one Canberra Ultra Radiac with a calibration due date of January 8, 2017. Each FMT member also had a luxel Landauer Optically Stimulated Luminescence permanent record dosimeter (issue date from January 1, 2016 – December 31, 2016). In addition, there were eight Direct-Reading Dosimeter (DRD) kits which contained one CD V-138 0-200 mR DRD (leak test due January 15, 2017), one CD V-730 0-20R DRD (leak test due date January 15, 2017) and one CD V-742 0-200R DRD (leak test due date January 15, 2017).

The FMT Coordinator also directed FMT #2 to read their dosimeters every 30 minutes. If a radiological release were to occur, team members were required to check their dosimetry every 15 minutes. Each FMT #2 member was provided ThyroSafe™ 65 milligram potassium iodide (KI) blister packs with an expiration date of April 2020.

The FMT #2 utilized the displayed map in the back of the van and a GPS unit to navigate to the different survey areas as directed by the FMT Coordinator. The FMT #2 used two different detectors consistently through the exercise. The Ludlum 2241-3 with a calibration due date of January 8, 2017 was used to for open/closed window readings at waist and at ground level. In the back of the customized van, there were mounted Ludlum 2200 meters (calibration due date of January 8, 2017) for silver zeolite cartridge analysis and a Ludlum 2200 (calibration due date of January 8, 2017) for particulate filter analysis. The FMT #2 was equipped with a RAS-1 Air Sampler mounted in the back of the van (calibration due date July 8, 2017).

The customized LCGHD van contained a box of outer gloves, decontamination wipes, a wall-

mounted 10-mile Emergency Planning Zone (EPZ) map, grease pencil, contamination control pad, two flashlights, vehicle maintenance items, trash can with extra bags, and a tacky floor mat. In the cab area of the van, there were FMT #2 logs; worksheets; fuel credit card; Lake, Geauga and Ashtabula County maps; and FMT procedure copies. The van had six drawers which contained a procedure book, pens, notepad, batteries (all types required), gloves, plastic bags, fuses, storage bags, flashlights, clipboards, towels, alcohol wipes, sample holders, particulate filters, four charcoal cartridges, 10 silver zeolite cartridges, a probe beta shield, tweezers, stop watch, compass, tape, and a first aid kit. The van also contained a lead-lined sample container that stored one 5 μCi Cs-137 source (red) and one 1.15 μCi Ba-133 source (black) for equipment checks. There were also six complete Tyvek suits, gloves, boots, and rain gear. Each team member was provided with an exposure reminder card indicating the mission dose (5 R) and other useful information.

The FMT #2 members followed Attachments 8 through 17 of the LCGHD FMT procedure, to check that the survey instruments and air samplers were within calibration dates and operating properly. Calibration was verified by checking calibration stickers that were affixed to the side of the instruments.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise on Tuesday, September 13, 2016, Lake County General Health District (LCGHD) Field Monitoring Team Number 2 (FMT #2) demonstrated the implementation of emergency worker exposure control and the decision to ingest potassium iodide (KI). The demonstration was conducted at the Lake County Emergency Operations Center (EOC) garage area located at 8505 Garfield Road, Mentor, OH.

The FMT #2 consisted of one Team Leader and another member who represented the LCGHD. At 0752 hours, the PNPP declared an Alert Emergency Classification Level (ECL). The EOC

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was notified by dedicated telephone line at 0804 hours. Management at LCGHD in Painesville, Ohio was notified at 0812 hours and notified and activated the FMT members. The FMT #2 arrived at the EOC at 0850 hours. Prior to deployment and after equipment inventory, source, and operational checks, FMT #2 received a detailed briefing from the Ohio Department of Public Safety's Resident Radiological Analyst and the Field Monitoring Team Leader (FMTL) in accordance with the "FMT Standard Operating Guide (SOG) Emergency Response Health and Safety Plan" and "KI and Dosimeter Briefing".

The briefing, which started at 0928 hours, included radiological monitoring specifics including the requirement to contact the FMT Coordinator at the end of each survey traverse and at a minimum of every 30 minutes to report exposure levels. The FMT Coordinator briefing also included potential safety conditions, determination of the edge of the plume (1 mR/hr), the usage of KI, meteorological data and plant conditions. The FMT Coordinator also emphasized the administrative limits of 1 R turn-back and the Total Effective Dose Equivalent (TEDE) limit of 5 rem.

Additionally, the FMT #2 had appropriate dosimetry for each FMT member. The personal dosimetry included one Canberra Ultra Radiac with a calibration due date of January 8, 2017. Each FMT member also had a luxel Landauer Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (issue dates from January 1, 2016 – December 31, 2016). There were eight Direct-Reading Dosimeter (DRD) kits which contained one CD V-138 0-200 mR DRD (leak test due date January 15, 2017), one CD V-730 0-20R DRD (leak test due date of January 15, 2017) and one CD V-742 0-200R DRD (leak test due date of January 15, 2017). Demonstration on the proper donning and doffing of personal protective equipment was successfully demonstrated at the EOC garage before prior to dispatch

Each FMT #2 member was provided ThyroSafe™ 65 milligram KI blister packs with an expiration date of April 2020. Prior to deployment FMT #2 received updated information regarding postulated meteorological conditions. The FMT #2 members read their dosimetry every 30 minutes and properly recorded reading on the "Dosimetry Report Form". At approximately 1057 hours, the FMT Coordinator informed FMT #2 that a radiological release from the PNPP was in progress. The FMT #2 members read their dosimetry every 30 minutes, at the end of every survey traverse and properly recorded reading on the "Dosimetry Report Form". The FMT #2 members were directed by the FMT Coordinator to take KI at 1217 hours and reported the ingestion of KI at 1224 hours.

Based on a Controller inject at 1239 hours, FMT #2 reported to the FMT Coordinator they had

reached their administrative limit of 1 R turn-back. The FMT Coordinator informed FMT #2 to immediately go to a background area and continue to monitor conditions to ensure that they were in a background area. The FMT #2 arrived in a background area at 1241 hours. At 1315 hours, FMT #2 was informed that their new administrative limit was now 1.64 R and that they could complete the mission.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise on Tuesday, September 13, 2016, Lake County General Health District (LCGHD) Field Monitoring Team Number 2 (FMT #2) demonstrated ambient radiation measurements were made and particulate samples were collected. The FMT #2 members moved to an appropriate low background location and determined whether significant amount of radioactivity was collected on the sampling media. The demonstration was conducted at the Lake County Emergency Operations Center (EOC) garage area located at 8505 Garfield Road, Mentor, OH.

The FMT #2 consisted of one Team Leader and another member who represented the LCGHD. At 0752 hours, the PNPP declared an Alert Emergency Classification Level (ECL). The EOC was notified by dedicated line at 0804 hours. Management at LCGHD in Painesville, Ohio was notified at 0812 hours and notified and activated the FMT members. The FMT #2 members arrived at the EOC at 0850 hours. Prior to deployment and after equipment inventory, source and operational checks, FMT #2 received a detailed briefing from the Ohio Department of Public Safety's Resident Radiological Analyst and the Field Monitoring Team Leader (FMTL) in accordance with the FMT Standard Operating Guide (SOG) Emergency Response Health and Safety Plan and KI and Dosimeter Briefing.

The briefing, which started at 0928 hours, included radiological monitoring requirements emphasizing the requirement to contact the FMT Coordinator at the end of each survey traverse but at a minimum of every 30 minutes to report exposure levels. The FMT Coordinator briefing

also included potential safety conditions, determination of the edge of the plume (1 mR/hr), the usage of KI, meteorological data, and plant conditions. The FMT Coordinator also emphasized the administrative limits of 1 R turn-back and the Total Effective Dose Equivalent (TEDE) limit of 5 rem.

Additionally, the FMT #2 had appropriate dosimetry for each FMT member. The personal dosimetry included one Canberra Ultra Radiac with a calibration due date of January 8, 2017. Each FMT member also had a luxel Landauer Optically Stimulated Luminescence Permanent Record Dosimeter (issue dates from January 1, 2016 – December 31, 2016). They had eight Direct-Reading Dosimeter (DRD) kits which contained one CD V-138 0-200 mR DRD (leak test due date January 15, 2017), one CD V-730 0-20R DRD (leak test due date of January 15, 2017) and one CD V-742 0-200R DRD (leak test due date of January 15, 2017). Demonstration on the proper donning and doffing of personal protective equipment was successfully demonstrated at the EOC Garage before dispatch.

Each FMT #2 member was provided ThyroSafe™ 65 milligram KI blister packs with an expiration date of April 2020. Prior to deployment FMT #2 received updated information regarding postulated meteorological conditions. FMT #2 members read their dosimetry every 30 minutes and properly recorded reading on the “Dosimetry Report Form”. The FMT #2 was dispatched at 0949 hours and received an update from the FMT Coordinator on meteorological conditions and to stage for a survey traverse at the intersection of River Road and Blair Road. While in transient at 1021 hours, the FMT Coordinator instructed FMT #2 to stage at the intersection of Antioch Road and Northridge Road for a north/south traverse. The FMT #2 arrived at the intersection of Antioch Road and Northridge Road at 1036 hours and informed the FMT Coordinator of the DRD reading of 16.6 µR.

At 1037 hours, FMT #2 was provided a meteorological update from the FMT Coordinator and was instructed to traverse north on Antioch Road to Lockwood Road and take readings every one tenth of a mile and record readings on the “FMT Results Sheet” (Attachment 5 of the FMT SOG).

The FMT #2 commenced the northern traverse of Antioch road at 1040 hours and recorded 15 readings indicating background up to Lockwood Road. The traverse was complete at 1045 hours and recorded on the “FMT Results Sheet”. The FMT #2 informed the FMT Coordinator of the survey results and DRD reading of 20.3 µR at 1046 hours.

At 1057 hours, FMT #2 was provided a meteorological update from the FMT Coordinator and

that a Site Area Emergency ECL had been declared at PNPP and that a radiological release was in progress. The FMT #2 was instructed to traverse south on Antioch Road to Northridge Road and take readings every one tenth of a mile and record readings on the "FMT Results Sheet".

The FMT #2 commenced the southern traverse of Antioch road at 1100 hours and recorded 15 readings indicating background to Northridge Road. The traverse was complete at 1105 hours and recorded on the "FMT Results Sheet". The FMT #2 informed the FMT Coordinator of the survey results and DRD reading of 24.1 μR at 1108 hours. At 1201 hours, FMT #2 was provided a meteorological update from the FMT Coordinator and was instructed to traverse north on Antioch Road to Lockwood Road and take readings every one tenth of a mile and record readings.

The FMT #2 commenced the northern traverse of Antioch road at 1205 hours and recorded 15 readings indicating increasing radiation readings up to Lockwood Road. The traverse was complete at 1210 hours and recorded on the "FMT Results Sheet". The FMT #2 informed the FMT Coordinator of the survey results and DRD reading of 37.9 μR at 1213 hours. Radiation levels (in mR/hr) were recorded as follows: 6.7 E-2, 3.3E-2, 6.7E-3, 9.8E-4, followed by only background readings.

At 1206 hours, FMT #2 was informed from the FMT Coordinator that a General Emergency ECL had been declared at the PNPP. At 1217 hours, FMT #2 was informed from the FMT Coordinator that an evacuation of Subareas 1, 2, 3, 4, 5, 6, and Lake Erie had been directed and that Emergency Workers were authorized to ingest KI. The FMT #2 was instructed to traverse south on Antioch Road to Northridge Road and take readings every one tenth of a mile and record readings.

The FMT #2 commenced the southern traverse of Antioch road at 1225 hours and recorded 15 readings indicating increasing radiation readings to Northridge Road. The traverse was complete at 1231 hours and recorded. The FMT #2 informed the FMT Coordinator of the survey results and DRD reading of 43.4 μR at 1232 hours. Radiation levels (in mR/hr) were recorded as follows: background, followed by 1.3E-2, 1.3E-1, 6.7E-1, and 1.35. The FMT #2 confirmed that they found the edge of the postulated radiological release.

Based on a Controller inject at 1239 hours, FMT #2 reported to the FMT Coordinator they had reached their administrative limit of 1 R turn-back. The FMT Coordinator informed FMT #2 to immediately go to a background area and continue to monitor conditions to ensure that they stay in a background area. The FMT #2 arrived in a background area at 1241 hours. At 1315 hours,

FMT #2 was informed that their new administrative limit was now 1.64 R and that they could complete the mission.

At 1319 hours, FMT #2 was provided a meteorological update from the FMT Coordinator and was instructed to traverse east on Northridge Road to Northridge Road and Call Road to perform a radiological survey and conduct an air sample and record readings. At approximately 1321 hours, the air sample required purging per the procedures. Ambient radiation reading measurements were taken and the (results in mR/hr) were as follows: closed window readings at two meters-1.3, one meter-1.31 and ground level- 1.31; open window readings at two meters-2.61, one meter-2.61 and ground level-2.61. Readings were recorded on the “FMT Results Sheet”. The air sample was initiated at 1327 hours and completed at 1332 hours.

The FMT #2 completed the survey and headed west on Northridge Road to a background area. This was complete at 1335 hours. At 1335 hours, the silver zeolite cartridge and particulate filter were counted. Three one-minute counts were conducted and results averaged and delineated on the “FMT Results Worksheet”. Results were 5670 counts per minute on each sample media. The FMT #2 informed the FMT Coordinator of the results at 1345 hours and the DRD reading of 44.5 uR. Sample media were properly placed in sample collection bags and chain-of-custody forms were properly completed. The exercise was terminated for FMT #2 at 1346 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 4.a.3
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.9 Lake County – County PIO at FENOC JIC

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Lake County demonstrated the capability to provide accurate emergency information in a timely manner to the public and news media in the Joint Information Center (JIC). The demonstration was conducted in the Auburn Career Center, located at 8140 Auburn Road, Painesville, Ohio.

At 1038 hours, the Lake County Public Information Officer (PIO) arrived and signed in at the JIC Security desk located in the lobby of the Auburn Career Center facility. He proceeded immediately to the State/County Work Area, a.k.a., the Networking Room. Upon arrival, he called his counterpart in the Lake County Emergency Operations Center (EOC) to confirm that he had arrived, establish communications, and receive the most current information. When asked, he said that he was first directed to assemble, along with one staff member, at the Lake County EOC. At 1013 hours, he and the staff member were deployed from the EOC to the JIC.

Upon arrival in the JIC, the Lake County PIO was briefed in the State/County Work Area by the FENOC Government Liaison. At 1102 hours, the JIC was declared operational.

At 1110 hours, prior to the first media briefing, the FENOC JIC Manager facilitated a pre-briefing in the JIC Pre-Brief Room among FENOC personnel, and PIOs from the State of Ohio and the three counties. The PNPP Technical Spokesperson shared that an Alert Emergency Classification Level (ECL) was declared at 0752 hours, a Site Area Emergency (SAE) was declared at 0954 hours, and that there had been a “non-routine” release. The Lake County PIO discussed the precautionary measures to shelter livestock and poultry, and to relocate schoolchildren. The other two counties followed suit. The Lake County PIO noted the States of Emergency declared by the Counties at 1015 hours, and the State at 1020 hours. The Communications Coordinator noted that Rumor Control personnel were receiving calls related to plant conditions and the likelihood of evacuation.

The JIC Information Supervisor for PNPP was assigned as moderator for the media briefings. Other participants at this and other media briefings were the PNPP Technical Spokesperson, the State of Ohio PIO, and Lake, Geauga and Ashtabula County PIOs. It was decided that this media briefing would relay information surrounding the declaration of the SAE ECL, plant conditions, and offsite implications. The JIC Information Supervisor said that once basic plant information was shared, the counties, beginning with Lake County, would present information affecting local area residents. They were to be followed by the State, and then the Technical Spokesperson, who was to provide more detailed plant information. At the conclusion of the presentations, questions were to be entertained from the assembled mock media.

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At approximately 1120 hours, the pre-brief concluded and the PIOs left to check in with their respective EOCs. The Lake County PIO also completed the Lake County Public Information Briefing Sheet (Attachment 17 to the Standard Operating Guideline for this position, individually issued for Lake County, as revised in May 2014). At 1125 hours, the presenters reconvened in the hallway outside of the Auditorium and had a brief discussion, summarizing talking points and messaging.

The first media briefing commenced at 1130 hours. During this media briefing, the Lake County PIO noted that nine Lake County news releases had been prepared and distributed. He then read News Releases Nos. 7 and 8 verbatim, regarding the sheltering of livestock and the relocation of schoolchildren, respectively. He stated that these actions were precautionary measures. He added that “lake and boat traffic” was “restricted within a 10-mile radius”, and that a County State of Emergency had been declared at 1015 hours. He concluded by reading the public hotline numbers.

During the question-and-answer period, he answered three questions from the mock media. One, why were livestock and poultry being sheltered, and for how long? He responded that it was a precautionary measure and that the length of time was currently indeterminate. Two, pertained to the 10-mile “evacuation” of Lake Erie. He elaborated, and discussed the restricted access. Three, pertained to the sheltering of “animals” and the relocation of schoolchildren, the timing of these precautionary measures, and their relative importance. The media briefing ended at 1152 hours. The next media briefing was scheduled for 1220 hours.

Immediately after this and other media briefings, the JIC Manager, with the assistance of the Information Supervisor for PNPP (the moderator), led a post-brief discussion among presenters in the JIC Pre-Brief Room. This discussion was comprised of lessons learned from the previous media briefing and responses planned for media questions requiring follow-up.

At 1203 hours, the Lake County PIO initially received the report that PNPP had escalated to a General Emergency (GE) ECL, and communicated this to those in the State/County Work Area. The second media briefing was scheduled for 1220 hours, but a short delay was requested so that the Lake County PIO could receive confirmation by email of the planned siren sounding and Emergency Alert System (EAS) broadcast. At 1222 hours, it was confirmed that the sirens would be activated at 1222 hours and the EAS message would commence at 1225 hours. Shortly thereafter, the pre-brief for the second media briefing commenced.

At this pre-brief, the Lake County PIO discussed the sirens and EAS broadcast, the relocation of

schoolchildren and the opening of care centers. The Communications Coordinator reported that calls had been received regarding the safety of essential personnel remaining at the plant, the magnitude of the release, possible injuries incurred, and whether the incident at the plant was an act of sabotage or terrorism.

At 1225 hours, the second media briefing commenced. During this briefing, the Lake County PIO read Lake County's Press Release No. 10, concerning the evacuation recommendation. He concluded his presentation by providing the Lake County hotline number and website address.

In the question-and-answer period following individual presentations, the Lake County PIO was asked two questions. One, what happens when care centers become full? He replied that most residents do not go to care centers and instead go to the homes of friends and family. The other two County PIOs stressed the availability of secondary, or alternate, care centers. Two, what happens to incarcerated people? The Lake County PIO said that those within the evacuated area would be removed to jails in surrounding counties. The media briefing ended at 1247 hours. The next media briefing was scheduled for 1315 hours.

During the post-brief discussion, the Lake County PIO noted that the mock media seemed to be particularly "docile" and well-behaved in their questioning.

At 1305 hours, a pre-brief was facilitated by the JIC Manager in anticipation of the third media briefing. The Lake County PIO stated that an accident had occurred at Highway 20 and Haynes Road, which was impeding evacuation traffic, and field monitoring teams were out at Antioch and Highway 20, but that there were no results to report. The Communications Coordinator reported that calls had been received regarding the magnitude of the release, and observations that people could "see" the plume.

At 1316 hours, the third media briefing commenced. The Lake County PIO read verbatim News Releases Nos. 11 and 12, which addressed open care centers and telephone hotlines for the public, respectively. He also stated that the Lake County Sheriff's Office had reported an accident at Highway 20 and Haynes Road, and suggested alternate routes.

In the question-and-answer period following individual presentations, the Lake County PIO was asked five questions. One, would traffic accidents increase the public's exposure to radiation? The Lake County PIO responded that there was nothing reported beyond the site boundary, so that the accidents would not increase the exposure risk. Two, what was the threat to fishing, was it safe? The Lake County PIO said that this would be determined once the response to the incident was complete. Three, was it more dangerous, given the accidents, to evacuate or take

shelter? The Lake County PIO responded that people should err on the side of caution and should evacuate. That being said, he noted that this was a voluntary evacuation, not a mandatory one. There was no legal authority behind the recommendation to evacuate. Four, how were people being helped who had no means of transportation? The Lake County PIO responded that this had been addressed in a news release. Residents were being asked to place a white towel on the door knob, and law enforcement were then to conduct door-to-door verification and help those in need of assistance. Five, what was the quality of the drinking water? The Lake County PIO said that water was being tested, and that well water testing, in particular, would be supported on the County level. The third media briefing concluded at 1336 hours. A post-brief followed.

The exercise was terminated at 1340 hours.

At the time of the arrival of the Lake County PIO in the JIC, eight news releases had already been issued by Lake County. The Lake County PIO printed out the news releases for distribution in the JIC. Lake County, with the assistance of FENOC administrative support, distributed a total of 12 news releases at the JIC during this exercise.

Press Release No. 1, issued at 0828 hours, addressed the declaration of an Alert ECL, at 0752 hours, at PNPP. Staffing was begun at the Lake County EOC. There were no recommendations for protective action. The public was urged to monitor their local radio or television station for the latest information. The public was also referred to the County's website for the latest news release and other information.

Press Release No. 2, issued at 0959 hours, announced that the Lake County EOC became operational at 0911 hours and that radiological field monitoring teams were on standby. The public was urged to monitor their local radio or television station for the latest information. The public was also referred to the County's website for the latest news release and other information.

Press Release No. 3, issued at 1001 hours, announced the activation of, and phone numbers for, the public hotline at the Lake County EOC. The public was also referred to the County's website for additional information.

Press Release No. 4, issued at 1013 hours, addressed the declaration of an SAE ECL at 0954 hours. It was reported that radiological field teams from the Lake County General Health District had been dispatched to the area around the PNPP to monitor for possible radiation releases. The public was urged to monitor their local radio or television station for the latest

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information. The public was also referred to the County's website for the latest news release and other information.

Press Release No. 5, issued at 1015 hours, reported that the Board of Lake County Commissioners had declared a State of Emergency in Lake County due to the emergency at the PNPP. The public was urged to monitor their local radio or television station for the latest information. The public was also referred to the County's website for the latest news release and other information. A copy of the Emergency Proclamation, signed at 1015 hours, was attached.

News Release No. 6, issued 1029 hours, transmitted Special News Bulletin B, recommending the following precautionary actions: restriction of boat traffic on Lake Erie and the closure of state parklands, both within 10 miles of the PNPP, due to the declaration of an SAE ECL at the plant. There were no recommended protective actions.

News Release No. 7, issued at 1032 hours, transmitted Special News Bulletin E, recommending the sheltering of livestock and poultry, which applied to municipalities in Lake, Ashtabula, and Geauga Counties, and which was effective as of 1008 hours.

News Release No. 8, issued at 1035 hours, transmitted Special Information Bulletin No. 9, which communicated the relocation of schoolchildren to specified schools outside the 10-mile Emergency Planning Zone (EPZ). It directed parents to pick up their children at the receiving schools. The Special Information Bulletin which was effective at 1032 hours.

Press Release No. 9, issued at 1102 hours, announced the "activation" of the JIC at 1102 hours. The press release provided the JIC's address and its purpose, and noted that the Lake County PIO would be present at the JIC. The public was urged to monitor their local radio or television station for the latest information. The public was also referred to the County's website for the latest news release and other information.

News Release No. 10, issued at 1216 hours, transmitted Special News Bulletin D, which addressed the declaration of a GE ECL at the PNPP. It stated that an evacuation was recommended for specified areas within Lake, Ashtabula, and Geauga Counties, and on Lake Erie within 10 miles of the PNPP. It recommended that referred to the local telephone directory for evacuation routes, location of care centers, and other emergency information. It noted that pets were not accepted at care centers. It reported that persons who have potassium iodide (KI) should take the prescribed dose as directed on the package insert, but if individuals did not have KI available, KI would be issued at the care center. It recommended that persons in the remainder of the 10-mile EPZ go indoors and monitor their local EAS station. It stated that a

door-to-door verification was being conducted by local fire departments, and that persons notified should tie a towel somewhere outside. It requested that if individual assistance was needed, the County Department of Emergency Services or the public information hotline should be contacted. Hotline telephone numbers were provided for each of the three counties.

News Release No. 11, issued at 1235 hours, transmitted Special Information Bulletin No. 8. This Bulletin listed open care centers and their locations in the three counties, and was effective at 1233 hours.

News Release No. 12, issued at 1240 hours, transmitted Special Information Bulletin No. 7. This Bulletin listed telephone hotlines for the public and their respective numbers for the three counties. It also provided the direct access line for the State of Ohio and a number for a PNPP representative. It directed news media representatives to the JIC. This Bulletin was effective at 1237 hours.

Throughout the exercise, procedures were referred to, positional checklists completed, and logs were maintained. Most communications among JIC staff were verbal and not written. News releases were clearly numbered.

Activation and operation of the JIC were conducted in accordance with the utility procedure, JIC-0003, "Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation," Revision 5, dated September 19, 2014. County PIO activities were guided by information contained in the Standard Operating Guidelines for this position, individually issued for Lake County, as revised in May 2014.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.10 Lake County – Madison School District (MSD) EV-2 DC Briefing

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Madison School District successfully described through an interview that at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The interview was conducted out-of-sequence from approximately 1000 hours to 1100 hours, at the South Elementary School, located at 92 Main Street, Madison, Ohio.

All school officials present for the interview referred to current copies of the Madison School District Suggested Operating Guidelines (SOG), Rev. 6/16, and they were familiar with their responsibilities.

Following the introductions of the Madison District Superintendent of Schools, the South Elementary School Principal, the Madison District Transportation Supervisor (associated with Community Bus Services, Youngstown, Ohio), and a school bus operator, the Exercise Controller provided a “School in Session” scenario to begin the interview. The Superintendent described how she would be notified of an event at PNPP and what actions she would then take or consider.

One of her first actions was to communicate the notification message to the Transportation Supervisor. The Superintendent used a cellular phone to cellular phone call method to contact the Supervisor and requested that all bus drivers report to the bus garage. A back-up system was a landline phone, a text message, or the use of the Infinite Campus System to notify the Supervisor directly. The bus drivers carried a Nextel radio/cellular phone.

Upon receiving the Alert Emergency Classification Level notification, the Transportation Supervisor followed her SOG checklist and notified bus drivers via Nextel radio/cellular phone or their on-bus radios. She requested all drivers to report to the bus garage, fuel their buses, and standby for instructions.

Follow-up communications were managed through the driver's Nextel or their on-bus radio. All of the Madison District's school buses were equipped with radios used to communicate with dispatch and with other drivers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Madison School District Transportation Supervisor successfully demonstrated through an interview and demonstration that the use of equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies were sufficient to support emergency operations. The demonstration was conducted at the South Elementary School, located at 92 East Main Street, Madison, Ohio.

Those present at the interview were the Madison District Superintendent of Schools, the South Elementary School Principal, the Madison District Transportation Supervisor (associated with Community Bus Services, Youngstown, Ohio), and a school bus operator. The Transportation Supervisor was responsible for storing and distributing supplies of dosimetry and potassium iodide (KI) for the District's bus drivers at the Madison School Bus Garage. At the end of the drivers' operational period, the Supervisor had the responsibility to collect the dosimetry from the drivers at the Ashtabula Lakeside High School monitoring and decontamination center.

The State of Ohio was responsible for all dosimetry calibration and for providing additional dosimetry, if needed. There were forty-four dosimetry kits available at the school bus garage and the district had thirty-four drivers immediately available to drive. Each kit contained; a lanyard, one Permanent Record Dosimeter (to be exchanged by 12/31/2016), two Pocket Dosimeters (one 0-20R medium range CD V-730 and one 0-200R high range CDV-742) with a leakage check due date of 1/15/2017, a CD V-750 dosimetry charger with which to zero the mid and high range dosimeters, a Dosimetry Report Form, a KI Instruction Form, and a ten-tablet blister pack of 65 mg strength KI tablets (expiration 12/2019) along with the KI information sheet.

The Transportation Supervisor maintained the master Emergency Worker Dosimetry Exposure

Log with names of all the drivers, their assigned dosimetry information, reported readings, and KI administration information.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Madison School District Transportation Supervisor successfully briefed and issued appropriate dosimetry, procedures, and managed radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and recorded the readings on the appropriate exposure record or chart. The demonstration was conducted at the South Elementary School, located at 92 Main Street, Madison, Ohio.

After zeroing the CD V-730 pocket dosimeters with the CD V-750 dosimetry charger, the Transportation Supervisor provided a briefing to the district's bus driver using her Dosimetry Briefing points outlined in the Madison School District's Suggested Operating Guidelines (SOGs; Attachment 3). She gave a kit to the driver and described the contents as the driver examined the dosimeters, forms, and potassium iodide (KI).

The Supervisor began by stating that a driver would not be issued a dosimetry kit and would not be allowed to be an emergency worker within the Emergency Planning Zone (EPZ) if the worker were under 18 years of age, pregnant, or not able to ingest iodine. The Supervisor provided direction on proper placement of the dosimetry, when and how to read both dosimeters at least every 30-minutes, how to report any reading of 1R or greater to the dispatch team leader, advised that their exposure limit was 25rem, and the dosimeter limit/turn-back dose was 5 R (roentgen).

Her briefing included information about the use of KI and its protection of the thyroid and that it was to be taken ONLY if the driver was assigned to work inside of the EPZ and taken ONLY after being directed to do so by the Team Leader (via the Ohio Department of Health). The KI

dosage was directed as two tablets once a day for 5 days or unless told to cease taking the KI. The possible side effects of ingesting KI were discussed and activities such as eating, drinking, smoking, chewing gum, and chewing tobacco were forbidden. The driver was instructed where and how to return the dosimetry upon completion her assignment and that the same permanent record dosimeter would be returned to her if she were assigned to another shift.

The bus driver was later questioned during the school's interview. She was very knowledgeable about and comfortable with the use of the dosimetry. She answered all questions correctly, including where to wear her dosimetry, how often to read the self-reading dosimeters, how and when to report any reading, when to take KI, and where to return the dosimetry and her completed Dosimetry Report Form after her assigned shift.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Madison School District successfully described through an interview and briefing that the issuance of potassium iodide (KI) and appropriate instructions were available should the decision to recommend use of KI had been made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) was maintained. The interview was conducted at the South Elementary School, located at 92 Main Street, Madison, Ohio.

During the interview with Madison School District administrators, the Exercise Controller provided a scenario involving an Emergency Classification Level of General Emergency event with a Protective Action Decision (PAD) from Lake County Emergency Operations Center (EOC) to have all emergency workers ingest potassium iodide (KI). This decision was disseminated during the relocation of students from South Elementary School.

The Madison School Superintendent simulated receiving a call from the Lake County Schools' Services Representative at the Lake County EOC with the information to implement the decision to have emergency workers ingest KI. She contacted the Transportation Supervisor who provided that information and direction to all the bus drivers to ingest KI, with reminders of the

precautions and possible effects, and instructed them to record the ingestion date, time, and amount of KI taken on their Dosimetry Report Form. The Supervisor requested all bus drivers to report back to dispatch confirming they had ingested their two 65mg tablets of KI. The dispatcher maintained the Emergency Worker Dosimeter and KI Administration Master Log as each bus drivers confirmed he/she had taken the KI (simulated).

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.11 Lake County – Madison School District (MSD) EV-2 Interview

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Madison School District successfully described, through an interview, that at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The interview was conducted out-of-sequence from approximately 1000 hours to 1100 hours, at the South Elementary School, located at 92 Main Street, Madison, Ohio.

All school officials present for the interview had current copies of the Madison School District Suggested Operating Guidelines, Rev. 6/16, and were very familiar with their responsibilities.

Following the introductions of the Madison District Superintendent of Schools, the South

Elementary School Principal, the Madison District Transportation Supervisor (associated with Community Bus Services, Youngstown, Ohio), and a school bus operator, the Exercise Controller provided a “School in Session” scenario to begin the interview. The Superintendent described how she would be notified of an event at PNPP and what actions she would then take or consider. Her cellular phone was the primary communications system that was used to receive the initial notification from the Lake County Emergency Operations Center (EOC).

Back up communications systems for follow-up notifications included landline phones, email, and facsimile. Communications systems used to notify and communicate with the district’s school principals, Transportation Supervisor, teachers, bus drivers, and various school staff included cellular phones, text messaging, email, Nextel radio/phones, ultra-high frequency (UHF) radios, and citizens band (CB) radios. The primary communications system used to notify parents was the Infinite Campus System. It was similar to Reverse 911 and notified parents/guardians via calls on cellular or landline phones, text or SMS messaging, and/or email messages. The District Supervisor appointed a staff person to provide information to the community through their District’s School Website, Twitter, and Facebook accounts. School information was also released through the Lake County EOC Public Information News Releases and Emergency Alert System messages.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Madison School District successfully described through an interview that the use of equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies were sufficient to support emergency operations. The interview was conducted at the South Elementary School, located at 92 East Main Street, Madison, Ohio.

Those present at the interview were the Madison District Superintendent of Schools, the South Elementary School Principal, the Madison District Transportation Supervisor (associated with Community Bus Services, Youngstown, Ohio), and a school bus operator. The various supplies, equipment, maps, and displays used by the Superintendent, the school Principals, and the

teachers during a PNPP event were discussed and were specific to the roles and responsibilities of each position.

The supplies that were observed during the interview included Madison School District's Suggested Operating Guidelines (SOGs) and contained the district's Agency Notification Form with maps showing the 10-mile Emergency Planning Zone and Evacuation Routes. Also included was an Emergency Telephone List with school district facility contact numbers, Lake County Emergency Operations Center contact positions and telephone numbers, and the support School District (Ashtabula) Staff contact telephone numbers. There was a sample letter addressed to the Parents/Guardians of the Madison School District students which was sent to every parent and/or guardian at the beginning of the school year describing the emergency plans and protective responses that would be taken by the District in case of an accident at PNPP. Detailed information regarding the Risk School area and the Receiving School locations with directions. Pre-scripted and printed, in large print, Notices to Parents of Student Relocation/Evacuation information for every Madison District School. The notice was posted on the outside doors of the evacuating school. Included in the SOGs were specific descriptions of School District responsibilities by positions to assist in twenty-four hour operations or shift changes.

The Transportation Supervisor was responsible for the Emergency Worker Dosimetry Exposure equipment and supplies. Her responsibilities and dosimetry supplies were discussed in LC039-SOUTHSDCO-1e1.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Madison School District successfully described, through an interview, that School officials made and implemented protective action decisions for schools. The interview was conducted at the South Elementary School, located at 92 Main Street, Madison, Ohio.

All school officials present for the interview had current copies of the Madison School District Suggested Operating Guidelines (SOGs), Rev. 6/16, and were very familiar with their responsibilities.

Following the introductions of the Madison District Superintendent of Schools, the South Elementary School Principal, the Madison District Transportation Supervisor (associated with Community Bus Services, Youngstown, Ohio), and a school bus operator, the Exercise Controller provided a “School in Session” scenario to begin the interview. The District Superintendent stated that after receiving the initial notification from the Lake County Emergency Operations Center (EOC) of an Alert Emergency Classification Level (ECL) at the PNPP, she began following her SOG checklists. She stated that her actions were in preparation for implementing possible decisions to protect students and staff in the Madison School District.

There were four schools within the 2-mile Emergency Planning Zone (EPZ) Subarea and one school within the 4-mile EPZ. The schools within the 2-mile EPZ were Madison High, Madison Middle, Madison Pre-K, North Elementary, and South Elementary School was within the 4-mile EPZ. There were 3200 students, including Pre-K students, enrolled in the Madison School District and 780 school administrators, staff, and classroom assistants.

At the Alert ECL, the Superintendent notified all school principals and instructed the Transportation Supervisor to contact bus drivers and have them report to the Bus Garage, fuel their buses, and stand-by for emergency information and instructions. She accessed the Infinite Campus System to obtain student census and contacted the receiving schools regarding the possible relocation of Madison School District students. She cancelled afternoon Kindergarten classes and notified those afternoon Kindergarten parents of the cancelled classes through Infinite Campus System. She instructed each school principal to terminate extracurricular activities.

During the Alert, the Transportation Supervisor assigned a Dosimetry Coordinator to prepare and issue dosimetry packets. She then briefed bus drivers on dosimetry and the possibility of ingesting potassium iodide (KI). Principals notified their teachers, staff, and briefed School Resource Officers (SROs) to assist with any security issues. The principals then began preparing relocation signs for the outermost doors of the school in case the Superintendent advised them to relocate. Teachers assisted with processing and releasing students to parents and guardians who came to the schools to pick up their children.

At the Site Area Emergency ECL, the Madison School District’s SOGs allowed the District to relocate students. The Superintendent notified the Transportation Supervisor and requested buses report to their assigned schools and begin relocating students and staff. She contacted Ashtabula City School District’s Superintendent to review the receiving school assignments. She followed her SOGs and monitored the traffic congestions at the schools and requested law enforcement’s

assistance for traffic control through the County Schools' Services Representative at the EOC. Infinite Campus System was activated to notify all parents with emergency information and the location of where they could pick up their student(s). School Principals, teachers, and staff prepared to release students to parents until the buses arrived at the schools and students were in the process of being loaded on the buses. Students were not released to their parents or guardians after that process began. The Superintendent maintained communication with the County Schools' Services Representative at the EOC as to when the relocation of schools would begin, which schools were the host schools and if there were any changes or special instructions, when Madison school buildings had been evacuated, and again when all students had arrived at their designated host schools.

The Transportation Supervisor followed her SOGs and discussed whether or not she would request additional buses from the Lake County EOC Transportation Coordinator to accommodate the relocation of students, teachers, and staff. She also discussed the possibility of requesting additional dosimetry kits from the Ohio Department of Health to supplement the number of kits that had been distributed to drivers. She and the Superintendent discussed the anticipated need to have the school buses report to the Ashtabula Area City School District's Transportation Office and support the evacuation of the general public after all school students had been relocated.

Madison High School students were relocated outside of the EPZ to Ashtabula Lakeside High School, Madison Middle School students were relocated to Ashtabula Lakeside Junior High School, Madison South Elementary School students were relocated to Ashtabula Erie Intermediate School, Madison North Elementary School students were relocated to Ashtabula Superior Intermediate School, Madison Pre-K students that were not picked up by their parents before the buses arrived were relocated to Ashtabula Ontario Primary School.

The parents and guardians of the students were notified of the evacuation/relocation by several methods. Notices were posted on all outside doors of each school giving the location of where students had been taken and would be released to the parent/guardian. Infinite Campus System (similar to Reverse 911) had been activated with emergency information provided to the parent using the contact method supplied by the student's family via voice message to landline and cellular telephone, text message, and/or email. The Lake County EOC released school relocation information through Emergency Alert System messages and News Releases.

The Madison School District had 47 buses, five with wheelchair-lift capabilities. All bus drivers carried a Nextel radio/phone and could be notified at home or on their bus. All host schools

were mapped, printed and placed in a binder on every buses.

Teachers traveled on the buses with their students and most buses had more than one classroom on the bus. The teachers carried a roster listing all the students under their care and remained with their students until they were picked up by their family. If students had not been picked up within a reasonable time, the students would have been transferred to Edgewood High School in Ashtabula (the evacuee Reception Center). The Superintendent of Schools would have remained with these students.

The Madison School District elected NOT to provide KI to students, therefore no KI was provided during the relocation nor would KI be available during a “Shelter in Place and take KI” order was given. A shelter in place procedure was discussed during the interview and the Principal and Superintendent provided details of the steps that would be taken should that order had been received. If during the evacuation/relocation of the students it was determined that students, teachers, and buses needed to be monitored for contamination, the buses would have been redirected to Edgewood High School, the designated reception center for monitoring of the vehicle and passengers.

Before and after school programs were called Latchkey programs. Parents of these students would have been notified via Infinite Campus System and/or transported to Ontario Primary School.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.c.2
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.12 Lake County – Kirkland FD (KFD) M&D - EW DC Briefing

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, Lake County maintained the appropriate equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies to support emergency operations at the Emergency Worker (EW) Dosimetry Distribution Point. The demonstration was conducted out-of-sequence from 1900 hours to 2100 hours at the Kirtland High School Evacuee Monitoring/Decontamination Station located at 9150 Chillicothe Road, Kirtland, OH.

The EW radiological briefing was conducted at approximately 1900 hours in the lobby area. The briefing was conducted for eight EWs from the City of Kirtland Fire and Rescue. All EWs were briefed simultaneously, with the briefing beginning at 1900 hours and ending at approximately 1930 hours.

Prior to the EW briefing, a City of Kirtland Fire and Rescue Lieutenant delivered two boxes with the EW dosimetry and radiological monitoring supplies to the Kirtland High School. Twenty five dosimetry packets and five LUDLUM Model 3 Survey Meters with 44-9 Pancake Probes (Calibration due dates of January 15, 2017) were delivered. The City of Kirtland Fire and Rescue Lieutenant briefed the EWs by reading from a laminated Emergency Worker Briefing Checklist. The City of Kirtland Fire and Rescue Lieutenant removed one of the dosimetry packets from the bin and laid out all equipment and instruction sheets to fully display and to provide instructions for exposure control, including precautions of ingesting KI.

The boxes containing dosimetry packets that was part of a larger supply of dosimetry packets maintained by Lake County was available. A total of 300 packets are available for the County.

Each dosimetry packet consisted of one CDV Model 730 Direct Reading Dosimeter (DRD) with a range 0-20 R (Calibration due dates of January 15, 2017), one CDV Model 742 DRD with a range 0-200 R (Calibration due dates of January 15, 2017) one LUXEL Landauer Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (PRD) (dates good from January 1, 2016 – December 31, 2016), two ThyroSafe™ 65 mg KI Blister packs (Expiration date of April 2020), one pen, one ThyroSafe™ KI tablet instruction sheet, one Field Personnel Dosimeter Record with KI ingestion recording blocks on the front of the form and DRD reading

annotation blocks on the back of the form, all in a zip-lock bag.

The City of Kirtland Fire and Rescue Lieutenant used a CD V-750, Model 6 pistol dosimeter charger to zero the DRDs that were used during the demonstration.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise on Monday, September 12, 2016, Lake County demonstrated the implementation of emergency worker exposure control and the implementation of the decision to ingest potassium iodide (KI) at the Emergency Worker (EW) Dosimetry Distribution Point. The demonstration was conducted out-of-sequence from 1900 hours to 2100 hours at the Kirtland High School Evacuee Monitoring/Decontamination Station located at 9150 Chillicothe Road, Kirtland, OH.

The EW radiological briefing was conducted at approximately 1900 hours in the lobby area. The briefing was conducted for eight EWs from the City of Kirtland Fire and Rescue. All EWs were briefed simultaneously, with the briefing beginning at 1900 hours and ending at approximately 1930 hours.

Prior to the EW briefing, a City of Kirtland Fire and Rescue Lieutenant delivered two boxes with the EW dosimetry and radiological monitoring supplies to the Kirtland High School. Twenty five dosimetry packets and five LUDLUM Model 3 Survey Meters with 44-9 Pancake Probes (Calibration due dates of January 15, 2017) were delivered. The City of Kirtland Fire and Rescue Lieutenant briefed the EWs by reading from a laminated Emergency Worker Briefing Checklist. The City of Kirtland Fire and Rescue Lieutenant removed one of the dosimetry packets from the bin and laid out all equipment and instruction sheets to fully display and to provide instructions for exposure control, including precautions of ingesting KI.

The boxes containing dosimetry packets that was part of a larger supply of dosimetry packets

maintained by Lake County was available. A total of 300 packets are available for the County.

Each dosimetry packet consisted of one CDV Model 730 Direct Reading Dosimeter (DRD) with a range 0-20 R (Calibration due dates of January 15, 2017), one CDV Model 742 DRD with a range 0-200 R (Calibration due dates of January 15, 2017) one LUXEL Landauer Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (PRD) (dates good from January 1, 2016 – December 31, 2016), two ThyroSafe™ 65 mg KI Blister packs (Expiration date of April 2020), one pen, one ThyroSafe™ KI tablet instruction sheet, one Dosimetry Report Form with KI ingestion recording blocks on the front of the form and DRD reading annotation blocks on the back of the form, all in a zip-lock bag.

The City of Kirtland Fire and Rescue Lieutenant used a CD V-750, Model 6 pistol dosimeter charger to zero the DRDs that were used during the demonstration.

The EWs were instructed to zero their DRDs prior to going to the field and to be sure to log their DRD readings on the Dosimetry Report Form. They were instructed to check their dosimeters every 30-minutes while in the field. The EWs were informed that their administrative exposure limit is 1 Roentgen during response efforts however, any increase of exposure should be reported to their supervisor. The EWs were instructed to wear their PRD closest to their body under their protective clothing at chest level. They were instructed to wear their DRDs outside of their protective clothing at chest level.

The EWs were then briefed on the use of KI, and the City of Kirtland Fire and Rescue Lieutenant made a point to inform the EWs that the use of KI was voluntary, and that KI should not be taken if they are allergic to iodine. When instructed by their supervisor, the EWs would ingest two 65 mg KI tablets in every 24-hour period, if necessary.

At the end of the briefing, the EWs workers were instructed to turn their dosimetry packets in at the Reception Center located at the Kirtland High School EW Monitoring and Decontamination Facility immediately following their shifts.

To make sure the EWs were aware of what was expected of them to monitor exposure and risk during response, two of the EWs worked were interviewed and requested to explain the instructions they were given, and they were able to do it successfully.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.14 Lake County – Kirkland FD (KFD) M&D - Evacuees

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, Kirtland Fire Department successfully demonstrated equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. The demonstration was conducted out-of-sequence from 1900 hours to 2100 hours at Kirtland High School, located at 9150 Chillicothe Road, Kirtland, Ohio.

The fire-fighters were issued a dosimetry package containing ten potassium-iodide (KI) tablets, a dosimetry record form and a Landauer Escort OSL dosimeter for permanent record dosimetry. The KI tablets were ThyroSafe™ 65 mg, expiration April 30, 2020. The fire-fighters were adequately briefed on the use of KI, including side-effects and contraindications. Kirtland FD used group dosimetry with one fire-fighter issued two Direct-Reading Dosimeters (DRDs)

Kirtland Fire Department had a two Ludlum Model 3 survey meters with Ludlum Model 44-9 pancake GM detectors, serial # 255899 and # 258353, that were used for evacuee monitoring and decontamination. Both survey meters had a calibration sticker that indicated the calibration date and an acceptable +/- 10% response range for their respective attached radiation check source. The survey meters were calibrated on January 15, 2016 and due for re-calibration on January 15, 2017.

The Kirtland Fire Department also demonstrated a TPM903B walk-through portal radiation detector, serial # 542 that was calibrated on November 19, 2015 and due for recalibration on November 19, 2016. The TPM903B was field response checked using a Ludlum Model 26-1 1 uCi Cs-137 check-source manufactured in December, 2013.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, Kirtland Fire Department successfully demonstrated appropriate dosimetry, KI and procedures, and managed radiological exposure to emergency workers in accordance with the plans/procedures. The demonstration was conducted out-of-sequence at 1900 hours to 2100 hours at Kirtland High School, located at 9150 Chillicothe Road, Kirtland, Ohio.

The Kirtland Fire Department demonstrated an evacuee monitoring and decontamination station at the Kirtland High School. The fire-fighter were issued a dosimetry package containing ten potassium-iodide (KI) tablets, a dosimetry record form and a Landauer Escort OSL dosimeter for permanent record dosimetry. The KI tablets were ThyroSafe™ 65 mg, expiration April 30, 2020. The fire-fighters were adequately briefed on the use of KI, including side-effects and contradictions.

Kirtland FD used group dosimetry with one fire-fighter issued two Direct-Reading Dosimeters (DRDs) and instructed to read them and report every 30 minutes. The radiation exposure limit was 5 roentgen and the turn-back level was 5 roentgen.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None

g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.15 Lake County – Kirkland FD (KFD) M&D - Evacuee Vehicles

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise on Monday, September 12, 2016, Lake County maintained the appropriate equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies to support emergency operations at the Vehicle Monitoring and Decontamination Point. The demonstration was conducted out-of-sequence from 1900 hours to 2100 hours at the Kirtland High School Evacuee Monitoring/Decontamination Station located at 9150 Chillicothe Road, Kirtland, OH.

The Emergency Worker (EW) radiological briefing was conducted at approximately 1900 hours in the lobby area. The briefing was conducted for eight EWs from the City of Kirtland Fire and Rescue. All EWs were briefed simultaneously, with the briefing beginning at 1900 hours and ending at approximately 1930 hours.

Prior to the EW briefing, a City of Kirtland Fire and Rescue Lieutenant delivered two boxes with the EW dosimetry and radiological monitoring supplies to the Kirtland High School. Twenty five dosimetry packets and five LUDLUM Model 3 Survey Meters with 44-9 Pancake Probes (Calibration due dates of January 15, 2017) were delivered. The City of Kirtland Fire and Rescue Lieutenant briefed the EWs by reading from a laminated Emergency Worker Briefing Checklist. The City of Kirtland Fire and Rescue Lieutenant removed one of the dosimetry packets from the bin and laid out all equipment and instruction sheets to fully display and to provide instructions for exposure control, including precautions of ingesting KI.

The boxes containing dosimetry packets that was part of a larger supply of dosimetry packets maintained by Lake County was available. A total of 300 packets are available for the County.

Each dosimetry packet consisted of one CDV Model 730 Direct Reading Dosimeter (DRD) with a range 0-20 R (Calibration due dates of January 15, 2017), one CDV Model 742 DRD with a range 0-200 R (Calibration due dates of January 15, 2017) one LUXEL Landauer Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (PRD) (dates good from January 1, 2016 – December 31, 2016), two ThyroSafe™ 65 mg KI Blister packs (Expiration date of

April 2020), one pen, one ThyroSafe™ KI tablet instruction sheet, one Field Personnel Dosimeter Record with KI ingestion recording blocks on the front of the form and DRD reading annotation blocks on the back of the form, all in a zip-lock bag. Two dosimetry packets were identified as area dosimetry. One area dosimetry packet was to be placed in the evacuee monitoring gymnasium and the other on a traffic cone adjacent to the vehicle monitoring and decontamination area.

The City of Kirtland Fire and Rescue Lieutenant used a CD V-750, Model 6 pistol dosimeter charger to zero the DRDs that were used during the demonstration.

Three bins one with personal protective equipment, one that contained two bottles of soap and brushes for vehicle decontamination and the third contained garden hose and nozzle to be hooked up at the City of Kirtland School bus garage water connection.

There were traffic cones and signage for traffic flow, vehicle staging area and vehicle impound area per the Lake County Standard Operating Procedure.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise on Monday, September 12, 2016, Lake County demonstrated the implementation of emergency worker exposure control and the implementation of the decision to ingest potassium iodide (KI) at the Evacuee Vehicle Monitoring Point. The demonstration was conducted out-of-sequence from 1900 hours to 2100 hours at the Kirtland High School Evacuee Monitoring/Decontamination Station located at 9150 Chillicothe Road, Kirtland, OH.

The EW radiological briefing was conducted at approximately 1900 hours in the lobby area. The briefing was conducted for eight EWs from the City of Kirtland Fire and Rescue. All EWs were briefed simultaneously, with the briefing beginning at 1900 hours and ending at approximately

1930 hours.

Prior to the EW briefing, a City of Kirtland Fire and Rescue Lieutenant delivered two boxes with the EW dosimetry and radiological monitoring supplies to the Kirtland High School. Twenty five dosimetry packets and five LUDLUM Model 3 Survey Meters with 44-9 Pancake Probes (Calibration due dates of January 15, 2017) were delivered. The City of Kirtland Fire and Rescue Lieutenant briefed the EWs by reading from a laminated Emergency Worker Briefing Checklist. The City of Kirtland Fire and Rescue Lieutenant removed one of the dosimetry packets from the bin and laid out all equipment and instruction sheets to fully display and to provide instructions for exposure control, including precautions of ingesting KI.

The boxes containing dosimetry packets that was part of a larger supply of dosimetry packets maintained by Lake County was available. A total of 300 packets are available for the County.

Each dosimetry packet consisted of one CDV Model 730 Direct Reading Dosimeter (DRD) with a range 0-20 R (Calibration due dates of January 15, 2017), one CDV Model 742 DRD with a range 0-200 R (Calibration due dates of January 15, 2017) one LUXEL Landauer Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (PRD) (dates good from January 1, 2016 – December 31, 2016), two ThyroSafe™ 65 mg KI Blister packs (Expiration date of April 2020), one pen, one ThyroSafe™ KI tablet instruction sheet, one Dosimetry Report Form with KI ingestion recording blocks on the front of the form and DRD reading annotation blocks on the back of the form, all in a zip-lock bag.

The City of Kirtland Fire and Rescue Lieutenant used a CD V-750, Model 6 pistol dosimeter charger to zero the DRDs that were used during the demonstration.

The EWs were instructed to zero their DRDs prior to going to the field and to be sure to log their DRD readings on the Dosimetry Report Form. They were instructed to check their dosimeters every 30-minutes while in the field. The EWs were informed that their administrative exposure limit is 1 Roentgen during response efforts however, any increase of exposure should be reported to their supervisor. The EWs were instructed to wear their PRD closest to their body under their protective clothing at chest level. They were instructed to wear their DRDs outside of their protective clothing at chest level.

The EWs were then briefed on the use of KI, and the City of Kirtland Fire and Rescue Lieutenant made a point to inform the EWs that the use of KI was voluntary, and that KI should not be taken if they are allergic to iodine. When instructed by their supervisor, the EWs would ingest two 65 mg KI tablets in every 24-hour period, if necessary.

At the end of the briefing, the EWs workers were instructed to turn their dosimetry packets in at the Reception Center located at the Kirtland High School EW Monitoring and Decontamination Facility immediately following their shifts.

To make sure the EWs were aware of what was expected of them to monitor exposure and risk during response, two of the EWs worked were interviewed and requested to explain the instructions they were given, and they were able to do it successfully.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the City of Kirtland Fire and Rescue demonstrated the capability to establish adequate facilities, resources and trained personnel to provide monitoring of evacuee vehicles. The demonstration was conducted out-of-sequence from approximately 1900 hours to 2100 hours at Kirtland High School, located at 9150 Chillicothe Road, Kirtland, OH.

The City of Kirtland Fire and Rescue Emergency Worker (EW) radiological briefing was conducted at approximately 1900 hours in the lobby area. The briefing was conducted for eight EWs from the City of Kirtland Fire and Rescue. All EWs were briefed simultaneously, with the briefing beginning at 1900 hours and ending at approximately 1930 hours.

Prior to the EW briefing, a City of Kirtland Fire and Rescue Lieutenant delivered two boxes with the EW dosimetry and radiological monitoring supplies to the Kirtland High School. Twenty five dosimetry packets and five LUDLUM Model 3 Survey Meters with 44-9 Pancake Probes (Calibration due dates of January 15, 2017) were delivered. The City of Kirtland Fire and Rescue Lieutenant briefed the EWs by reading from a laminated Emergency Worker Briefing Checklist. The City of Kirtland Fire and Rescue Lieutenant removed one of the dosimetry packets from the bin and laid out all equipment and instruction sheets to fully display and to provide instructions for exposure control, including precautions of ingesting potassium iodide (KI).

The boxes containing dosimetry packets that was part of a larger supply of dosimetry packets

maintained by Lake County was available. A total of 300 packets are available for the County.

Each dosimetry packet consisted of one CDV Model 730 Direct Reading Dosimeter (DRD) with a range 0-20 R (Calibration due dates of January 15, 2017), one CDV Model 742 DRD with a range 0-200 R (Calibration due dates of January 15, 2017) one LUXEL Landauer Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (PRD) (dates good from January 1, 2016 – December 31, 2016), two ThyroSafe™ 65 mg KI Blister packs (Expiration date of April 2020), one pen, one ThyroSafe™ KI tablet instruction sheet, one DOSIMETRY REPORT FORM with KI ingestion recording blocks on the front of the form and DRD reading annotation blocks on the back of the form, all in a zip-lock bag.

The City of Kirtland Fire and Rescue Lieutenant used a CD V-750, Model 6 pistol dosimeter charger to zero the DRDs that were used during the demonstration.

An individual was directed to the portal monitors, monitored and found to be contaminated. The contaminated individual (one male) was directed to the separate male and female locker room showers for decontamination. The male was decontaminated successfully and was provided documentation and forwarded to the mass care facility.

The vehicle of the postulated contaminated individual was identified and relocated to the bus garage area for monitoring and decontamination. The City of Kirtland Fire and Rescue EWs donned protective clothing and successfully determined the background contamination level of 40 counts per minute (cpm) and documented that on the EQUIPMENT MONITORING RECORD FORM.

The vehicle was monitored and was found to have contamination 1500 cpm on the left front wheel well. The threshold was 300 cpm above background. This was recorded on the appropriate EQUIPMENT MONITORING RECORD FORM. The vehicle was successfully decontaminated using soap, water and brushes and was placed in the Kirtland High School parking lot. Vehicles unable to be decontaminated would be placed in the field adjacent to the football stadium.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.a.1, 6.a.1
- b. LEVEL 1 FINDINGS: None

- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.16 Lake County – American Red Cross (ARC) - Evacuee Registration

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

Successfully demonstrated – This associated criterion requires no narrative.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, Lake County demonstrated the capability to establish adequate facilities, resources and trained personnel to provide monitoring of evacuees. The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours at Kirtland High School, located at 9150 Chillicothe Road, Kirtland, Ohio.

The Registration area was set up as per American Red Cross (ARC) procedures at the entrance to the Kirtland High School cafeteria. The ARC had an MOU with Lake County for set up and operation of this Reception Center. Access was limited by blocked and taped-off hallways plus signs. One security person was thirty feet down the entry hallway, and checked evacuees coming toward the Registration Station to ensure they had a properly filled out Personnel Monitoring Record that showed they had been through the Personnel Monitoring Station and were uncontaminated. If they did not have a form, they were instructed to go to the Personnel Monitoring Station. The Registration Station had two ARC volunteers operating it. The location of this table was at the main entry to the school cafeteria, where Congregate Care was set up. Once registered, evacuees would have a red wrist band attached before entering the Congregate Care Center if they needed a place to stay, showing they were uncontaminated and registered. Those not wishing to stay were allowed to leave.

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A total of six personnel simulated being evacuees, and were sent to the Registration Station once successfully passed through the portal monitor. Each person showed the security person previously mentioned a completed Personnel Monitoring Record Form. Once this was done, they filled out a Red Cross Shelter Dormitory Registration Form that collected information such as name, address, number in party, etc. Those not staying would sign a Shelter Sign-In Form, showing they had been to the Reception Center and offered shelter but had declined.

If evacuees brought their pets and requested lodging, they would have to make other arrangements for them, as they weren't allowed in the Congregate Care Center. The exception to this would be service animals, which would be allowed in with their owners. The local Humane Society would have been available in an actual event to find a nearby place to keep the other pets if the evacuee was staying in the shelter.

Once the Shelter Dormitory Registration Form was filled out and the person showed their identification, ARC staff interviewed them to determine if they had any special needs, such as medical assistance. After completing registration, the evacuees were routed to the Congregate Care Center. The paperwork they'd filled out would be kept at the Registration Station. According to the Team Leader at the Registration Station, this facility was able to support 1,100 evacuees in the Care Center. When the number of evacuees registered at the Care Center reached or exceeded 75%, the ARC Liaison at the County EOC would be notified.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 6.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.17 Lake County – Lake County Health Department – KI Distro

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday September 12, 2016, the Lake County General Health District (LCGHD) demonstrated the equipment, maps, displays, potassium iodide (KI) and other supplies were sufficient to support emergency operations. The demonstration was conducted out-of-sequence from approximately 1900 hours to 2100 hours, at the Kirtland High School located at 9150 Chillicothe Road, Kirtland, Ohio.

At 1900 hours, two Registered Nurses (RNs) from the LCGHD, established a station within the Kirtland High School Care Center for the distribution of KI to the general public.

During the setup process, the following equipment and supplies were observed, a large “KI Pickup Here” sign, a “Do Not take KI if you have:” sign, a “Doses for Children” sign, “Lake County General Health District Name, Address & Personal History (NAPH) Forms,” “Potassium Iodide (KI) Fact Sheets” (both in English and Spanish), “Potassium Iodide (KI) Distribution Forms,” and a large bag containing KI.

The KI was observed to be ThyroSafe™ 65mg tablets contained in individual blister packets with a lot number of TU404A, and a date of 04/2020. These were further separated into individual handout packages containing four KI tablets and a KI consumer information fact sheet. When asked, the RNs indicated the KI was stored at the LCGHD in large bags containing 2000 doses per bag. They further indicated the KI was stored within the required 66°F to 78°F temperature band, and should additional KI be required, it could be requested through the Lake County Emergency Operations Center.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday September 12, 2016,

Lake County General Health District (LCGHD) demonstrated appropriate instructions were available should a decision to recommend the use of potassium iodide (KI) be made. Appropriate record-keeping of the administration of KI for institutionalized individuals was maintained sufficient to support emergency operations. The demonstration was conducted out-of-sequence from approximately 1900 hours to 2100 hours, at the Kirtland High School located at 9150 Chillicothe Road, Kirtland, Ohio.

At 1900 hours, two LCGHD Registered Nurses (RNs) established a station within the Kirtland High School Care Center for the distribution of KI to the general public.

During the exercise, seven members of the general public were observed being issued (simulated) KI, four males, and three females.

The following sequence was observed for all seven members of the general public when being processed;

1. The RNs verified the individual had a completed Personnel Monitoring Record Form, and that the form documented they were clean of radiation. The RNs indicated that if they did not have this form indicating they were clean, they were sent back to be monitored and decontaminated if needed.
2. The RNs asked the individual if they had obtained KI on their own, and if so, had they ingested the KI already. If they had already ingested KI, they were not issued additional KI.
3. The RNs interviewed the individuals and documented their answers on a "Lake County General Health District Name, Address & Personal History (NAPH) Form. Five questions relating to the individual's health were asked on the form. The RNs indicated a "Yes" answer to any of the five questions automatically disqualified the individual from receiving KI for themselves.
4. Those qualifying individuals were then issued a packet containing four KI tablets (two doses) and a consumer package insert containing information about the KI. Additionally they were given a "Potassium Iodide (KI) Fact Sheet." These fact sheets were observed to contain as a minimum, reason for taking KI, dosages, contraindications, and possible side effects.
5. The RNs reinforced that the KI should not be ingested unless recommended by the appropriate government officials.

6. Finally, the RNs asked if there were any questions.

The RNs indicated adults could be issued KI packets for up to six children and that child doses were listed on the back of the Potassium Iodide (KI) Fact Sheet.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.18 Lake County – American Red Cross (ARC) - Congregate Care

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the American Red Cross (ARC) demonstrated facilities were sufficient to support emergency response. The demonstration was conducted out-of-sequence from approximately 1830 hours to 1945 hours, at the Kirtland High School, located at 9150 Chillicothe Road, Kirtland, Ohio.

The Kirtland School System campus is composed of three separate but connected school buildings consisting of Kirtland Elementary, Middle, and High Schools. Each facility had a gymnasium and cafeteria and the middle and high schools would be used to house evacuees in the Congregate Care Center (CCC) in the event of an accident at PNPP. The ARC had certified the capacity of the Kirtland High School facility to be approximately 1100 evacuees based on the ARC standard of 40 square feet of space for each evacuee.

The buildings were in excellent condition and well maintained. In addition to the gymnasium and cafeterias, classrooms at the facility provided sufficient space for agencies assigned to the facility such as Disaster Health Services, Health Department, and Family Services representatives.

The buildings were air conditioned, well lighted, ventilated, and were equipped with backup power in the event of a loss of power to the facility. The rooms were equipped with a more than sufficient supply of tables, chairs, and other equipment for all staff working in the CCC. The ARC resources were sufficient with equipment and supplies coming from the ARC District Headquarters in Cleveland and the Regional warehouse located in Dayton, Ohio, if needed. Evacuees and visitors to the Center were able to access gender specific restrooms and shower rooms.

After leaving the monitoring and decontamination area, evacuee access to the CCC was limited to using a single point of entry. Security personnel were stationed to check evacuee Personnel Monitoring Record forms before allowing entry to the CCC. Security staff were posted at other doors to the facility to control access to the Center. Wrist bands were issued to evacuees to indicate evacuees had been monitored or decontaminated and found to be below contamination levels.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the American Red Cross (ARC) demonstrated key personnel with leadership roles for the Kirtland Congregate Care Center provided direction and control to that part of the overall response effort for which they were responsible. The demonstration was conducted out-of-sequence from approximately 1830 hours to 1945 hours, at the Kirtland High School, located at 9150 Chillicothe Road, Kirtland, Ohio.

Upon arrival at the demonstration, the Kirtland CCC was set up and staffed by ARC personnel. The Shelter Director was in charge of Center operations and was the primary contact for the Center with outside agencies. The CCC was set up for the out-of-sequence demonstration but in an actual event would be according to floor plans found in ARC plans and procedures. By interview, the Shelter Manager explained how staff received information and instructions relating to events at PNPP and within the Center. He stated that while the Center was operational, the Shelter Director would hold daily morning meetings with the supervisory staff to

brief them of the situations at PNPP and center business. Supervisors would in turn relay information to their staff at area meetings held throughout the event. Similar staff meetings and briefings would be held during each shift change to ensure all staff on all shifts were informed of ongoing events. Center needs and evacuee statistics from each operational area at the Center would be relayed through supervisors to the Shelter Director who would make contacts with the ARC Disaster Operations Center, vendors, state, county, and local officials for action.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the American Red Cross (ARC) demonstrated at least two communications systems were available and at least one operated properly, and established and maintained communication links with appropriate locations for the Kirtland Congregate Care Center (CCC). The demonstration was conducted out-of-sequence from approximately 1830 hours to 1945 hours, at the Kirtland High School, located at 9150 Chillicothe Road, Kirtland, Ohio.

The Kirtland High School CCC primary means of communication within the building during the demonstration was provided by several Motorola Model CP110M hand held, two channel radios. These radios were issued to ARC Shelter Director and supervisors assigned to various areas of the Center. The radios had a range to 2-3 miles. A radio check was performed by Center staff and no communication failures were observed during the demonstration.

Another communication system used at the Center was the Multi-Agency Radio Communication System (MARCS) radio system which is the primary wireless multi-functional communication system used in the State of Ohio by state agencies for disaster response and interoperability. The Shelter Director would use the MARCS radio to communicate with state, county, and local agencies as well as the ARC Disaster Operations Center at the Cleveland Branch of the ARC.

ARES/RACES amateur radio operators would also provide another means of communication for the Center. The amateur operators provide backup and overflow communication using a wide variety of equipment they would bring to the Center and could link other shelters, state and

county EOCs, and agencies also staffed by amateur stations.

Cellular telephones provided an additional means of communication for Center staff.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the American Red Cross (ARC) demonstrated Kirtland Congregate Care Center provided services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrated procedures to assure evacuees were monitored for contamination and were decontaminated as appropriate prior to entering the Center. The demonstration was conducted out-of-sequence from approximately 1830 hours to 1945 hours, at the Kirtland High School, located at 9150 Chillicothe Road, Kirtland, Ohio.

The Kirtland High School CCC was set up and staffed by ARC personnel prior to the beginning of the demonstration which took place in the school cafeteria. ARC was responsible for set-up, staffing, and care of evacuees that would need services at the Center. Upon leaving the monitoring/decontamination area in the school gymnasium, each evacuee in need of shelter proceeded to the CCC. Access to the Center was limited to one entry point that was staffed by security personnel who reviewed evacuee Personnel Monitoring Record for evidence of having been monitored or decontaminated and found to be free of contamination before being allowed to approach the registration desk. At Registration, the evacuee records were again reviewed and a wrist band was issued to those who had been monitored. Additional forms were completed that captured evacuee identification, family contact information, and any needs the evacuee was aware of. Each evacuee was given a welcome letter that explained the services offered at the Center as well as rules of the shelter. Once all forms were completed, the evacuee was allowed to enter the Center. Service animals were allowed in the CCC however, pets were not. Assistance in locating pet care was available from shelter staff and the Dog Warden representative.

Once inside, shelter workers interviewed each evacuee again to assess any medical, dietary, spiritual, emotional, shelter, or other needs the individual may have. From that, shelter workers would try and accommodate any special needs whenever possible. That included such things as access to electrical outlets for breathing machines or special diets, for example.

ARC supplied or coordinated food and snack service for the evacuees. This ranged from light snacks and refreshments to full hot meals served in the Center cafeteria. Snacks and light meals were provided by ARC from supplies brought to the Center from the Cleveland Branch Headquarters. Hot meal service would be provided by partner agencies, restaurants and catering services, grocery/supermarket chains, and other vendors that had agreed to provide services to the Center or to re-supply ARC stocks. Several hundred meals could be provided each day from ARC and partner agencies and businesses. ARC equipment would be used to supply coffee, water, and soft drinks for the Center.

During registration, a Shelter Dormitory Registration form was completed for evacuees in need of shelter and they were given a cot, a comfort kit of toiletries, and two blankets and were assigned space in the dormitory. Using the ARC Guide for Mass Care standard of 40 square feet of space per person, the Kirtland CCC facility had a capacity of 1100 persons. Center staff indicated that the Cleveland District Branch had on hand supplies of cots, blankets, and sundries to accommodate more than 3,000 evacuees. If needed, additional equipment and supplies could have been brought in from other nearby ARC Districts and the ARC Regional Facility in Dayton, Ohio which served as one of five national distribution centers for the ARC.

Evacuees in need of any health, mental health, spiritual, or shelter needs completed a Shelter Referral Log form and were directed to the Disaster Health Services area of the shelter. That area was able to provide with evacuees with minor first-aid, treatment for anxiety, over-the-counter medications, and assistance in obtaining prescriptions, if needed. More advanced medical needs would be addressed by local fire departments or would be transported to local medical facilities. Dietary and other medical needs were recorded. Mental health issues were referred to trained personnel for assistance. Day care was also available to evacuees, if needed, that was provided by local service groups. The evacuees housed at the shelter had access to gender specific restrooms and showers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.b.1, 1.c.1, 1.d.1, 6.c.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.19 Lake County – Madison Township PD (MTPD) TCP/ACP DC Briefing

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

Successfully demonstrated – This associated criterion requires no narrative

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

As Part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP), Partial-Participation, Plume Exposure Pathway Exercise conducted out-of-sequence on Tuesday, September 13, 2016, the Madison Township Police Department (MTPD), demonstrated the availability of sufficient equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies to support emergency operations. The demonstration was conducted from approximately 1000 hours to 1100 hours, at the MTPD, located at 2065 Hubbard Road, Madison Ohio.

Participants in the demonstration included the Police Department Dosimetry Coordinator (DC) Officer and a Traffic Control Point (TCP) or Access Control Point (ACP) Officer.

In the event of a radiological emergency at Perry Nuclear Power Plant (PNPP), all MTPD Emergency Worker (EW) personnel would be issued a dosimetry packet and given a dosimetry and KI briefing by the Police Department DC prior to deployment to field duties in the Emergency Planning Zone (EPZ).

During the demonstration the DC referred to a Standard Operating Guidelines (SOG) procedure checklist and issued a dosimetry packet and its contents to an MTPD EW. He referred to the

individual components within the packet, verbalized clear instructions regarding reading the dosimeters every 30 minutes, and confirmed the EW understood instructions on documenting the readings, when issuing the dosimetry packet.

The dosimetry equipment for EW exposure control was packaged in zip-sealed plastic bags (packets) and are located in the MTPD offices. The MTPD had an inventory of 25 EW packets. Included in each packet was one Escort Landauer Personnel Dosimeter (11/1/2016 – 12/3/2016), one ThyroSafe™ KI blister pack of ten 65mg tablets (expiration of 12/20/2019) and a KI information sheet, one Bendix CDV-730 (0-20R) Direct-Reading Dosimeter (DRD) (calibration due date 1-15-2017), one Bendix CDV-742 (0-200R) DRD (calibration due date 1-15-2017). Also contained in the packet, was an instruction sheet and a form for recording the DRD readings and KI ingestion times. A CDV-750, model 6 Dosimetry Charger was available, to aid in returning the dosimeters needle to zero (0) after reading. Both the DC and TCP or ACP Officer demonstrated knowledge in the use of the CDV-750. Additional KI and EW packets are available from the County Emergency Operation Center.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted out-of-sequence on Tuesday, September 13, 2016, Madison Township Police Department demonstrated the capability to issue appropriate dosimetry, potassium iodide (KI), and procedures, and to manage radiological exposure to emergency workers (EWs) in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. They maintained appropriate record-keeping of the administration of KI to EWs. The demonstration/interview was conducted from approximately 1000 hours to 1100 hours, at the Madison Township Police Department, located at 2065 Hubbard Road, Madison Ohio. Participants in the demonstration included the Police Department Dosimetry Coordinator Officer (DC) and a Traffic or Access Control Point Officer.

After notification of an event at PNPP, the Police Chief or Officer-in-Charge (OIC) would assign a person to the duties of Police Department Dosimetry Coordinator (DC). The DC would issue dosimetry packets, monitor dosimeter readings, track KI ingestion and brief all Police Department Emergency Workers (EWs) on use of dosimetry and KI. The DC said the first thing he would do upon receiving the DC duties was to inventory the dosimetry packets and zero all direct-reading dosimeters. The DC stated he would determine when to replace an emergency worker in consultation with the Lake County Emergency Operation Center (EOC). He would only instruct personnel to take KI when requested to do so by the EOC.

During the demonstration, the DC issued EW dosimetry packet to the Traffic Control Point (TCP) or Access Control Point (ACP) Officer and gave a dosimetry and KI briefing to the Officer. The dosimetry packet contained one Escort Landauer Personnel Dosimeter (11/1/2016 – 12/3/2016), a ThyroSafe™ KI blister pack of ten 65mg tablets (expiration of 12/20/2019) and a KI information sheet, one Bendix CDV-730 (0-20R) Direct-Reading Dosimeter (DRD) (calibration due date 1-15-2017), one Bendix CDV-742 (0-200R) DRD (calibration due date 1-15-2017). Also contained in the packet, was an instruction sheet and a form for recording the DRD readings and KI ingestion times. A CDV-750, model 6 Dosimetry Charger was available, to aid in returning the dosimeter needles to zero (0) after reading. Both the DC and TCP or ACP Officer demonstrated knowledge in the use of the CDV-750.

During the briefing the DC provided instruction on how to read the DRDs, to periodically check the DRDs every 30 minutes and recording readings on the Dosimetry Report Form. The DC confirmed the EW understood the instructions on documenting the readings. He, removed each individual components from the packet, and verbalized clear instructions regarding each. The DC instructed Traffic or Access Control Point Officer to verify that the DRD dosimeters were still set on zero.

At the end of the briefing the TCP or ACP Officer recorded the appropriate information on the Dosimetry Report Form and demonstrated knowledge on reporting value (1R), turn back value (5R), when to read the dosimeter, where to wear dosimeters, where to report for monitoring and decontamination, and how to return the kit to the DC upon completion of emergency activities. He also demonstrated knowledge of the reasons to take KI, how he would be informed to ingest KI (per order of the County EOC), documentation of KI ingestion, and the possible side effects.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.20 Lake County – Madison Township PD (MTPD) TCP/ACP

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

As Part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise, conducted out-of-sequence on Tuesday, September 13, 2016, Madison Township Police Department demonstrated the availability of two communication systems, that at least one operated properly, and that communications capabilities could be managed in support of emergency operations. The demonstration/interview was conducted from approximately 1000 hours to 1100 hours, at the Madison Township Police Department (MTPD) located at 2065 Hubbard Road, Madison Ohio.

Participants in the demonstration/interview included two Police Department Traffic Control Point (TCP) or Access Control Point (ACP) Officers.

The primary means of communication for MTPD Officers maintaining either a TCP or ACP was a vehicle based, multichannel 800 MHz radio system that allowed communications with a wide variety of local law enforcement agencies, fire and emergency medical services, local government entities and public works agencies. As a backup, all officers carried a separate 800 MHz portable radio with the same multichannel communication access. Both systems could carry out a self-operational communications testing function each time the radio was turned on. The Officers explained that all members of the MTPD carried either police department issued or personal cellular telephones. Both the primary and backup systems were demonstrated and fully functional during the interview. The MTPD Officer's vehicles were equipped with computers having IMobile Radio Computer Aided Dispatch (CAD) system, and instant message capability.

The computer system was used on a regular basis for communication with the officers. All available communication systems demonstrated by the Officers were independent of commercial telephone. The MTPD Officers had knowledge of the communication systems capabilities and could manage them in support of emergency operation.

There were no communication failures noted.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As Part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial-Participation, Plume Exposure Pathway Exercise conducted out-of-sequence on Tuesday, September 13, 2016, Madison Township Police Department, demonstrated the availability of sufficient equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies to support emergency operations. The demonstration/interview was conducted from approximately 1000 hours to 1100 hours, at the Madison Township Police Department (MTPD) located at 2065 Hubbard Road, Madison Ohio.

Participants in the demonstration/interview included two Police Department Traffic Control Point (TCP) or Access Control Point (ACP) Officers.

The MTPD had an appropriate supply of emergency response equipment, and maps, dosimetry, potassium iodide (KI) and other supplies to support the establishment of the required eight Traffic Control Points (TCPs) and nine Access Control Points (ACPs) in the Township of Madison. The MTPD Officers used the Lake County Emergency Management Agency's, Standard Operating Guidelines (SOGs) for Police Departments Inside the Emergency Planning Zone (EPZ), (Rev.24 dated January 2016) during the interview. Both Officers had copies of the SOG checklists needed to complete their task and used their checklist during the interview.

There was an additional supply of SOGs at the Police Station.

The TCP or ACP Officers stated that all Police Department vehicles carried traffic cones (5), road flares, gloves and barricade tape. The Officers knew where to get road barriers, cones or other additional equipment that is available for TCPs or ACPs activities. The TCP or ACP Officers explained the procedures for obtaining appropriate numbers of additional traffic control

equipment for each TCP or ACP.

When activated the TCP or ACP Officers would report to MTPD. The Officers stated that at this time they would receive a dosimetry packet and a dosimetry and Potassium Iodide (KI) briefing. The dosimetry packet contained one Escort Landauer Personnel Dosimeter (11/1/2016 – 12/3/2016), one Bindix CDV-730 (0-20R) Direct-Reading Dosimeter (DRD) (calibration due date 1-15-2017), one Bendix CDV-742 (0-200R) DRD (calibration due date 1-15-2017) and a ThyroSafe™ KI blister pack of ten 65mg tablets. The KI blister pack was marked with an expiration date of 12/20/2019. The Officers stated they were required to read their dosimeter every thirty minutes, record their readings and submit the record and dosimetry packet to the Dosimetry Coordinator Officer (DC) upon completion of emergency activities. The DC stated there were 25 dosimetry packets located in the Madison Township Police Department.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Full-Participation Plume Exposure Pathway Exercise conducted out-of-sequence on Tuesday, September 13, 2016, Madison Township Police Department (MTPD) demonstrated the capability to issue appropriate dosimetry, procedures and to manage radiological exposure to emergency workers (EWs) in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. The demonstration/interview was conducted from approximately 1000 hours to 1100 hours, at the City of Madison Township Police Department located at 2065 Hubbard Road, Madison Ohio. Participants in the demonstration/interview included two Police Department Traffic Control Point (TCP) or Access Control Point (ACP) Officers.

At a Site Area Emergency Emergency Classification Level notification or higher of an event at PNPP, MTPD Officers would be requested to report for dosimetry and potassium iodide (KI) briefing at the MTPD and placed on standby. The MTPD Police Chief or Officer-in-Charge

(OIC) will assign a personnel to TCP or ACP duties. The MTPD Officers stated the Lake County Emergency Operation Center (EOC) Law Enforcement Coordinator would inform MTPD when the Traffic Control Point(s) and Access Control Point(s) (TCPs/ACPs) were to be activated and which locations to post.

The MTPD Officers used the Lake County Emergency Management Agency Suggested Operating Guidelines (SOGs) for Police Departments inside the Emergency Planning Zone (EPZ), (Rev.24 dated January 2016) during the interview. Both Officers had copies of the SOG checklists needed to complete their task and used their checklist during the interview. There is an additional supply of SOGs at the Police Station.

During the demonstration, the Police Department Dosimetry Coordinator Officer (DC) issued EW dosimetry packet to the (TCP) or (ACP) Officers and gave a dosimetry and KI briefing to the Officers. The DC stated he would also monitor dosimeter reading and track KI ingestion. The dosimetry packet contained one Escort Landauer Personnel Dosimeter (11/1/2016 – 12/3/2016), one ThyroSafe™ KI blister pack of ten 65mg tablets (expiration of 12/20/2019) and a KI information sheet, one Bendix CDV-730 (0-20R) Direct-Reading Dosimeter (DRD) (calibration due date 1-15-2017), one Bendix CDV-742 (0-200R) DRD (calibration due date 1-15-2017). Also contained in the packet, was an instruction sheet and a form for recording the DRD readings and KI ingestion times.

The DC provided instruction on how to read the DRDs, to periodically check the DRDs every 30 minutes and recording readings on the Dosimetry Report Form. The DC confirmed the EW understood the instructions on documenting the readings. He referred to the individual components within the packet, verbalized clear instructions regarding each

Upon a simulated deployment to a TCP or ACP location the Officers correctly described that readings 1R or greater would be reported to their supervisor, the turn-back value of 5R, when to read the dosimeter (every 30 minutes), where to wear dosimeters, where to report for monitoring and decontamination, and where to return the packet to the DC upon completion of emergency activities. They demonstrated knowledge of the reasons to take KI, how he would be informed to ingest KI (per order of the County EOC), the possible side effects and documentation of KI ingestion. The Officers stated their understanding of the need for management of radiological exposure in accordance with the plans and procedures.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As Part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted out-of-sequence on Tuesday, September 13, 2016, Madison Township Police Department (MTPD) demonstrated the capabilities to establish and operate Traffic Control Points (TCPs) or Access Control Points (ACPs) and that accurate instructions are provided to Traffic or Access control personnel. The demonstration / interview was conducted from approximately 1000 hours to 1100 hours, at the MTPD located at 2065 Hubbard Road, Madison Ohio. Participants in the interview included two Police Department Traffic Control Point (TCP) or Access Control Point (ACP) Officers.

It was stated that in the event of an emergency at PNPP, the MTPD would be notified by the Lake County Emergency Operations Center (EOC) at the Alert Emergency Classification Level or higher. The Police Chief or Officer-in-Charge (OIC) would assign a person to the duties of Department Dosimetry Coordinator (DC) and assign personnel to TCPs or ACPs when requested by the EOC Law Enforcement Coordinator. The Police DC would issue dosimetry packets and Potassium Iodide (KI), monitor dosimeter readings KI ingestion, and instruct personnel to take KI when the OIC was advised by the EOC. The DC would inform the officers to report to the Emergency Worker Monitoring and Decontamination Station after completion of their duties.

The interviewed TCP or ACP Officers correctly identified their traffic and access control responsibilities. As the evacuation routes are well established, the MTPD Officers knew the required locations to which they could be assigned (eight-TCPs and nine-ACPs). The TCPs or ACPs were pre-identified in the Suggested Operating Guidelines (SOG)-Police Departments inside the Emergency Planning Zone (EPZ), and the DC had his copy available during the interview. The TCP or ACP Officers would be notified by the Dispatcher of which Care Centers were open. The TCP or ACP Officers stated all Police Department vehicles carries cones (5), road flares, and barricade tape and the Officer knew where and how to get additional barriers, or other equipment that might be needed. The TCP or ACP Officers explained the procedures for obtaining the appropriate number of additional traffic cones and barricades for each TCP or ACP.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.d.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.21 Lake County – Madison Village PD (MVPD) TCP/ACP DC Briefing

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

Successfully demonstrated – This associated criterion required no Narrative.

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

As Part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Madison Village Police Department successfully demonstrated the ability to provide equipment, displays, potassium iodide (KI), and other supplies to support emergency operations. The demonstration was conducted out-of-sequence from 1400 hours to 1153 hours, at the Madison Village Police Department, located at 216 West Main Street, Madison Village, Ohio.

The Madison Village distribution point for Emergency Workers (EWs) dosimetry was in a room located in the rear of the Police Department. The room was equipped with tables, chairs, and administrative supplies. Maps of the PNPP 10-mile EPZ, evacuation routes, and Traffic Control Point locations were prominently displayed. The Police Department maintained an inventory of dosimetry that contained 20 EW dosimetry kits. Each dosimetry kit contained one CD V-730, 0-20R Direct-Reading Dosimeter (DRD), one CD V-742, 0-200R DRD, one Landauer Permanent Record Dosimeter (DRD), two CD-V 750 dosimeter chargers, one Dosimetry Report Form with personnel dosimetry instructions, and one packet of six 65mg doses of ThyroSafe™ KI tablets. Both DRDs had calibration dates of January 15, 2015. The expiration date on the KI packet was

December 31, 2019. The exchange date for the DRDs was December 31, 2019.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As Part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Madison Village Police Department successfully demonstrated the ability to issue dosimetry, potassium iodide (KI) and implement procedures to manage radiological exposure to emergency workers (EWs) in accordance with plans and procedures. The demonstration was conducted out-of-sequence from 1400 hours to 1530 hours, at the Madison Village Police Department, located at 216 West Main Street, Madison Village, Ohio.

The Madison Village Police Chief was responsible for directing the dispatch of Police Officers' who would be assigned as EWs. Through interview with the Dosimetry Coordinator (DC), it was determined that EWs would be dispatched in accordance with procedures associated with each Emergency Action Level. Under the direction of the Police Chief, the DC had the direct responsibility for providing radiological information to EWs, issuing dosimetry and KI, and monitoring their exposure levels.

The Police Department maintained an inventory of 20 EW dosimetry kits. Each dosimetry kit contained one CD V-730, 0-20R Direct-Reading Dosimeter (DRD), one CD V-742, 0-200R DRD, one Landauer Permanent Record Dosimeter (PRD), two CD-V 750 dosimeter chargers, one Dosimetry Report Form with personnel dosimetry instructions, and one packet of six 65mg doses of ThyroSafe™ KI tablets. Both DRDs had calibration dates of January 15, 2015. The expiration date on the KI packet was December 31, 2019. The PRD exchange date was December 31, 2019.

At 1445 hours, the DC conducted a briefing for one EW and the Police Chief. The briefing was accurate, detailed and included the proper method for zeroing and wearing the DRDs and TLDs, the requirement to read DRDs every 30 minutes and to record any increased radiation exposure

on the Dosimetry-KI Record Form, administrative dose limits (1R notify the DC and 5R turn back). The DCO stated that upon future dispatch of EWs they would receive an identical briefing prior to being dispatched to their mission assignment. At the conclusion of the briefing, an interview with the EW confirmed his understanding of the purpose and use of KI, the proper method of zeroing and reading DRDs and recording increased dose levels, the proper wearing of DRDs and TLDs, reporting requirements, administrative dose levels, and disposition of dosimetry and KI at the end of mission assignment. Through interview with the DC it was determined that the replacement of EWs who became exposed to radiation would be directed by the Police Chief. The determination to replace an EW would be based on the level of exposure and the criticality of the EW mission.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.23 Lake County – Madison Village PD (MVPD) TCP/ACP

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

As Part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Madison Village Police Department successfully demonstrated the availability of two communication systems, that one operates properly, and communications capabilities could be managed in support of emergency operations. The demonstration was conducted out-of-sequence from 1400 hours to 1530 hours, at the Madison Village Police Department, located at 216 West Main Street, Madison Village, Ohio.

Participants in the demonstration/interview included the Police Department Dosimetry Coordinator and a Traffic Control Point (TCP) Officer. The TCP Officer stated that the primary communication system used by the Madison Village Police Department to contact personnel staffing the TCPs is a vehicle based 800 MHz radio system, with individual units installed in all police vehicles. As a backup, all officers carry a separate 800 MHz portable radio. The Madison Village Police Department vehicles are also equipped with Mobile Data Terminal computers with instant text message capability. The computer system is used on a regular basis for communication with the officers. Almost all members of the Madison Village Police Department also carry either police department issued or personal cellular telephones. Both the primary and backup systems were demonstrated and fully functional during the interview. All communication systems available were independent of commercial telephone.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As Part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Madison Village Police Department successfully demonstrated the ability to provide sufficient quantities of equipment, maps, dosimetry, potassium iodide (KI) and other supplies to support emergency operations at Traffic Control Points (TCPs) within the Madison Village area of responsibility. The demonstration/interview was conducted out-of-sequence from 1400 hours to 1530 hours, at the Madison Village Police Department, located at 216 West Main Street, Madison Village, Ohio.

Through interview with the Traffic Control Officer (TCO) who would man the TCP, it was determined that he had received a dosimetry briefing by the Madison Village Dosimetry Coordinator. He had been issued a dosimetry kit that contained one CD-V 0-20R Direct Reading Dosimeter (DRD), one CD-V 0-200R DRD, one Landauer Permanent Record Dosimeter (PRD), one Dosimetry Report Form with personnel dosimetry instructions, and one packet of six 65mg ThyroSafe™ KI tablets. Both DRDs had calibration dates of January 15, 2016. The exchange date for the PRD was December 31, 2019. The expiration date of the KI was December 31, 2019.

Additional equipment available to the TCO included: an Emergency Traffic and Perimeter

Control Guide with maps and instructions for each Madison Village TCP, a Lake County Map, with PNPP evacuation routes. The TCOs police vehicle contained two traffic cones, flares, reflective vests and flashlights. The TCO stated that additional traffic cones and barriers would be provided by the Madison Village or Madison Township Roads Departments.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As Part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Madison Village Police Department successfully demonstrated the implementation of Emergency Worker (EW) Exposure Control by the distribution/issue of appropriate dosimetry, Potassium Iodide (KI) and management of EW radiological exposure in accordance with plans and procedures. The demonstration was conducted out-of-sequence from 1400 hours to 1530 hours, at the Madison Village Police Department, located at 216 West Main Street, Madison Village, Ohio.

Through interview with the Traffic Control Officer (TCO) who would staff the TACP, it was determined that he had received a dosimetry briefing by the Madison Village Dosimetry Coordinator (DC). He had been issued a dosimetry kit that contained one CD-V 0-20R Direct Reading Dosimeter (DRD), one CD-V 0-200R DRD, one Landauer Permanent Record Dosimeter (PRD), one Dosimetry Report Form with personnel dosimetry instructions, and one packet of six 65mg ThyroSafe™ KI tablets. Both DRDs had calibration dates of January 15, 2016. The exchange date for the PRD was December 31. The expiration date of the KI was December 31, 2019.

During the dosimetry briefing by the DC the TCO had been instructed on how to zero and read the DRDs, the proper wearing of the DRDs and PRD and that the DRDs should be read at 30 minute intervals. The TCO correctly demonstrated reading the DRDs and explained how he would record readings on the Dosimetry Report Form. The TCO was aware of and correctly

stated the 1R administrative exposure limit and knew that he should be relieved of his post if the exposure limit approached or reached 5R. The TCO knew that at the end of his shift or termination of the assignment that the issued dosimetry would be returned to the DC. The DC and Shift Supervisor would then determine whether to replace the TCO or terminate the assignment.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As Part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Madison Village Police Department successfully demonstrated the ability to establish appropriate traffic and access control and to provide accurate instructions to traffic control point (TCP) personnel. The demonstration was conducted out-of-sequence from 1400 hours to 1530 hours, at the Madison Village Police Department, located at 216 West Main Street, Madison Village, Ohio.

Through interview with the Traffic Control Officer (TCO) who would staff the TACP, it was determined that he had received a dosimetry briefing by the Madison Village Dosimetry Coordinator. He had been issued a dosimetry kit that contained one CD-V 0-20R Direct Reading Dosimeter (DRD), one CD-V 0-200R DRD, one Landauer Permanent Record Dosimeter (PRD), one Dosimetry Report Form with personnel dosimetry instructions, and one packet of six 65mg ThyroSafe™ KI tablets. Both DRDs had calibration dates of January 15, 2016. The exchange date for the PRD was December 31, 2019. The expiration date of the KI was December 31, 2019.

The TCO explained that the Emergency Traffic Control Guide (TCG) listed three pre-identified TCPs in the Madison Village area of responsibility. The TCG contained maps and instructions for each TCP. The TCO explained that the instructions for each of the TCPs required the TCO to facilitate traffic movement eastward on Route 84 towards Ashtabula, Ohio. He also should deny traffic movement toward the West on Route 84. The TCO explained that among his responsibilities were the requirement to facilitate and evaluate traffic flow, coordinate response to any traffic impediments, report congested roads and recommend traffic rerouting to the Madison Village Dispatcher.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.d.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.24 Lake County – Concord FD (CFD) Backup Rt. Alt - DC Briefing

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

Successfully demonstrated – This associated criterion requires no narrative.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Concord Fire Department demonstrated equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI), and other supplies sufficient to support emergency operations. The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours, at the Concord Fire Department, located at 11600 Concord Hambden Road, Concord, Ohio.

The Concord Fire Department was supplied with dosimetry packets containing two Direct-Reading Dosimeters (DRDs), ten 65 mg ThyroSafe™ potassium-iodide (KI) tablets, a Landauer Escort OSL dosimeter, and a dosimetry record form.

The KI tablets had an expiration date December, 2019. The Escort dosimeter was wear-dated 1/1/16 – 12/31/16.

The DRDs were CDV-742 0 – 200 R, and CDV-720 0 – 20 R dosimeters. The dosimeters were leak-checked on January 15, 2016 and due to be rechecked on January 15, 2017.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Concord Fire Department demonstrated appropriate dosimetry, KI and procedures, and managed radiological exposure to emergency workers in accordance with the plans/procedures. The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours, at the Concord Fire Department, located at 11600 Concord Hambden Road, Concord, Ohio.

The Concord Fire Department was supplied with dosimetry packets containing two Direct-Reading Dosimeters (DRDs), ten 65 mg ThyroSafe™ potassium-iodide (KI) tablets, a Landauer Escort OSL dosimeter, and a dosimetry record form.

The KI tablets had an expiration date December, 2019. The Escort dosimeter was wear-dated 1/1/16 – 12/31/16.

The DRDs were CDV-742 0 – 200 R, and CDV-720 0 – 20R dosimeters. The dosimeters were leak-checked on January 15, 2016 and due to be rechecked on January 15, 2017.

The Concord Fire Department firefighters were issued dosimetry packages and briefed on their backup route alerting mission. The Lieutenant adequately briefed the firefighters about KI dose, side effects and contraindications. They were instructed not to take the KI until instructed.

The DRDs were zeroed out with a piezo-electric dosimeter charger. The firefighters were instructed that their radiation exposure limit turn-back limit was 25 rem TEDE or 5 R indicated on their DRDs. They were told to read their DRDs every thirty minutes and report their exposure by radio, and turn in their dosimetry and record form when their shift was finished.

By interview, the firefighters were aware of the use and side effects of KI and how to properly

wear, read and report DRD values. The firefighters also were aware of the turn-back limit of 5 R and where to return their equipment once the route was completed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.25 Lake County – Concord FD (CFD) Backup Rt. Alt

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Concord Fire Department demonstrated the capability that at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours, at the Concord Fire Department, 11600 Concord Hambden Road, Concord, Ohio.

The primary means of communications was an 800 MHz Motorola Radio mounted inside the fire department vehicles. Each individual firefighter also carried a handheld 800 MHz radios on their person. Backup communication consisted of personal cellphones and landlines. The fire department response vehicle and handheld radios functioned properly throughout the demonstrations.

The radio system had the capability to communicate on multiple radio channels to both local and

county dispatchers as well as other fire department personnel.

A communication check was initiated with the fire station upon route personnel entering the vehicle, at the commencement of the route, and upon completion. Communication was maintained throughout the demonstration and there were no communication failures noted during the demonstration.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures, and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Concord Fire Department demonstrated the capability that equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI), and other supplies were sufficient to support emergency operations. The demonstration was conducted during an out-of-sequence activity from approximately 1800 hours to 2000 hours, at the Concord Fire Department, 11600 Concord Hambden Road, Concord, Ohio.

Copies of the Standard Operating Guidelines (SOG) for an Emergency at the PNPP, Lake County Fire Departments were available for each designated position in the fire department including backup route alerting team. The guidelines contained copies of the Emergency Worker Dosimetry Exposure Log and Dosimetry Report Form. Copies of the route alerting directions for the siren in the township with an associated maps were available along with a copies of the pre-scripted messages to be read over the vehicle's public address system.

Fire Unit #1327 was used to demonstrate capabilities for a backup route alerting team. Each member of the two-person team was issued an emergency workers dosimetry packet containing a Landauer OSL permanent record dosimeter (PRD), a CDV-730 direct-reading dosimeter (DRD), a CDV-742 DRD, a package of ten 65 mg ThyroSafe™ potassium iodide (KI) tablets, a Dosimetry Report Form, and a lanyard for maintaining positive control of the DRDs. There was an adequate supply of dosimetry packets on hand for all the firefighters. Additional resources would be requested from the Lake County Emergency Operations Center.

All activities described in the demonstration criterion were carried out in accordance with the

plan, procedures, and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Concord Fire Department demonstrated the capability to issue appropriate dosimetry, KI and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintained appropriate record-keeping of the administration of KI to emergency workers.

The demonstration was conducted during an out-of-sequence activity from approximately 1800 hours to 2000 hours, at the Concord Fire Department, 11600 Concord Hambden Road, Concord, Ohio.

At 1807 hours, via Controller inject, the Fire/EMS Coordinator called to notify the fire department of a Site Area Emergency at the PNPP and that siren L26 was inoperable. If sirens were to be sounded, back-up route alerting for that siren coverage area would be required. Upon this notification, the Dosimetry Coordinator (DC) completed zeroing the Direct-Reading Dosimeters (DRDs) and directed personnel to complete the workers identification portion of the Dosimetry Report Form.

The DC then briefed fire department personnel on the usage of dosimetry kits and asked if any individuals were under the age of 18 or pregnant. None of the personnel responded in the affirmative to either of the questions. The DC also briefed fire department personnel that they would not be able to eat, drink, smoke, chew gum or tobacco inside the Emergency Planning Zone.

The DC instructed personnel to wear the dosimetry DRDs and Permanent Reading Dosimeters (PRDs) above their waist, on their outermost garment, and on the front torso of the body. Personnel were directed to read their dosimetry every 30 minutes and record the reading on the Dosimetry Report Form. The DC explained how to read each dosimeter and informed personnel

to report back if they received a reading of 1 R or greater. The turn-back value was 5 R and the life-saving limit was 25 R.

There were four kits available for the four firefighter participating in the demonstration. Each kit contained a Launder Permanent record dosimeter (PDR), a CD V-730 Direct-Reading Dosimeter, a CD V-742 DRD, a Dosimetry Report Form, a lanyard for maintaining positive control of the DRDs, and a package of ten 65 mg ThyroSafe™ potassium iodide (KI) tablets with an expiration date of December, 2019. The DRDs had calibration dates of Feb 15, 2016.

The DC provided instruction regarding the usage of potassium iodide (KI). He stated that it protect the thyroid and provided instructions regarding the appropriate dosage; potential side effects (Including skin rash, metallic taste, and upset stomach); and symptoms of allergy (e.g., fever, joint pains, shortness of breath). He also reminded the workers that if any allergic reaction should occur, they should immediately report such symptom to the DC.

Fire department personnel responded that they understood that they wouldn't ingest KI unless directed to do so by the DC, and if directed to ingest KI, they would record doses on the Dosimetry Report Form. Personnel were aware of the requirement to contact the DC is they needed additional KI or to report any dosimetry equipment issues.

Four fire department personnel demonstrated appropriate usage of dosimetry. All wore their dosimetry on lanyards above their outermost garments. Fire department personnel knew the reporting limit, the turn-back value, and the life-saving limit.

At 1900 hours, the DC notified the firefighters to take readings. The readings were communicated by radio to the DC. Personnel stated that upon completion of their mission they would report to the appropriate emergency worker monitoring and decontamination locations unless otherwise directed. There were no readings on the DRDs during the demonstrations so all workers completed and turned in their Dosimetry Report Forms to the DC.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures, and extent-of-play agreement.

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654/FEMA-REP-1, E.6; Appendix 3.B.2.c)

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016,

the Concord Fire Department demonstrated the capability to ensure backup alert and notification of the public was completed within a reasonable time following the direction by the Lake County Emergency Operations Center of a failure of the primary alert and notification system. The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours, at the Concord Fire Department, 11600 Concord Hambden Road, Concord, Ohio.

At 1807 hours, via Controller inject, the Fire/EMS Coordinator called to notify the fire department of a Site Area Emergency, Emergency Classification Level (ECL) incident at the PNPP and that siren L26 was inoperable.

At 1828 hours, the Concord Fire Department Officer-In-Charge (OIC) was notified of an upgrade to a General Emergency ECL at the PNPP via Controller inject. The OIC confirmed that siren L26 was still inoperable. The OIC provided directions and maps to the 2-person team tasked with backup route alerting duties. The public address system on Unit 1327 (2006 Dodge Durango) was checked and found to be functional prior to the team leaving the fire station. When tested, the public address system was clear and audible from listening inside the fire station.

In accordance with plans and procedures, Siren L26 was located in the Concord Township area and required only one team to complete the backup route alerting within a reasonable time frame.

The backup route alerting team drove the route at approximately 15 miles per hour. A simulated announcement was continuously broadcast over the public address system in the vehicle. Per the Suggested Operating Guideline for Lake County Fire Department, the message stated: "This is an emergency. Turn on your radio and television for emergency instructions." The message contained the elements required by current REP guidance.

The backup route alerting team notified the fire department (OIC) when they arrived at the route and began backup route alert notifications.

The backup route alerting notification was completed at 1903 hours. The entire route was run in 32 minutes.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures, and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 5.a.3
- b. LEVEL 1 FINDINGS: None

- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.26 Lake County – LakeTran RTA – DC Briefing

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday September 14, 2016, Laketrans (the regional transit authority for Lake County, Ohio) demonstrated at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. The demonstration was conducted out-of-sequence from approximately 0800 hours to 0900 hours, at the Fairport Superintendent's Office, 329 Vine Street, Fairport, Ohio.

This criterion was demonstrated via interview involving one bus driver and a supervisor.

Both individuals described two systems routinely used by drivers and dispatchers. Primary communications are routinely accomplished using an 800 MHz County radio system. Laketrans has adequate radios to equip all of its 84 Motor Coach Industries (MCI) buses. As a backup communications system, all buses are equipped with a Ranger satellite system that is routinely used to communicate manifest information. This system can also communicate via text.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday September 14, 2016, Laketrans (the regional transit authority for Lake County, Ohio) demonstrated sufficient

equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI), and other supplies to support emergency operations. The demonstration was conducted out-of-sequence from approximately 0800 hours to 0900 hours, at the Fairport Superintendent's Office, 329 Vine Street, Fairport, Ohio.

This criterion was demonstrated via interview involving one bus driver and a supervisor.

Laketran has 84 Motor Coach Industries (MCI) buses. Each bus has 49 seats and additional capacity to carry 23 standing passengers. Buses are Americans with Disabilities Act compliant and each can carry two wheel chairs. This clearly meets the requirement to transport the 720 students and 54 staff members in the Fairport Harbor School District.

Laketran has 110 emergency worker kits that are provided and maintained by the State of Ohio. Each kit contained one Model 730 0-20 R Direct-Reading Dosimeter (DRD), one CD V-743 0-200 mR DRD, and one Landauer Escort Luxel+ optically stimulated luminescent (OSL) dosimeter as a dosimeter of legal record. Each kit also contained 10 individually packaged 65 mg ThyroSafe™ KI tablets. Spot checks indicated that all DRDs had been leak checked on January 15, 2016 with a test due date of January 15, 2017. Landauer Escorts were within the current issue cycle of January 1, 2016 to December 31, 2016. Potassium iodide was from lot TU401A with a shelf life expiration of December, 2019.

Emergency Worker Exposure Logs, other instructions, and lanyards included in the kits meet additional needs of emergency workers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures.

Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA REP-1, K.3.a, b; K.4)

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday September 14, 2016, Laketran (the regional transit authority for Lake County, Ohio) demonstrated appropriate availability of dosimetry, potassium iodide (KI) and procedures, and managed radiological

exposure to emergency workers in accordance with the plans/procedures. Emergency workers periodically and at the end of each mission read their dosimeters and recorded the readings on the appropriate exposure record or chart. OROs maintained appropriate record-keeping of the administration of KI to emergency workers. The demonstration was conducted out-of-sequence from approximately 0800 hours to 0900 hours, at the Fairport Superintendent's Office, 329 Vine Street, Fairport, Ohio.

This criterion was demonstrated via interview involving one bus driver and a supervisor.

The supervisor read the standard brief that he would deliver to emergency workers. It covered dose limits, dosimeter and KI recording, use and precautions associated with KI, proper position of dosimetry, and periodic reading of Direct-Reading Dosimeters (DRDs). He also demonstrated zeroing of DRDs. The supervisor displayed and explained his Dosimetry Report Form, used to record dosimetry readings and KI usage for all of his drivers.

Via interview, the bus driver demonstrated understanding of the 5 R exposure limit, potentially equaling a 25 rem lifetime limit; proper recording of dosimetry and KI usage on the Emergency Worker Exposure Log; the requirement to read DRD every 30 minutes; use and precautions associated with KI; and final recording of exposure readings and turn in of dosimetry and records to his supervisor or other designated location at the end of the mission.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday September 14, 2016, Laketrans (the regional transit authority for Lake County, Ohio) demonstrated that potassium iodide (KI) and appropriate instructions were available if a decision to recommend use of KI was made. Appropriate record-keeping of the administration of KI for institutionalized individuals was maintained. The demonstration was conducted out-of-sequence from approximately 0800 hours to 0900 hours, at the Fairport Superintendent's Office, 329 Vine Street, Fairport, Ohio.

This criterion was demonstrated via interview involving one bus driver and a supervisor.

The supervisor read the standard brief that he would deliver to emergency workers. It covered KI recording and use and precautions associated with KI. He demonstrated several Emergency Worker Kits, which included 10 each 65 mg tablets of KI.

The bus driver accurately described the purpose of KI and identified the daily dosage as 130 mg. He also correctly described the precautions associated with KI, indications of an adverse reaction to iodine, and identified printed materials with this information in the emergency worker kit. The driver explained that he would take KI only if recommended by the State Department of Health and communicated by his supervisor and described how to record KI dosage on the Emergency Worker Exposure Log.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.2.27 Lake County – Fairpoint SD EV-2 Interview

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Concord Fire Department demonstrated the capability that equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI), and other supplies were sufficient to support emergency operations. The demonstration was conducted during an out-of-sequence activity from approximately 1800 hours to 2000 hours, at the Concord Fire Department, 11600 Concord Hambden Road, Concord, Ohio.

Copies of the Standard Operating Guidelines (SOG) for an Emergency at the PNPP, Lake County Fire Departments were available for each designated position in the fire department including backup route alerting team. The guidelines contained copies of the Emergency Worker Dosimetry Exposure Log and Dosimetry Report Form. Copies of the route alerting directions for the siren in the township with an associated maps were available along with a copies of the pre-scripted messages to be read over the vehicle's public address system.

Fire Unit #1327 was used to demonstrate capabilities for a backup route alerting team. Each member of the two-person team was issued an emergency workers dosimetry packet containing a Landauer OSL permanent record dosimeter (PRD), a CDV-730 direct-reading dosimeter (DRD), a CDV-742 DRD, a package of ten 65 mg ThyroSafe™ potassium iodide (KI) tablets, a Dosimetry Report Form, and a lanyard for maintaining positive control of the DRDs. There was an adequate supply of dosimetry packets on hand for all the firefighters. Additional resources would be requested from the Lake County Emergency Operations Center.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures, and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, Fairport Harbor Exempted Village School District had adequate equipment, displays and other supplies to support emergency operations. The interview was conducted out-of-sequence from approximately 0800 hours to 0900 hours at Fairport School district Superintendent's office, located at 329 Vine Street, Fairport Harbor, Ohio.

The following personnel were at the interview: District Superintendent of Schools, Grade School vice Principal, High School Principal, Transportation Supervisor, and a bus operator. Another evaluator was present to interview the School District personnel concerning Transportation, to include radiological equipment and potassium iodide (KI). There was a copy of the School District Suggested Operating Guidelines, last revised June 6, 2016.

There were two computers available for use during this exercise, one at the Receptionist's desk and one in the Superintendent's office, which was next to the Reception area. The Superintendent's office had a table capable of seating seven. A student roster was at the

Receptionist's desk, and a copy machine was also present in her area of operations next to the fax machine. A bookshelf in the Superintendent's office had a copy of the standard operating guidelines in case of an event at PNPP.

As per the Extent-of-Play agreement, the Transportation Supervisor and bus driver were interviewed concerning dosimetry and KI. This was done by the other evaluator.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, Fairport Harbor Exempted Village School District demonstrated the capability to issue appropriate dosimetry, potassium iodide (KI), procedures, and the capability to manage radiological exposure to emergency workers in accordance with the plans and procedures. The interview was conducted out-of-sequence from approximately 0800 hours to 1000 hours, at the Fairport School District Superintendent's Office, located at 329 Vine Street, Fairport Harbor, Ohio.

The following personnel were at the interview: District Superintendent of Schools, vice Principal of the grade school, high school Principal, Transportation supervisor, and a bus operator. Another evaluator was present to interview the School District concerning transportation. If there had been any mutual aid resources needed for an actual event, the Superintendent stated they would obtain dosimetry/KI (if needed) and just-in-time training at the County Emergency Operations Center.

The Superintendent stated that if a Site Area Emergency Classification Level was reached, he would have instructed the Transportation Supervisor to dispatch the bus drivers if the decision had been made to move students to the school designated to accept them during this emergency (Kirtland Schools).

The Superintendent stated he would have the school Principals' and office staff read the pertinent portions of the SOG concerning actions to take. Items that would be included are the following: Each principal will provide updated roster to Superintendent; if a need existed for medical aid, check with the school nurse; Review plans and procedures—call if any questions; Principal is last one out of building, and that actual emergencies take precedence over the exercise. He also would have told them where to report for decontamination, which was Kirtland High School. Evacuation maps were in the EPI Emergency Preparation Information pamphlet, along with additional information. The Transportation Supervisor had one available.

The other evaluator interviewed the Transportation Supervisor about the radiological and safety briefing he would provide to the bus drivers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, Fairport Harbor Exempted Village School District did not have Potassium Iodide (KI) available on-site as per their plans and procedures. The interview was conducted out-of-sequence from approximately 0800 hours to 0900 hours at the Superintendent's office located at 329 Vine Street, Fairport Harbor, Ohio.

The following personnel were at the interview: District Superintendent of Schools, grade school vice Principal, high school Principal, Transportation Supervisor (acting as DCO), and a bus operator. Another evaluator was present to interview the Transportation Supervisor and bus driver.

This school district does not have KI for its students stored on site, as per its plans and procedures. The other evaluator interviewed the Transportation Supervisor and bus driver, according to the extent-of-play, concerning dosimetry and KI.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, Fairport Harbor Exempted Village School District demonstrated the capability to implement protective actions for schools. The interview was conducted out-of-sequence from approximately 0800 hours to 0900 hours, at Fairport School District Superintendent's office, located at 329 Vine Street, Fairport Harbor, Ohio.

In attendance at the interview were the District Superintendent of Schools, McKinley grade school vice principal, Fairport Harbor high school principal, transportation supervisor and a bus driver. Another evaluator was present to interview the Transportation Supervisor and bus driver.

The District Superintendent would ensure protective actions that affected the District were implemented, based on Lake County Emergency Operations Center (EOC) recommendations. Evacuation routes and relocation information were available in a copy of the First Energy Nuclear Operating Company pamphlet the transportation supervisor had. If notification to parents, schools and other staff became necessary, the Messenger Alert communication system would be utilized. Notifications of the Emergency Classification Levels (ECLs) would come from Lake County EOC, as would recommendations to evacuate or shelter in place. If students were evacuated, normally at Site Area Emergency (SAE) ECL, they would be moved by Lake Tran to Kirtland School District. There are 84 buses available; only 15 would be necessary to move the number of students and staff presently at the schools.

The total number of students and staff to be evacuated from this District would be 774. Primary means of notification from Lake County EOC would be by commercial telephone. Parents would be notified of actions taken at the Fairport School District by the Messenger Alert system, which texts/emails/phones parents, according to the preference they had listed when their student was enrolled. This notification would be transmitted to parents and Offsite Response Organizations in a timely manner.

There are two schools in this school district, both of which are inside the 10-mile EPZ. It is a Latchkey program, and no students within their jurisdiction attend schools outside the 10-mile EPZ. Teachers and staff of the District schools would go with the students when they were evacuated, and keep a class list for accountability.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.2
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3 Risk Jurisdictions – Ashtabula County

4.3.3.1 Ashtabula County – ACSO Dispatch (INP)

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Initial Warning Point used effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. The demonstration was conducted in the Ashtabula County Sheriff's Department Dispatch Center, located at 25 West Jefferson Street, Jefferson, Ohio.

The Sheriff's Office Dispatch Center Central Communications is operated 24 hours a day using three shifts of two Dispatchers and one Sheriff's Sergeant or Lieutenant on each shift. During the exercise, two Dispatchers and one Sergeant were already on shift from 0700 hours to 1500 hours. Rosters were made available to support 24-hour operations. Shift coverage was determined as needed to support the event.

At 0801 hours, Ashtabula County received an initial notification from the PNPP that an Alert Emergency Classification Level (ECL) had been declared at 0752 hours. The call came in via a Five-way Dedicated Telephone System that connected PNPP with Ashtabula, Geauga and Lake Counties, and the State of Ohio. If the dedicated line was inoperable, commercial lines were available for contact and verification.

The Dispatcher filled in an Initial Notification Form, titled, FENOC Nuclear Power Plant Initial Notification Form, Perry, PNPP No 7794 Rev. 6/8/11. The dispatcher correctly noted the Alert ECL; Emergency Action Level GA2; damage to irradiated fuel; and Utility Protective Action Recommendation (none). Dispatcher then acknowledged understanding of the message, which

served as the notification verification. The Initial Notification Form was given to the Communications Officer. This activity concluded Dispatch Center participation in the exercise.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Ashtabula County Sheriff's Office Initial Notification Point (INP) demonstrated that at least two communications systems were available, at least one operated properly, communications links were established and maintained with appropriate locations, and communications capabilities were managed in support of emergency operations. The Initial Notification Point (INP) demonstration was conducted in the Sheriff's Office Dispatch Center located in a room adjacent to the Ashtabula County Emergency Operations Center (EOC) at 25 West Jefferson Street, Jefferson, Ohio.

Ashtabula County received an initial notification from PNPP via a Five-way Dedicated Telephone System that connected PNPP with Ashtabula, Geauga and Lake Counties, and the State of Ohio. The Five-way Dedicated Telephone System was designed to automatically ring at all locations when the receiver was lifted at any one of the PNPP extensions. The telephone was a large red desktop unit topped with a large light that flashed when ringing, making it easy to both see and hear.

Alternate communications to the Five-way Dedicated Telephone System were readily available and included commercial telephone with pre-programmed speed dial, email, facsimile, and a Motorola Radius CP200. These were not demonstrated during the exercise.

No communications failures were noticed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

Successfully demonstrated – This associated criterion requires no narrative.

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

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

4.3.3.2 Ashtabula County – EOC

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (AC EOC) demonstrated effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. The demonstration was conducted at the AC EOC located at 25 West Jefferson Street, Jefferson, Ohio.

At 0801 hours, the Ashtabula County Emergency Management Agency (EMA) Director was notified by the Ashtabula County Dispatch Center that it had received notice on the Five-Way Dedicated Telephone Line that an Alert Emergency Classification Level (ECL) had been declared at the PNPP. The EMA Director immediately instructed the EMA staff to activate the AC EOC and mobilize all AC EOC personnel. The AC EOC personnel were notified using the Code Red call-down system. The notifications were complete by 0804 hours.

At 0833 hours, EMA Director along with the three County Commissioners activated the Executive Discussion Line (EDL) located in the Executive Room adjacent to the AC EOC. The EDL was open throughout the exercise to communicate with the State EOC, the Lake County EOC, The Geauga County EOC and the Emergency Operations Facility at PNPP.

The AC EOC personnel were not pre-positioned. The AC EOC support staff started to arrive immediately while key personnel from other locations arrived from 0817 hours until 0858 hours. At 0905 hours, all key responders identified in the Ashtabula County Emergency Management Agency, Radiological Emergency Response Plan, January 2016 were present in the AC EOC. The EMA Director declared the AC EOC operational at 0905 hours.

Once the AC EOC was declared operational communications from the Five Way Dedicated Telephone Line were transferred to the Ashtabula County Radiological Officer (RO) in the AC EOC. The Five Way Dedicated Telephone Line was used to communicate with the SEOC, Lake County EOC, Geauga County EOC and the Emergency Operations Facility at PNPP. Subsequent ECL's were received by the RO and pertinent information immediately delivered to the Executive Group. The Site Area Emergency ECL was received at 1010 hours and the General Emergency ECL was received at 1202 hours. Verification of the ECL's was accomplished through discussions on the EDL and electronic mail.

A 24-hour staffing roster was posted at the entrance to the AC EOC with staff members for the first 12 hours and staff members for the second 12-hour shift listed. The Code Red call-down system was programmed with all AC EOC staff and could contact each with home phone, cellular phone or text message.

The AC EOC was activated in a timely manner and the EMA Director demonstrated the capability to initiate notification to other emergency management organizations in a timely manner. No additional resources or compensatory measures were identified or requested to alert, notify, and mobilize emergency personnel.

All activities described in the demonstration of this criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center demonstrated the capability of personnel in key leadership roles to provide direction and control to that part of the overall response effort for which they were responsible. The demonstration was conducted at the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

The Ashtabula County Emergency Operations Center (EOC) Executive Group was composed of the County's Emergency Management Director (EMD), the County Sheriff and three County Commissioners. The Executive Group worked in an office adjacent to, and with a clear view of, the EOC. The EOC was declared fully staffed and operational at 0905 hours.

Using a conference call telephone line that remained open throughout the exercise the Executive Group was able to coordinate its actions with the Executive Groups in the Lake County EOC, the Geauga County EOC, and the State of Ohio EOC to consider Protective Action Recommendations (PARs) and make a joint Protective Action Decisions (PADs).

The Deputy EMD supervised the ongoing activities of the EOC staff, providing direction and control when required. He monitored the status of response actions and directed EOC staff to take additional actions as needed. While located in separate areas the EMD and Deputy EMD were able to remain in constant communication through the use of hand-held radios.

The EMD conducted the initial EOC briefing at 0915 hours, stating that the PNPP had declared an Alert Emergency Classification Level (ECL) at 0752 hours. The Utility Representative in the EOC then reviewed the condition of the plant and actions being taken to correct the problem. The Deputy EMD directed the EOC staff to refer to their Suggested Operating Guidelines and complete all actions required to be taken when an Alert is declared.

A subsequent EOC briefing was conducted at 0930 hours, and included time for each participating agency to report on its status. This "round robin" agency reporting format was followed at subsequent EOC briefings. At 1010 hours, the EMD briefed the EOC that a Site Area Emergency (SAE) ECL has been declared. However, no Protective Action Recommendations (PAR) had been received and no Protective Action Decisions (PAD) made.

Agency representatives were urged to complete all required SAE actions as quickly as possible.

At 1015 hours, the County Commissioners declared a State of Emergency for Ashtabula County.

At 1040 hours, the EOC was again briefed that the PNPP was shutting down the reactor. Each agency reported the status of its activities.

At 1148 hours, the Utility Representative informed the Executive Group that plant conditions were deteriorating. The EMD then encouraged members of the Executive Group and the EOC staff to start reviewing their Standard Operating Guidelines for what they should do if a General Emergency (GE) was declared.

At 1202 hours, the EMD was notified that the PNPP had declared a GE ECL at 1150 hours, and

that a release of radioactivity was in progress. The Protective Action Recommendation was evacuation of Subareas 1, 2, 3, 4, 5, 6 and that portion of Lake Erie within 10 miles of the plant. Through discussion on the conference call line the Executive Groups of the three counties (Ashtabula, Geauga and Lake) concurred with evacuation of Subareas 1, 2, 3, 4, 5, 6, and that portion of Lake Erie near the plant. The sirens would sound at 1222 hours, and the Emergency Alert System (EAS) message would be broadcast at 1225 hours.

At 1217 hours, the State of Ohio EOC recommended evacuation on Subareas 1, 2, 3, and Lake Erie and that KI should be taken by emergency workers, institutionalized individuals and the general public and that 2 R be the total radiation does limit and 1 R the turn-back limit.

The Executive Groups of the three risk counties involved discussed the State's recommendations, before deciding to keep their original decision concerning evacuation of Subareas 1, 2, 3, 4, 5, 6 and the 10 mile portion of Lake Erie near the PNPP, but adopting the State's recommendation that KI should be taken by emergency workers, institutionalized individuals and the general public; and that 2 R be the total radiation does limit and 1 R the turn-back limit. That decision was reached at 1221 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (AC EOC) demonstrated that at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The demonstration was conducted at the AC EOC located at 25 West Jefferson Street, Jefferson, Ohio.

The primary communications systems that were available and demonstrated at the AC EOC during the exercise to communicate with other jurisdictions were the Five-Way Dedicated Telephone Line and the dedicated Executive Discussion Line. These communication systems were used to communicate with the Emergency Operations Facility at PNPP, State EOC and the

Geauga County EOC and the Lake County EOC. These systems were maintained by PNPP with regularly scheduled tests.

The key personnel at the AC EOC used a facsimile machine, electronic mail and commercial landline and cellular telephones to communicate with Ashtabula County personnel, support organizations, and other jurisdictions. These systems were also available to provide a coordinated communications link with fixed and mobile medical support facilities. The computer systems in the AC EOC were maintained by the Ashtabula County IT Department and telephones maintained by local providers.

Other communication systems use in the AC EOC and available to all AC EOC staff were the 800 MHz radio systems. These radio systems were independent of commercial telephone systems and successfully demonstrated during the exercise.

The AC EOC the Public Information Officer (PIO) communicated with the Joint Information Center by a Dedicated Public Information Line and by computer. The PIO stated that if neither system was available, the PIO would have Sheriff's Department disseminate the information by the 800 MHz radio systems nor the county EAS broadcast system.

Communications checks were conducted soon after activation of the AC EOC and there were no communication failures during the exercise. The AC EOC staff managed all message traffic without delays and there was no disruption in the conduct of emergency services.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Ashtabula County Emergency Operations Center (EOC) demonstrated the capability to use equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies to support emergency operations. The demonstration was conducted at the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

Located in the basement of the Ashtabula County Court House, the EOC had access to designated work spaces, restrooms and a break area sufficient to support around the clock

operations. Emergency Operations Center personnel staffed the sign-in table, while Sheriff's deputies furnished site security. Individual work stations within the EOC were equipped with a landline telephone, a laptop computer and standard office supplies. Suggested Operating Guidelines (SOG) and checklists specific to each function were furnished for each function, Fire/EMS Coordinator; Law Enforcement Coordinator; Job and Family Services Representative; Transportation Officer; Public Information Officer (PIO); PNPP Representative; Communication Officer, American Red Cross; Ashtabula Health Department; Ohio State Cooperative Extension Service; and the Ashtabula County Amateur Radio Club.

Knowledge Center display was projected on a large, easily visible screen and was located on the front wall of the EOC. Also on the front wall was a white board showing the Emergency Classification Level, meteorological data, protective action decisions, Shelter/Evacuation/KI information and Emergency Worker Exposure Limits. Two large flat-screen monitors were located in the upper corners of the front wall. Maps showing the siren locations, evacuation routes, and the locations of schools, hospitals, congregate care facilities, and Traffic Control Points and Access Control Points were placed on the right side wall. Also on this wall was a map depicting the Emergency Planning Zones with the 2-mile, 5-mile and 10-mile zones. Next to the PIO desk was a large map of the county water system; and clip boards for news releases, special news bulletins, and faxes from the other counties and the State of Ohio. On the opposite was a large map of Ashtabula County and white board displays, one showing Event-Casualty/Damage Summary and the other Area Closings Status and Shelter/Facility Status.

Next to the EOC were offices for the Executive Group, the Radiological Officer, the Public Inquiry staff and Amateur Radio Operators. The Executive Group room was equipped a conference call speaker phone that connected the three risk counties and the State of Ohio EOC. This connection was established at 0833 hours and remained open for the duration of the exercise.

The Emergency Operations Center was located outside of the 10-mile Emergency Planning Zone, dosimetry and potassium iodide were not provided for EOC Staff.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures. Emergency workers periodically and at the end of each mission read their dosimeters and

record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA REP-1, K.3.a, b; K.4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (EOC) demonstrated the capability to issue appropriate dosimetry, KI and procedures, and manage radiological exposure of emergency workers in accordance with plans and procedures. The demonstration was conducted at the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

At 0915 hours, the Radiological Officer (RO) conducted a radiological briefing for two designated Emergency Workers (EW). During the briefing the EW were issued a 0-20 R Direct Read Dosimeter (DRD), a 0-200 R DRD, a simulated Permanent Read Dosimeter (PRD), a packet of potassium iodide (KI) tablets, record forms and instruction sheet. The EWs were told that the DRDs were to be worn on their torso on their outermost garment, read at 30-minute intervals and the readings recorded on the form provided. The EWs were told that their dosimeter limit / turn-back reading was 5 R, their Total Effective Dose Equivalent (TEDE) was 5 rem. The EWs were told how KI affects the human body and that they were to take it only when instructed to do so and to then record the time it was taken on the form provided. The two Emergency Workers were instructed to turn in their dosimeters, KI, and record sheets at the end of their assigned work period.

In a subsequent interview with the two Emergency Workers both demonstrated how to read their DRDs and how the readings were to be recorded. Both individuals displayed an adequate knowledge of when and why KI was to be taken and the drug's impact on the body. All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (EOC) demonstrated the capability that potassium iodide (KI) and appropriate instructions were available should a decision to

recommend the use of KI by the general public and institutionalized individuals be made and that appropriate keeping of the administrations of KI for institutionalized individuals was maintained. The demonstration was conducted at the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

The Ashtabula County Health Department maintains a supply of potassium iodide at its office in Jefferson. On the date of the exercise the Health Department representative in the EOC stated that the County Health Department currently had 110,384 KI tablets, which equaled 55,192 doses. The Health Department representative also stated that many of the county's residents kept a supply of KI at their homes, that all of the ambulance services in the County maintained a supply of KI, that several pharmacies in the County stocked KI, and that the larger employers in the County maintained a supply of KI on site for their employees.

Ashtabula County is required annually to collect the names of those individuals, who have registered as mobility impaired, special needs, or limited needs. The list is secured at the County

Emergency Management Agency's office and shared only with the county Office of Jobs and Family Services (JFS). The JFS is responsible for 59 persons within Subareas 4 and 5, and have identified them prior to the event for needing assistance. Within the County EOC the

County Transportation Director stated that their office would provide transportation to the identified citizens based on request initiated by the JFS liaison. Three pre-designated pick-up points have been identified for those persons requiring transportation but were not registered through the office of JFS.

The County Health Department sponsors a weekly clinic in Geneva at which KI is also made available to the general public. The Health Department representative stated that if an evacuation was ordered evacuees should go to a designated reception center where KI would be available and that host health care facilities would also have KI that could be administered if needed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial

Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (EOC) demonstrated the capability to implement protective actions for persons with disabilities and/access/functional needs, other than schools, within area subject to protective actions. The demonstration was conducted at the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

Upon arrival at the EOC the representatives of the Department of Jobs and Family Services (DJFS) began contacting the Functional Needs Support Agencies concerning the Alert Emergency Classification Level (ECL) at the PNPP, requesting that the agencies notify their clients of Alert ECL. The DJFS representatives stated that the support agencies are in almost daily contact with their clients and therefore were in an excellent position to know their client's current status and how to best contact them. The Functional Needs Support Agencies notified during this exercise were: Area Agency on Aging District 11; Ashtabula County Board of Developmental Disabilities; Ashtabula Regional Home Health; Care Star; Catholic Charities; Happy Hearts Shelter; Homestead Nursing; Hospice of the Western Reserve; and the Mental Health Recovery Services Board. By 1007 hours, all individuals with special needs had been contacted (simulated).

Following the declaration of a Site Area Emergency ECL at 0954 hours, the Functional Needs Support Agencies were again notified and in turn notified their clients to determine who would need transportation should that be required. This action was completed by 1040 hours, and the Transportation Coordinator in the EOC was notified. The Transportation Coordinator stated that transportation for special needs individuals would be via school system vehicles (buses or wheelchair accessible vans as needed), with back up transportation being provided by local fire departments and the Functional Needs Support Agencies.

After the declaration of a General Emergency ECL and the decision by the Executive Group at 1221 hours, to evacuate Subareas 4 and 5 the DJFS representatives again called the Functional Needs Support Agencies who in turn notified their clients.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016,

the Ashtabula County Emergency Operations Center (EOC) demonstrated the capability of officials to implement protective action for schools. The demonstration was conducted at the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

At 0954 hours, a Site Area Emergency Classification Level was declared at the PNPP. At 1009 hours, the School Services Representative advised the Ashtabula County Executive Group that Geneva Area City School District had elected to relocate all students in Subareas 4 and 5 as a default precautionary protective action. The District consisted of three elementary schools, one middle school and one high school. The School Services Representative contacted the school principals at the three host schools to discuss their ability to accept the relocated students. The EOC Transportation Officer coordinated with the Geneva School District Transportation Supervisor to provide busses adequate to accomplish the relocation.

The School Services Representative reported that the host schools, Jefferson A Tech, Jefferson Middle School and Jefferson High School, were prepared to receive the students being relocated. The School Services Representative coordinated with the EOC Public Information Officer Liaison to ensure the Joint Information Center was aware of the planned relocation. She also coordinated with the Public Inquiry staff so they could accurately handle questions from the public. Parents of students were also notified by an automatic calldown telephone system to pick up students at the host schools. At 1018 hours, the School Superintendent notified the EMD that students the Geneva Schools were being relocated (simulated).

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (AC EOC) demonstrated the establishment of appropriate traffic and access control in the 10-Emergency Planning Zone in Ashtabula County. The demonstration was conducted at the AC EOC located at 25 West Jefferson Street, Jefferson, Ohio.

The AC EOC Law Enforcement Coordinator (LEC) was responsible for appropriate Traffic Control Points (TCP) and Access Control Points (ACP) in Ashtabula County. The TCP and

ACP along with operating procedures were identified in the Ashtabula County Emergency Management Agency, Suggested Operating Guidelines, ORO Law Enforcement Agents, revised 04/2016 (SOG).

Upon arrival at the AC EOC at 0817 hours, the LEC was informed that an Alert Emergency Classification Level (ECL) had been declared at the PNPP at 0752 hours. The LEC then notified all law enforcement agencies to prepare for heavy traffic, be prepared to assist in the relocation of school children, and too standby. At 1010 hours, the AC EOC was notified that a Site Area Emergency ECL had been declared. The LEC again notified all law enforcement agencies and instructed them to prepare for deployment to TCP and ACP. The LEC also coordinated equipment needs for the TCP and ACP with the Transportation Coordinator.

At 1202 hours, it was announced in the AC EOC that a General Emergency ECL had been declared. At 1221 hours, it was announced that a Protective Action Decision had been made to evacuate Subareas 1, 2, 3, 4, 5, 6 and the Lake. The LEC consulted the SOG and collaborated with the Ohio State Highway Patrol, Geneva Township and Lake Police Departments to determine the TCP and ACP coverage for the evacuation. The LEC then consulted with the Transportation Coordinator and the Public Information Officer.

During an interview the LEC said all emergency personnel deployed to the TCP and ACP would be briefed and provided the SOG for use and familiarization prior to deployment. This activity was demonstrated at the Geneva Police Department. The TCP and ACP were not deployed for this exercise in accordance with the extent-of-play agreement.

The AC EOC Operations Manager stated that air, rail and boating traffic was the responsibility of the State of Ohio. The AC EOC was notified at 1033 hours that early precautionary action had been taken to restrict air, rail and boating traffic in the area.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (AC EOC) demonstrated impediments to evacuation could be identified and resolved in accordance with plans, procedures and the Extent-of-Play Agreement. The demonstration was conducted at the AC EOC located at 25 West

Jefferson Street, Jefferson, Ohio.

During the evacuation of Subareas 1, 2, 3, 4, 5, 6 and Lake it was reported to the Law Enforcement Coordinator (LEC) that a fully loaded semi-trailer from Mohawk Paper overturned when negotiating a right hand turn south onto Rt. 45 from Rt. 20. The contents of the trailer were strewn across the intersection, blocking traffic from all directions. The report also stated it would take at least two hours to clear the impediment.

Upon receipt of the information the LEC had the Ohio State Highway Patrol dispatch a Trooper to the scene to determine if there were any injuries and to assess the situation and manage the traffic. The LEC also dispatched Eagle Towing to clear the route. The LEC then collaborated with the other law enforcement agencies to propose an alternative route for the evacuation. A large evacuation route map was available along the wall in the AC EOC for easy reference and discussion.

The alternative route would detour east bound traffic on Rt. 20 south on Depot Road at Saybrook, then east on Rt. 84 until arriving at Rt. 45. West bound traffic on Rt. 20 would detour to Sanborn Road south to Rt. 84 and finally to Rt. 45. South bound traffic on Rt. 45 would detour west on New London Road, then south on Depot Road to Rt. 84.

Once selected the LEC explained the proposed route to the Radiological Officer who then approved the detour. The LEC coordinated with the Transportation Coordinator to make sure the necessary resources would be deployed to the new Traffic Control Point locations. The LEC then briefed the Executive Board and the Public Information Officer on the alternative routes. Public notification was done through the Joint Information Center with information provided by the Public Information Officer. The public notification was provided by the Joint Information Center through a media release to all persons traveling on Rt. 20 and Rt. 45 explaining how traffic would be diverted due to the accident.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures, and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (AC EOC) primary alerting and notification to the public was completed in a timely manner following the initial decision by the Executive Groups of Ashtabula, Lake and Geauga Counties to notify the public of an emergency situation. The demonstration was conducted at the AC EOC located at 25 West Jefferson Street, Jefferson, Ohio.

At 1221 hours, the combined Executive Groups of Ashtabula, Lake and Geauga Counties made a Protective Action Decision to evacuate Subareas 1, 2, 3, 4, 5, 6, and Lake. In accordance with the plans, procedures and extent-of-play agreement the Lake County EOC prepared the appropriate Emergency Alert System (EAS) message and simulated sounding the sirens and sending the message over the Lake County EAS System. The sirens were sounded at 1222 hours and the EAS Message was broadcast at 1225 hours. In accordance with the extent-of-play agreement no siren activation was performed by Ashtabula County.

The AC EOC staff said in the event of a siren failure in Ashtabula County the PNPP would notify the AC EOC and back-up route alerting would be conducted. The siren system was maintained by PNPP.

The EAS message was verified by the AC EOC Public Information Officer. The EAS message contained the required information, the responsible agency, Lake County, the affected plant, PNPP, reference to the information brochure and the request to tune to local radio stations for information. In the event of a failure in sending the message over the Lake County EAS System the Ashtabula County EAS System would broadcast the message. Ashtabula County maintains a Sage EAS ENDEC 2000D alerting system. A quiet test of the system was conducted once a week and an audible test was conducted quarterly.

All activities described in the demonstration of this criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (EOC) demonstrated the capability to

provide accurate emergency information and instructions to the public and the news media in a timely manner. The demonstration was conducted at the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

During the exercise the Ashtabula County Public Information Officer (PIO) drafted three news releases that were reviewed and approved by the Executive Group before being disseminated by the Joint Information Center.

News release number one, issued at 0930 hours, concerned the Ashtabula County EOC being activated in response to an Alert Emergency Classification Level being declared at the PNPP.

News release number two, issued at 1045 hours, focused on the State of Emergency having been declared by the Governor and the Ashtabula Board of Commissioners. This release also stated that parklands within 10 miles of the PNPP were now closed and that boating traffic was restricted on Lake Erie within 10 miles of the PNPP.

News release number three was issued at 1245 hours and concerned a traffic accident at the intersection of US-20 and SR-45. Information about the detour around the accident location was provided in the releases.

During the exercise the PIO received two telephone calls (simulated) from citizens requesting information. These were forwarded to the Public Inquiry desk. No news media interviews or briefings were conducted by the County PIO in the EOC during the exercise.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.3 Ashtabula County – EOC Executive Room

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Executive Committee demonstrated that key personnel with leadership roles for the ORO could provide direction and control to that part of the overall response effort for which they are responsible. The demonstration was conducted at the Ashtabula County Emergency Operations Center (EOC), located at 25 West Jefferson Street, Jefferson, Ohio.

The Ashtabula County EOC Executive Group was located in the Executive Room adjacent to and overlooking the EOC facility. The Group consisted of the Emergency Management Agency (EMA) Director, three Ashtabula County Commissioners, and the Ashtabula County Sheriff. The Group coordinated with the Executive Groups in the Lake County EOC, the Geauga County EOC, and the State of Ohio EOC to consider Protective Action Recommendations (PARs), make joint Protective Active Decisions (PADs) and initiate precautionary measures. They considered two PAR, one from the State and one from the Utility, and made one PAD.

At 0838 hours, the Executive Decision Line was opened. This line was hosted by Lake County, and connected the Executive Group from Ashtabula with Lake and Geauga Counties, and the State of Ohio.

At 0850 hours, Executive Group personnel present discussed whether to produce a press release regarding the opening of the county EOC. At 0857 hours, the Executive Group was declared operational. The Executive Group discussed and ultimately decided that schools needed to begin planning for any potential emergency classification level increases. The EMA Director was in constant contact with the EOC Operations Coordinator via hand-held radio. Decisions made by both the Executive Group and the EOC were transmitted through the Operations Coordinator.

The Executive Decision Line remained open during the entire exercise, and updates were held during Emergency Classification Level changes, protective action decision-making, and whenever the Executive Groups and the State needed to pass along information. Although Protective Action Recommendations were made by the Utility and the State, the Ashtabula County Executive Group retained the right to make a Protective Action Decision in coordination with Lake County and Geauga County.

Each Executive Group member had their Suggested Operating Procedures and followed the checklists during the exercise. Two administrative assistants, one for the EMA Director and once for the Commissioners, maintained the activity logs for the Executive Group.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654/FEMA-REP-1, C-6; J-10.e, f; K.3.a, 4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Emergency Operations Center (EOC) Executive Group demonstrated the use of a decision-making process to ensure that an exposure control system, including use of potassium iodide (KI), was in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. The demonstration was conducted in the Ashtabula County EOC Executive Room, located at 25 West Jefferson Street, Jefferson, Ohio.

The Ashtabula County Executive Group, in coordination with Lake and Geauga County Executive Groups, was the coordinator for the emergency worker exposure control system. Based on the Ashtabula County Radiological Emergency Response Plan, the dosimetry limit/turn-back values were set at 1 R for all activities, 2 R for protection of valuable property, and 5 R for lifesaving or protection of large populations. These dosimetry limits correlated to Total Effective Dose Equivalent (TEDE) dose limits of 5 rem, 10 rem, and 25 rem, respectively.

Throughout the exercise, the Executive Group made decisions in coordination with Lake County and Geauga County; this included the KI decision.

At 1150 hours, a General Emergency Emergency Classification Level was declared at PNPP. At 1217 hours, the State of Ohio Protective Action Recommendation was received, which recommended KI for emergency workers in Subareas 1, 2, 3 and the Lake and a change to the dose limit/turn-back values from 5 R to 2 R, 2 R to 1 R and 1 R to 1 R. At 1221 hours, a Protective Action Decision was made to recommend KI for emergency workers in Subareas 1, 2, 3 4, 5, 6 and the Lake and a change to the dose limit/turn-back values from 5 R to 2 R, 2 R to 1 R

and 1 R to 1 R.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Executive Group demonstrated a decision-making process involving consideration of appropriate factors and necessary coordination to make Protective Action Decisions (PADs) for the general public, including the recommendation for the use of potassium iodide (KI). The demonstration was conducted in the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

The Ashtabula County EOC Executive Group coordinated with the Lake County Executive Group and the Geauga County Executive Group to consider a Protective Action Recommendation (PAR) from the utility and the State of Ohio.

At 1202 hours, the Executive Group received a Protective Action Recommendation (PAR) from the utility to evacuate Subareas 4 and 5, and to administer KI to emergency workers and institutionalized individuals. At 1214 hours, the Executive Groups of Ashtabula, Lake, and Geauga Counties issued a Protective Action Decision #1 to evacuate Subareas 1, 2, 3, 4, 5, 6, and the lake. At 1217 hours, the State of Ohio forwarded a PAR with evacuation of Subareas 1, 2, 3, and the lake; KI for emergency workers, institutionalized persons and the public in those Subareas; turn-back values in the 10-mile Emergency Planning Zone (EPZ) changed from 5 R to 2 R for lifesaving or protection of large populations, 2 R to 1 R for protection of valuable property, and 1 R to 1 R for standard response functions; and turn-back dose outside of the 10-mile EPZ unchanged. The Executive Group elected to stay with the PAD already issued, and updated the amendment at 1221 hours which included KI for emergency workers, institutionalized persons, and the public in Subareas 1, 2, 3, 4, 5, 6, and the lake.

The Operations Coordinator informed the EOC staff and requested the staff notify their respective agencies and field staff.

Annex J of the Ashtabula County Radiological Emergency Response Plan outlined the process taken by the Executive Group in Ashtabula County in the absence of a consensus PAD with Lake and Geauga Counties.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Executive Group made protective action decisions (PADs) for groups of persons with disabilities and access/functional needs. The demonstration was conducted in the Ashtabula County EOC located at 25 West Jefferson Street, Jefferson, Ohio.

The Commissioners were assisted in their decision-making by the Emergency Management Director (EMD) and County Sheriff, and supported by the PNPP Liaison. Special population groups in Ashtabula County included schools (if evacuated before a General Alert Emergency Classification Level), private nursing homes and hospitals. The Ashtabula County Job and Family Services maintained a list of the special needs residents located inside the 10-mile Emergency Planning Zone. The list contained the name, address, telephone number, special need(s) and transportation requirements of each individual. Hearing, vision, and mobility impaired individuals within the affected area were considered part of the general population.

At 0850 hours, during the Alert Emergency Classification Level (ECL), the Executive Group directed the schools liaison to begin the planning and notification process for a potentially higher ECL. The Operations Coordinator reported to the Executive Group at 0925 hours, with updates on the number of special needs individuals who might require transportation and the transportation assets available, and provided continuous updates on the movement of school children.

At 0954 hours, a Site Area Emergency Classification Level was declared at PNPP. At 1009 hours, the School Services Representative advised the Ashtabula County Executive Group that Geneva Area City School District had elected to relocate all students in Subareas 4 and 5 as a default precautionary protective action. The District consisted of three elementary schools, one middle school and one high school. The School Services Representative contacted the school

principals at the three host schools to discuss their ability to accept the relocated students. The EOC Transportation Officer coordinated with the Geneva School District Transportation Supervisor to provide busses adequate to accomplish the relocation. At 1018 hours, the School Superintendent notified the EMD that students the Geneva Schools were being relocated (simulated).

Factors considered when making PADs were the same as for the general population and gave special attention to current and projected weather and highway conditions (especially for pre-established evacuation routes) availability of transportation resources, and the availability specialized health care facilities. Transportation logistics for special population groups were coordinated by the County Fire Services Coordinator, Health/Medical Officer and the School Services Officer in the EOC. At 1221 hours, the Executive Group amended PAD #1 to include KI ingestion for institutionalized persons.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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

4.3.3.4 Ashtabula County – EOC - PIO

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Ashtabula County Public Information Liaison provided accurate emergency information and instructions to the public and news media in a timely manner. This demonstration was conducted at the Ashtabula County Emergency Operations Center located at 25 West Jefferson Street, Jefferson, Ohio.

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Upon notification of an event at PNPP at 0801 hours, the Public Information Officer and one Information Coordinator deployed to the Joint Information Center (JIC) at the Lake County Emergency Operations Center. The JIC served as the centralized location for public affairs, media access, and coordination of emergency information for all of the risk and host counties.

Within Ashtabula County, the Public Information Liaison (PIL) was required to gather timely and pertinent information and forward through email, Knowledge Center or telephone to the lead PIO at the JIC. The PIL was also required to monitor information sharing within the EOC, and on social media. Ashtabula County activated their Public Inquiry and Rumor Control line in a designated room within the EOC. There were a total of 27 calls received during the exercise, all of which were addressed, logged on Knowledge Center, and routed to appropriate EOC personnel as needed. No trends were noted, and the calls covered a wide range of situations expected during an incident. The Public Inquiry and Rumor Control Line also monitored social media.

Messages received from the JIC were distributed to the EOC and Executive Group, with file copies posted by the PIL in a designated area within the EOC.

The PIL generated three press releases, two which were sent to the PIO at the JIC. The PIL uploaded a total of five documents on Knowledge Center, which was accessible by the PIO. The first generated press release was issued at 0948 hours, and covered the Alert Emergency Classification Level and subsequent EOC Activation, and directed personnel to monitor TV/radio for further information. At 1115 hours, a second press release was sent to the JIC; this release detailed the local State of Emergency declaration at 1015 hours, boating restrictions and state park closures within the 10 mile Emergency Planning Zone, and the livestock advisory. At 1300 hours, the third release sent to the JIC covered an impediment and re-routing in Ashtabula County. The PIL did not use pre-printed messaging because they could not be found, but explained that the PIO Suggested Operating Procedures (dated April 2016) were used to ensure required information was in each message. Lake County press releases starting with Message #4 released at 1013 hours, covered Ashtabula County. There was no loss of information flow noted based on PIL responsibilities at the EOC.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.5 Ashtabula County – County PIO at FENOC JIC

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Ashtabula County demonstrated the capability to provide accurate emergency information in a timely manner to the public and news media at the FirstEnergy Nuclear Operating Company (FENOC) PNPP Joint Information Center (JIC). The demonstration was conducted at the Auburn Career Center (ACC), located at 8140 Auburn Road, Concord, Ohio.

Starting at the County EOC, the Ashtabula County Public Information Officer (PIO) and an assistant departed for the JIC at 1028 hours, arriving at 1102 hours. They signed in at the JIC Security desk located in the lobby of the ACC facility, proceeding upstairs to the State/County Work Area, a.k.a., the Networking Room. Upon arrival, he checked in with his counterpart at the EOC to confirm his arrival, establish communications, and receive the most current information. PIOs from Lake and Ashtabula counties, and the State of Ohio, all arrived at about the same time and were briefed by the FENOC Government Liaison, and agreement was reached to conduct the first media briefing at 1130 hours. With all functions staffed, the JIC was declared operational by the JIC manager at 1102 hours.

Physically, the ACC was well suited to serve its intended purpose of gathering and coordinating information and disseminating it to the public and the media in various ways. The first floor was available to members of the press who were prevented by security from going upstairs to the JIC work areas. The media briefing room was a large, modern auditorium with a stage and table for the presenters and a podium for the moderator. Graphics were available and projected on a screen as needed to enhance the presentations. Both table and lapel microphones were used to be sure everyone in the auditorium could hear. Plenty of seats were available for the media and an upstairs balcony was used by observers. Presenters could access the stage via a separate stairway. Plenty of work space was provided for media representatives and a liaison person was on hand to assist the media as needed.

At 1110 hours, prior to the first media briefing, the FENOC JIC Manager facilitated a pre-briefing in the JIC Pre-Brief Room among FENOC personnel, and PIOs from the State of Ohio and the three counties. The JIC Information Supervisor for PNPP was assigned as moderator.

Other participants at this and other media briefings were the PNPP Technical Spokesperson, the State of Ohio PIO, and Lake, Geauga and Ashtabula County PIOs. With the event having begun more than two hours earlier, it was decided that this media briefing would report information related to the declaration of the Site Area Emergency (SAE) Emergency Classification Level (ECL), plant conditions, and offsite implications. The JIC Information Supervisor said that once basic plant information was shared, the counties, beginning with Lake County, as the lead, would present information affecting local area residents, followed by the State. Once the counties concluded, the Technical Spokesperson would provide more detailed plant information. Questions were then to be entertained from the assembled mock media.

In each of the pre-briefings, the JIC Manager, with the assistance of the Information Supervisor for PNPP serving as moderator, specified the purpose(s) of the briefing, identified who would participate and the order of speakers, identified and led the discussion of rumors and trends with the help of the FENOC Communications Coordinator, and identified the graphics to be displayed.

At approximately 1120 hours, the pre-brief concluded and the PIOs left to check in with their respective EOCs to determine whether there was new information to provide. The participants then reconvened outside of the Auditorium, had a brief discussion, and the first media briefing commenced at 1130 hours.

The Lake County PIO led off the presentation by reporting on the precautionary measures that had been taken. The FENOC Communications Coordinator said that calls were coming into the hotline related to plant conditions and the possibility of evacuation. The Ashtabula PIO reported that the EOC was operational at 0905 hours, and the county had declared a state of emergency at 1015 hours. He provided hotline phone numbers and the URL for the county's website. No mock media questions were directed to the Ashtabula County PIO. The first briefing ended at 1152 hours, with the next one scheduled for 1220 hours.

Immediately after this and other media briefings the JIC Manager, with the assistance of the Information Supervisor for PNPP (the moderator), led the discussion in the JIC Pre-Brief Room of lessons learned from the just-concluded media briefing and ensured that a response was planned for information requiring follow-up.

At 1203 hours, the Lake County PIO received the initial report that PNPP event had escalated to a General Emergency ECL, sharing it with his colleagues in the work area. Although the second media briefing had been scheduled for 1220 hours, a short delay was requested to confirm the

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protective action decisions (PADs) being made, receipt of the Lake County special news bulletin providing PAD details, and the timing of siren activation (at 1222 hours) and broadcasting of the EAS message (at 1225 hours). The Lake County PIO presentation occupied the bulk of the time reading the lengthy special news bulletin containing the details of the evacuation of Subareas 1-6 and Lake Erie out to a ten-mile radius from the plant, also affecting Geauga and Ashtabula counties.

The Ashtabula PIO addressed concerns of those with special needs and the relocation of schoolchildren. Again, he shared the hotline number and the website.

Mock media asked each of the presenters what happens when care centers approach capacity. All indicated that most residents do not go to care centers and instead go to the homes of friends and family and, in the unlikely event a care center neared capacity, secondary, or alternate, care centers would be opened. The briefing ended at 1247 hours with the next one scheduled for 1315 hours.

As before, at 1305 hours, a pre-brief was facilitated by the JIC Manager in anticipation of the third media briefing following the same procedure. The third media briefing began at 1316 hours. The same representatives participated, and once again, the PNPP Information Supervisor acted as moderator. Again, Lake County took the lead. Ashtabula County reported that with care centers becoming overcrowded, an additional care was preparing to open. He discussed a traffic accident at Rt. 45 & Hwy. 20, and provided an alternate route. The hotline number and website were again provided.

The FENOC Communications Coordinator said that calls were coming requesting information on the magnitude of the rad release, and that some individuals were saying that they could "see" the plume.

Ashtabula County issued no news releases at the JIC during the exercise.

As a utility operated facility, activation and operation of the PNPP JIC were conducted in accordance with the utility procedure, JIC-0003, "Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation," Revision 5, dated September 19, 2014.

The public inquiry hotline function at the PNPP JIC was conducted by FENOC staff on behalf of the three counties and the State, and is reported on separately under the State narrative.

All activities described in the demonstration criterion were carried out in accordance with the

plan, procedures and extent-of-play agreement.

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

- a. MET: 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.6 Ashtabula County – Geneva PD (GPD) TCP/ACP DC Briefing

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

Successfully demonstrated – This associated criteria requires no narrative.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 12, 2016, the Geneva Police Department (GPD) demonstrated that there was sufficient equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies to support emergency operations. The interview and demonstration was conducted out of sequence from approximately 1000 hours to 1100 hours at the GPD headquarters located at 44 North Forest Street, Geneva, OH.

There were 16 dosimetry packets to issue emergency workers at the GPD. Each dosimetry kit had a Thermoluminescent Dosimetry Badge that would be used as a permanent record of exposure, two Direct-Reading Dosimeters (DRDs) manufactured by Arrow-Tech with a calibration expiration date of March 15, 2019, and a bubble pack of 10 65 mg KI tablets manufactured by ThyroSafe™ with an expiration date of December 31, 2019. The Dosimetry Coordinator demonstrated using a CDV-700 Charger to zero the DRD. Each kit had a dosimetry report form to be used by the emergency workers to record the readings of the DRD in half hour

intervals and at the end of their mission.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 12, 2016, the Geneva Police Department (GPD) demonstrated the capability to issue dosimetry, potassium iodide (KI) and manage an exposure control plan for emergency workers in support of emergency operations. The interview and demonstration was conducted out of sequence from approximately 1000 hours to 1100 hours at the GPD headquarters located at 44 North Forest Street, Geneva, OH.

The Dosimetry Coordinator (DC) simulated briefing a group of officers who would be in the field manning traffic and access control points assigned to the GPD. The DC had 16 dosimetry packets that were to be issued to officers who were to be assigned as emergency workers at the GPD. The DC used a checklist from the Ashtabula County EMA Suggested Operating Guidelines (revised 4/2016), as a guide to brief the officers and simulated issuing an emergency worker packets. The DC described the contents of the EW packets and displayed the dosimetry report form (revised 2/2011).

Each dosimetry packet had a Thermoluminescent Dosimetry Badge that would be used as a permanent record of exposure, and two Direct-Reading Dosimeters (DRDs) manufactured by Arrow-Tech with a calibration expiration date of March 15, 2019. The EW dosimetry kit contained one DRD reading from 0-20 R and one reading from 0-200 R. The DC used a CD V-700 charger to zero the DRD, he advised the officers that they were to read and verify the zero reading at the start of their mission and record readings of the DRD in half hour intervals and at the end of their mission. The DC briefed that usually they would be reminded to record the reading by a radio transmission from the dispatcher.

The DC instructed the officer how to wear the dosimetry and reviewed maximum exposure

limitations of 1 R and a turn-back value of 5 R. Each EW packet contained a bubble pack of 10 65 mg KI tablets manufactured by ThyroSafe™ with an expiration date of December 31, 2019, the DC briefed the officers on KI, purpose and contra-indications and that they were to take the KI when directed. At the end of their mission, the officers were to make a final DRD reading, record it and return the dosimetry and report forms to the DC at GPD headquarters or to an EW monitoring or decontamination site for records retention.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.7 Ashtabula County – Geneva PD (GPD) TCP/ACP

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

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 12, 2016, the Geneva Police Department (GPD) demonstrated that at least two communications systems were available and at least one system operated properly, and communications links that were established and maintained on several levels with other appropriate emergency response organizations. The interview and demonstration was conducted out of sequence from approximately 1000 hours to 1100 hours at the GPD headquarters located at 44 North Forest Street, Geneva, OH.

The GPD operates a Public Service Answering Point (PSAP) at the GPD headquarters for the city of Geneva, OH. By direct observation it was determined that the PSAP dispatcher acts as the GPD dispatcher and primary link to officers in the field. An interview with the officer concluded

that there were multiple radio systems with redundancies built into them that an officer may use to contact the PSAP dispatcher; however the most common means of communications for GPD officers was a UHF radio system. A Multi-Agency Radio Communications System was also available which is an 800 MHz trunked radio system used by law enforcement (LE) in OH and links GPD with other LE agencies, fire and emergency medical services, public works and others authorized within Ashtabula County.

The GPD cars have an array of mobile radios and each officer was issued a hand held radio for use while on duty. The GPD cars also had a laptop computer with a messaging system that provides an additional tier of communications with the PSAP dispatcher. GPD officers carried personal cellular phones that can also be used as a backup to contact the PSAP dispatcher at GPD headquarters.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 12, 2016, the Geneva Police Department (GPD) demonstrated that there was sufficient equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies to support emergency operations. The interview and demonstration was conducted out of sequence from approximately 1000 hours to 1100 hours at the GPD headquarters located at 44 North Forest Street, Geneva, OH.

There were sufficient dosimetry packets to issue GPD officers as emergency workers (EW). The EW dosimetry kits had a Thermoluminescent Dosimetry Badge that would be used as a permanent record of exposure, and two Direct-Reading Dosimeters (DRDs) manufactured by Arrow-Tech with a calibration expiration date of March 15, 2019, and a bubble pack of 10 65 mg KI tablets manufactured by ThyroSafe™ with an expiration date of December 31, 2019.

There was a copy of the list of traffic and access control points (TACP) assigned to the GPD available to the supervisor, dispatcher and officer who would report to his field assignment. Traffic cones were available to the officer at all times that are kept at GPD headquarters. Additional barricades and traffic cones could be coordinated through Geneva Public Works and would be delivered on request to the TACP. Mutual aid is available to the GPD for additional

cars and staff should it be required.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 12, 2016, the Geneva Police Department (GPD) demonstrated the capability to issue dosimetry, potassium iodide (KI) and manage an exposure control plan for emergency workers in support of emergency operations. The interview and demonstration was conducted out of sequence from approximately 1000 hours to 1100 hours at the GPD headquarters located at 44 North Forest Street, Geneva, OH.

The Dosimetry Coordinator (DC) simulated issuing one of 16 dosimetry packets that were to be issued to officers who were to be assigned as emergency workers at the GPD. The DC used a check list from the Ashtabula County EMA Suggested Operating Guidelines (revised 4/2016) to brief. The DC described the contents of the EW packet and displayed the dosimetry report form (revised 2/2011).

A random packet was selected and the EW dosimetry kit had a Thermoluminescent Dosimeter Badge that would be used as a permanent record of exposure, and two Direct-Reading Dosimeters (DRDs) manufactured by Arrow-Tech with a calibration expiration date of March 15, 2019. It contained one DRD which read from 0-20 R and one which read from 0-200 R. The DC used a CDV-700 charger to zero the DRD for the officer. The DC advised the officer that he was to read and verify the zero reading at the start of their mission and record readings of the DRD in half hour intervals and at the end of their mission. The DC briefed the officer that he would be reminded to record the reading by a radio transmission from the dispatcher or the DC directly. The DC instructed the officer to wear the dosimetry outside of his clothing and reviewed maximum exposure limitations of 1 R and a turn-back value of 5 R.

The EW dosimetry packet contained a bubble pack of 10 65 mg KI tablets manufactured by

ThyroSafe™ with an expiration date of December 31, 2019, the DC briefed the officer on KI, purpose and contra-indications and that they were to take the KI when ordered to do so. At the end of his mission, the officer was to make a final DRD reading, record it and return the dosimetry and report forms to him at GPD headquarters or at the EW monitoring or decontamination site for records retention.

The Officer was interviewed to verify that he understood the applicable radiation control requirements. The Officer was aware of the exposure limit and turn-back value, use of radiation detection instruments, use of protective clothing and where to return the Dosimetry Kit.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 12, 2016, the Geneva Police Department (GPD) demonstrated the capability to provide field personnel adequate and accurate instructions to establish a traffic and access control point (TACP). The interview and demonstration was conducted out of sequence from approximately 1000 hours to 1100 hours at the GPD headquarters located at 44 North Forest Street, Geneva, OH.

The Law Enforcement Suggested Operating Guideline (SOG, revised 04/2016) Part 2: Response Actions was used by the GDP supervisor as Traffic Control Officer and Access Control Officer following a checklist of which actions to initiate at various emergency level classification levels. The GDP dispatcher had a copy of the SOG available to ensure that Agency Notification Form (Attachment 1 of the SOG) was correct and the GPD Chief and supervision would be notified of appropriate changes in actions as emergency classification levels changed. There were five identified TACPs at intersections within the jurisdiction of the GPD. The TACPs are listed in the Ashtabula County Radiological Emergency Response Plan as Attachment 47.

During the interview it was determined that the GPD officer assigned would be briefed by the GPD Dosimetry Coordinator (DC) and that the DC would brief any incoming mutual aid officers to insure that they received just in time training and were included in the GPD EW exposure control program. By interview it was determined that the GPD officer would use his car and emergency lights as the initial method of barricading the TACP. Additional traffic cones and

barricades would be provided by the GPD, Fire Department or Public Works Department if the event was protracted. The GPD supervisor in accordance with the SOG may be instructed by the Ashtabula County Emergency Operations Center to oversee officers providing four levels of access control: Level 1 – No Control, Level 2 – Stop and Warn, Level 3 – Stop all traffic – clearance required, Level 4 – No Entry.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.d.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.8 Ashtabula County – Lakeside High School (LHS) M&D - DC Briefing

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

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, and Plume Exposure Pathway Exercise conducted Monday September 12, 2016, Saybrook Township Fire Department successfully demonstrated that they had at least two communication systems available, both of which operated properly, and communication links were established with appropriate locations. The demonstration was conducted from approximately 1800 hours to 1930 hours at Lakeside High School, 6600 Sanborn Road, Ashtabula, Ohio.

The primary communication method used during the exercise was hand held multi-channel 800 MHz radios. The backup communication method was cellular telephones. The radios were demonstrated without incident. The cellular telephones were also demonstrated without incident. The Multi-Agency Radio Communication System was also available.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway exercise conducted on September 12, 2016, Saybrook Township Fire Department successfully demonstrated that equipment, maps, displays monitoring instruments, dosimetry, potassium iodide (KI), and other supplies were sufficient to support emergency operations. The demonstration was conducted from approximately 1800 hours to 1930 hours at the Lakeside High School Reception Center located at 6600 Sanborn Road, Ashtabula, Ohio.

The Reception Center equipment was delivered by the Saybrook Fire Department in a designated trailer. The Reception Center was secured with ropes, placards, and yellow tape. Cones were used in lieu of craft paper to delineate clean and dirty areas. Appropriate signs were also placed at each station in the Reception Center.

One portal monitor, a Bicron Model TPM-903B, calibration due December 3, 2016 was used to monitor evacuees during the demonstration. There were three additional portal monitors available if necessary.

Operational checks were demonstrated using their procedures for testing the portal monitor. A one microcurie Cs-137 source was used to test the alarming function at three different heights. The unit alarmed at each height.

Three Ludlum Model 3 radiation survey meters with Ludlum 44-9 pancake probes were used for monitoring of evacuees and vehicles. They were calibrated on March 15, 2016 and due on March 15, 2017. Six additional meters were available if needed. Operational checks were successfully completed with the built-in check source.

There were 20 dosimetry kits at the Reception Center. Emergency workers were given one Landauer Luxel Permanent Record Dosimeter (PRD), replacement due February, 2017 and one Dosimetry Report Form for their assignment. The PRDs would be returned to the Dosimetry Coordinator at the end of the emergency.

Additional dosimetry consisting of one Arrow-Tech Model 730 Direct-Reading Dosimeter

(DRD) with a range of 0-20 R, drift test due March 15, 2017, and one Bendix Model CDV-742 DRD with a range of 0-200 R, drift test due March 15, 2017, were used as area monitors. The DRDs were placed at each station in the Reception Center. Two CDV-750 Model 6 Dosimeters were used to zero the DRDs. The DRDs were adequate to meet the 5 R exposure limit.

Each dosimetry packet contained 10 ThyroSafe™ 65 mg potassium iodide (KI) tablets with dosage and health information. The KI had an expiration date of December 2019, but was not issued because the location was outside the 10-mile Emergency Planning Zone (EPZ).

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, Saybrook Township Fire Department successfully demonstrated the capability to implement protective actions for emergency workers conducting monitoring and decontamination of evacuees. The demonstration was conducted from approximately 1800 hours to 1930 hours at Lakeside High School located at 6600 Sanborn Road, Ashtabula, Ohio.

There were 20 dosimetry kits located at the Reception Center. Each emergency worker was given one Landauer Luxel Permanent Record Dosimeter (PRD), replacement due February 2017 and one Dosimetry Report Form for their assignment. The PRDs would be returned to the Dosimetry Coordinator at the end of the emergency.

Arrow-Tech Model 730 Direct-Reading Dosimeters (DRDs) with a range 0-20 R and Bendix Model CDV-742 DRDs with a range of 0-200 R were used as area monitors at each of the stations in the Reception Center. Dosimeter chargers (CDV-750 Model 6) were used to zero the DRDs. The DRDs were adequate to meet the 5 R exposure limit.

At approximately 1800 hours, the Dosimetry Coordinator conducted a radiological briefing during which dosimetry was issued. The briefing was conducted using a pre-scripted Dosimetry

Coordinator Guide, attachment 53, from the Ashtabula County Suggested Operating Guideline for Fire Departments outside the 10-mile Emergency Planning Zone (EPZ). The briefing included the distribution of dosimetry packets, the proper use of DRDs, reading DRDs every 30 minutes, exposure limits, proper placement of PRDs, turn-back value, no eating or drinking, and return dosimetry to the Dosimetry Coordinator after completion of their assignment.

Although potassium iodide was contained in each dosimetry packet, it was not used because the facility was outside the 10-mile EPZ. The Dosimetry Coordinator read the DRD at each station every 30 minutes and recorded the result on the Area Dosimetry Log.

One emergency worker at each station was interviewed to verify that they understood the applicable radiation control requirements. Each worker was aware of the exposure limit and turn-back value, use of radiation detection instruments, use of protective clothing and where to return their PRDs.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.9 Ashtabula County – Lakeside High School (LHS) M&D - Evacuees

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Monday September 12, 2016, the Saybrook Fire Department demonstrated that the Lakeland Reception Center was sufficient to support the emergency response. The demonstration was conducted out-of-sequence from approximately 1800 hours to 1930 hours at the Lakeland High School located at 6600 Sanborn Road, Ashtabula, Ohio.

Lakeside High School was a very large facility that had previously been used as an Emergency

Worker Monitoring and Decontamination Center. The facility had adequate space, furnishings, lighting, restrooms, shower rooms, and ventilation to support the arrival of approximately 5700 evacuees. This included separate restroom/shower facilities for males and females. Generators were available on the premises for backup power and records provided verified the maintenance and monthly testing of the generators. The parking lots were sufficiently large to accommodate areas for both “clean” and “contaminated” vehicles.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, and Plume Exposure Pathway Exercise conducted Monday September 12, 2016, Saybrook Township Fire Department successfully demonstrated that key personnel with leadership roles provided direction and control to that part of the overall response effort for which they are responsible. The demonstration was conducted from approximately 1800 hours to 1930 hours at Lakeside High School, 6600 Sanborn Road, Ashtabula, Ohio.

The Officer-in-Charge, a Saybrook Fire Captain, made assignments and ensured preparations of the Reception Center Team. The Reception Center Team consisted of members of the Saybrook, Ashtabula Township, Ashtabula, and Conneaut Fire Departments. The 15 member team consisted of a Team Leader, Dosimetry Coordinator, Personnel Portal Monitor Operator, Personnel Recorder, Locker Room Monitors (Male and Female), Transportation Attendant, Vehicle/Equipment Monitor, Vehicle Equipment Recorder, Vehicle Attendant/Equipment Attendant, and Vehicle Movement Attendant.

The Reception Center was set up prior to the start of the demonstration at approximately 1800 hours. At that time the Dosimetry Coordinator provided a briefing using a pre-scripted Dosimetry Coordinator Guide, Attachment 53. The briefing included the issuance of dosimetry packets, the proper use of Direct-Reading Dosimeters (DRDs), reading DRDs every 30 minutes, exposure limits, proper placement of Permanent Record Dosimeters (PRDs), turn back value, no eating and drinking, and to return the dosimetry to the Dosimetry Coordinator at the conclusion of their assignment.

The DRDs were used as area monitors at all the Reception Center Stations. Potassium Iodide was

available but not used because the Reception Center was outside the 10-mile Emergency Planning Zone (EPZ).

Plans and Procedures were followed and there were no adverse consequences. No additional resources were required during the demonstration. The Saybrook Fire Captain provided direction and maintained control throughout the demonstration

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway exercise conducted on September 12, 2016, Saybrook Township Fire Department successfully demonstrated that equipment, maps, displays monitoring instruments, dosimetry, potassium iodide (KI), and other supplies were sufficient to support emergency operations. The demonstration was conducted from approximately 1800 hours to 1930 hours at the Lakeside High School Reception Center located at 6600 Sanborn Road, Ashtabula, Ohio.

The Reception Center equipment was delivered by the Saybrook Fire Department in a designated trailer. The Reception Center was secured with ropes, placards, and yellow tape. Cones were used in lieu of craft paper to delineate clean and dirty areas. Appropriate signs were also placed at each station in the Reception Center.

One portal monitor, a Bicron Model TPM-903B, calibration due December 3, 2016 was used to monitor evacuees during the demonstration. There were three additional portal monitors available if necessary.

Operational checks were demonstrated using their procedures for testing the portal monitor. A one microcurie Cs-137 source was used to test the alarming function at three different heights. The unit alarmed at each height.

Three Ludlum Model 3 radiation survey meters with Ludlum 44-9 pancake probes were used for monitoring of evacuees and vehicles. They were calibrated on March 15, 2016 and due on March 15, 2017. Six additional meters were available if needed. Operational checks were successfully completed with the built-in check source.

There were 20 dosimetry kits at the Reception Center. Emergency workers were given one Landauer Luxel Permanent Record Dosimeter (PRD), replacement due February, 2017 and one Dosimetry Report Form for their assignment. The PRDs would be returned to the Dosimetry Coordinator at the end of the emergency.

Additional dosimetry consisting of one Arrow-Tech Model 730 Direct-Reading Dosimeter (DRD) with a range of 0-20 R, drift test due March 15, 2017, and one Bendix Model CDV-742 DRD with a range of 0-200 R, drift test due March 15, 2017, were used as area monitors. The DRDs were placed at each station in the Reception Center. Two CDV-750 Model 6 Dosimeters were used to zero the DRDs. The DRDs were adequate to meet the 5R exposure limit.

Each dosimetry packet contained 10 ThyroSafe™ 65 mg potassium iodide (KI) tablets with dosage and health information. The KI had an expiration date of December 2019. The KI was not used because the location was outside the 10-mile Emergency Planning Zone (EPZ).

Other supplies for the Reception Center include a large supply of traffic cones, police tape, stanchions, and rolls of craft paper which were not used for this demonstration.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, Saybrook Township Fire Department successfully demonstrated the capability to implement protective actions for emergency workers conducting monitoring and decontamination of evacuees. The demonstration was conducted from approximately 1800 hours to 1930 hours at Lakeside High School located at 6600 Sanborn Road, Ashtabula, Ohio.

There were 20 dosimetry kits located at the Reception Center. Each emergency worker was given one Landauer Luxel Permanent Record Dosimeter (PRD), replacement due February 2017 and one Dosimetry Report Form for their assignment. The PRDs would be returned to the

Dosimetry Coordinator at the end of the emergency.

Arrow-Tech Model 730 Direct-Reading Dosimeters (DRDs) with a range 0-20 R and Bendix Model CDV-742 DRDs with a range of 0-200 R were used as area monitors at each of the stations in the Reception Center. Dosimeter chargers (CDV-750 Model 6) were used to zero the DRDs. The DRDs were adequate to meet the 5 R exposure limit.

At approximately 1800 hours, the Dosimetry Coordinator conducted a radiological briefing during which dosimetry was issued. The briefing was conducted using a pre-scripted Dosimetry Coordinator Guide, attachment 53, from the Ashtabula County Suggested Operating Guideline for Fire Departments outside the 10-mile Emergency Planning Zone (EPZ). The briefing included the distribution of dosimetry packets, the proper use of DRDs, reading DRDs every 30 minutes, exposure limits, proper placement of PRDs, turn-back value, no eating or drinking, and return dosimetry to the Dosimetry Coordinator after completion of their assignment. Although potassium iodide (KI) was contained in each dosimetry packet, it was not used because the facility was outside the 10-mile EPZ. The Dosimetry Coordinator read the DRD at each station every 30 minutes and recorded the result on the Area Dosimetry Log.

One emergency worker at each station (4) was interviewed to verify that they understood the applicable radiation control requirements. Each worker was aware of the exposure limit and turn-back value, use of radiation detection instruments, use of protective clothing and where to return their PRDs.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday September 12, 2016, Saybrook Township Fire Department demonstrated the capability to provide appropriate space, adequate resources, and trained personnel for monitoring, decontamination, and registration of evacuees. The demonstration was conducted out-of-sequence from approximately 1800 hours to 1930 hours at Lakeside High School located at 6600 Sanborn Road, Ashtabula, Ohio.

The total population of the PNPP 10-mile Emergency Planning Zone (EPZ) was 124,120 people

including the transient population. 108,584 were depicted as permanent residents, whereas 15,536 were depicted as a transient population. Sufficient monitoring equipment and personnel were needed to process 20% of the population (24,824 evacuees) within 12 hours to meet the Radiological Emergency Planning (REP) criteria. The Lakeside High School had sufficient monitoring equipment (4 Portal Monitors) to process 5760 evacuees out of the 24,824 evacuees. In accordance with the extent-of-play agreement, six monitoring demonstrations were conducted using one portal monitor. The monitoring sequences for the six simulated evacuees were timed. Using the procedure demonstrated, the reception center personnel would have been able to process 5,760 evacuees in 12 hours. There were two additional Reception Centers and a total of 27 Portal Monitors, including those at Lakeside High School which would provide the necessary resources to meet the 12 hour requirement.

The evacuee monitoring equipment was set-up and used properly. This included assembly, source response checks, and survey speed. The portal monitor was checked for alarm response to a Cs-137 source and the Ludlum 3 survey meters were operationally checked with their internal source. All monitoring personnel were aware of the required decontamination levels of equal to or greater than 300 counts per minute (CPM) above background. Background levels were posted at all stations.

Procedures used to minimize the spread of contamination included monitoring probe covers, gloves and shoe covers (simulated), physical barriers and personnel providing evacuee instructions and escorts as needed. Appropriate means to separate clean from potentially contaminated areas at the facility were accomplished by the use of physical barriers to separate areas and control evacuee traffic.

A check mark in the "Uncontaminated" box of the Personnel Monitoring Record was used to indicate individuals that had been monitored, cleared and found to have no contamination. Provisions were also made to separate contaminated and uncontaminated individuals, provide changes of clothing for people whose clothing was contaminated, and to store contaminated clothing and personal belongings in a designated room away from the monitoring area.

Appropriate procedures were used for the decontamination of evacuees. In accordance with the extent-of-play agreement, only one of the two locker rooms (Female) was set up for this demonstration. The Locker Room Decontamination Monitor explained that two attempts could be made to decontaminate an evacuee. If decontamination was unsuccessful at that time, the evacuee would be referred for hospital evaluation. An initial reading of 3000 cpm above background on the face or chest would also be grounds for hospital referral.

A radiological survey of a simulated contaminated evacuee was conducted prior to decontamination using a Ludlum Model 3 survey meter with a Model 44-9 pancake detector. The survey was conducted correctly with the proper speed and distance from the body. All areas registered at background except for the right hand which registered a reading of 2400 cpm (by controller inject). Decontamination items including soap and towel were made available for the contaminated evacuee and he was instructed to wash his hand with soap under warm water and to dry the hand with the towel (paper). After the second attempt, the hand was reading at the background reading (by controller inject) and he was referred to registration.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.b.1, 1.c.1, 1.e.1, 3.a.1, 6.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.10 Ashtabula County – Lakeside High School (LHS) M&D - Evacuee Vehicle

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

As part of the Perry Nuclear Power Plant (PNPP) Partial Participation, Plume Exposure Pathway Radiological Emergency Preparedness Exercise conducted on Monday, September 12, 2016, the Saybrook Township, Ashtabula City, Ashtabula Township and Conneaut Fire Departments located in Ashtabula County successfully demonstrated equipment, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies sufficient to support emergency operations at the Lakeside High School (LHS) Reception Center's Monitoring and Decontamination Facility for Evacuee Vehicles (Facility). The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours, at the Facility at LHS located at 6600 Sanborn Road, Ashtabula, Ohio.

The Saybrook Township Fire Department arrived at the facility with a 20-foot-long enclosed trailer with all needed Facility supplies and equipment staged inside. The dosimetry supplies and equipment for all four fire departments were also stored in the trailer. The quantities of dosimetry and KI stored in the trailer was confirmed by physical inspection.

The Facility had two plastic storage containers with decontamination equipment, signs, barrier tape, detergent bushes, hoses, vehicle survey forms, a copy of the Ashtabula County Emergency Management Agency Suggested Operating Guidelines for Fire Departments Outside the EPZ, revised 04/2016 and other incidentals supplied. The personal protection equipment consisted of Tyvek coveralls, booties and heavy rubber gloves and other incidentals. All equipment and supplies were as listed in the plans and procedures and sufficient to support the six Emergency Workers (EW) necessary to staff the Facility.

The Saybrook Township Fire Department Radiological Officer (RO) at the LHS Reception Center was also responsible radiological equipment at the Facility. The RO stated radiological equipment was stored in the Saybrook Township Fire Department trailer which was locked and housed in a climate controlled building. The radiological supplies were replaced by PNPP annually and the RO said all dosimetry instruments was inventoried, inspected, operationally checked and calibrated at least monthly.

The RO stated there were twenty Dosimetry Kits for each fire department responding at the LHS Reception Center and nine Ludlum Model 3 radiation detectors equipped with a model 44-9 Probe with related supplied for use at the LHS Reception Center. The dosimetry equipment was inspected, inventoried, calibrated and operationally checked by the RO and EW at the LHS Reception Center and then issued to the Facility.

One Ludlum Model 3 and two EW Dosimetry Kits were issued to the Facility for the exercise. The Ludlum Model 3 was calibrated on 3/15/16 with a due date of 3/15/17 and a scale of 0 to 5k cpm with ranges of X0.1, X1 and X100. Each EW Dosimetry Kit was in a zip lock bag with a packet number and the dose limits and turn back values printed on the front. The bag contained a lanyard clip, one Arrow-Tech model 730 Direct-Reading Dosimeter (DRD) with a range of 0-2 R calibrated on 3/15/16 with a due date of 3/15/17, one Bendix CDV DRD with a range of 0-200 R calibrated on 3/15/16 with a due date of 3/15/17, one clip on Luxel+ Landauer optically stimulated luminescence dosimeter (OSLD) Dosimeter of Legal Record effective Mar 01- Feb 28, 10 65mg ThyroSafe™ KI tablets in foil blister pack with an expiration date of 12/31/2019, KI iOSAT Tablet instructions and directions for use. Finally, the bag contained a Dosimetry Report Form with sections for EW Identification, Mission Assignment, Dosimeter Record,

Running Total Exposure and Record of KI. The back of the form described dose limits, before shift, during shift and after shift instructions.

Water for decontamination came from two hoses attached to the Facility. Traffic into the facility was directed with cones, signs and barrier tape and was laid out as depicted in the Suggested Operating Guidelines.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Partial Participation Plume Exposure Pathway Radiological Emergency Preparedness Exercise conducted on Monday, September 12, 2016, the Saybrook Township, Ashtabula City, Ashtabula Township and Conneaut Fire Departments located in Ashtabula County successfully demonstrated the capability to issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to Emergency Workers (EW) in accordance with the plan and procedures and to maintain appropriate record-keeping of the administration of KI for EW at the Lakeside High School (LHS) Reception Center's Monitoring and Decontamination Facility for Evacuee Vehicles (Facility). The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours, at the Facility at LHS located at 6600 Sanborn Road, Ashtabula, Ohio.

The Saybrook Township Fire Department Radiological Officer (RO) at the LHS Reception Center was responsible for managing radiological exposure control for EW at the Facility. The RO was also responsible for the EW radiological briefing which was conducted at the LHS Reception Center. The RO had a notebook with the plan and procedures for RO radiological responsibilities and a large quantity of blank radiation exposure records and record keeping forms to document EW exposure. The RO stated that all equipment, supplies and EW records would be forwarded to Ashtabula County at the end of the emergency.

One Ludlum Model 3 and two EW Dosimetry Kits were issued to the Facility. The Ludlum Model 3 was calibrated on 3/15/16 with a due date of 3/15/17 and a scale of 0 to 5k cpm with

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ranges of X0.1, X1 and X100. Each EW Dosimetry Kit was in a zip lock bag with a packet number and the dose limits and turn back values printed on the front. The bag contained a lanyard clip, one Arrow-Tech model 730 Direct-Reading Dosimeter (DRD) with a range of 0-20 R calibrated on 3/15/16 with a due date of 3/15/17, one Bendix CDV DRD with a range of 0-200 R calibrated on 3/15/16 with a due date of 3/15/17, one clip on Luxel+ Landauer optically stimulated luminescence dosimeter (OSLD) Dosimeter of Legal Record effective Mar 01- Feb 28, 10 65mg ThyroSafe™ KI tablets in foil blister pack with an expiration date of 12/31/2019, KI iOSAT Tablet instructions and directions for use. Finally, the bag contained a Dosimetry Report Form with sections for EW Identification, Mission Assignment, Dosimeter Record, Running Total Exposure and Record of KI. The back of the form described dose limits, before shift, during shift and after shift instructions.

Before the briefing the RO provided an EW Dosimetry Kit to two EW. The RO then showed the EW how to read and set the DRD to zero and verify the setting. The RO briefed the EW by reading from the dosimetry and KI instructions sheets. The RO briefing included instructions that the DRD and OSLD should be worn between the neck and waist on the outside of the clothing. The EW should enter personal/event information and the DRD serial number on the Radiation Exposure Record Card and read and record DRD readings every 30 minutes and at the end of the shift. If the DRD readings totaled 5 R, the EW was to notify the RO immediately. The RO stated the dosimetry should be returned to the RO when instructed to do so.

During the briefing the RO questioned the EW to find out if any of them should not consume KI. The RO said the use of KI was voluntary and it should only be taken when told to do so by the RO upon direction from the Ohio Department of Health. The EW were told to refer to the enclosed iOSAT information on possible side effects of KI. If KI was recommended the EW would consume KI and record the time the KI was ingested on the KI Ingestion Record. At the conclusion of the briefing the RO ask the EW if there were any issues the EW were unclear about or if they had any questions. The RO stated the EW should report to the RO at the end of the shift or mission for further instructions.

The RO maintained the Dosimeter Control Log Forms to track the distribution and return of dosimetry and KI. The Form required the RO to enter the distribution and return dates, DRD serial number, whether KI was accepted or refused, whether a Radiation Exposure Record was received by the EW and the recipient's signature. The RO also maintained the exposure records of all EW.

At the Facility area monitoring was performed by attaching at two nearby locations a set of two

DRD; capable of reading the mission exposure limit of 5 R. One Ludlum Model 3 radiation survey instrument was set on the X0.1s scale in audible mode to give an immediate notification of any elevated readings in the area. The Ludlum Model 3 was inspected, inventoried, calibrated and operationally checked by the RO at the LHS Reception Center. The personal protection equipment at the Facility consisted of Tyvek coveralls, booties and heavy rubber gloves.

The EW were interviewed regarding their knowledge of dosimetry and exposure control after they were deployed to the Facility. Both EW knew where to wear their dosimetry and to read their DRD every 30 minutes. They knew the turn-back limit was 5 R and to only consume KI when instructed to do so. They were unsure what to do at the end of their shift or mission but stated they would contact their supervisor for instructions.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Partial Participation, Plume Exposure Pathway Radiological Emergency Preparedness Exercise conducted on Monday, September 12, 2016, the Saybrook Township, Ashtabula City, Ashtabula Township and Conneaut Fire Departments located in Ashtabula County successfully demonstrated they had the appropriate space, adequate resources and trained personnel to accomplish monitoring and decontamination of evacuee vehicles at the Lakeside High School (LHS) Reception Center's Monitoring and Decontamination Facility for Evacuee Vehicles (Facility). The demonstration was conducted out-of-sequence from approximately 1800 hours to 2000 hours, at the Facility at LHS located at 6600 Sanborn Road, Ashtabula, Ohio.

Evacuee Vehicles were directed to the LHS Reception Center by personnel, cones, signs and barriers. Emergency Workers (EW) at the Facility would then drive the vehicle to the Facility for monitoring and decontamination, if necessary. As specified in the extent-of-play agreement the monitoring of one evacuee vehicle was demonstrated and the decontamination of evacuee vehicles was discussed.

The EW used a Ludlum Model 3 radiation survey meter with Ludlum 44-9 probe covered with thin plastic sheeting to prevent the probe from becoming contaminated to monitor the evacuee vehicle. Any reading over 300 cpm would render the vehicle contaminated. The evacuee

vehicle was monitored at the radiation grill, bumpers, wheel wells, tires, door handles, driver seat steering and air intakes. The EW followed the frisking procedure of less than six inches per second and holding the probe within one inch of the surface. During the procedure the probe came into contact with the surface of the vehicle. The EW stated at that point the plastic sheeting would be replaced to avoid contamination. At the driver side wheel well the EW recorded a reading of 15,000 cpm which classified the vehicle as contaminated. The EW continued monitoring the vehicle but no other contamination was detected.

The results of the monitoring were recorded on a four-part Equipment Monitoring Record form. One copy was conspicuously posted inside the vehicle, one was provided to the evacuee, one was sent to the Ashtabula County Health Department and one stayed at the Facility.

The decontamination process was discussed by the EW Team at the Facility. Clean vehicles were directed by personnel, signs, cones and barrier to the clean side of the drive to return to the evacuee in the clean parking area. Contaminated vehicles were driven to the vehicle impound lot for decontamination. As time allowed the vehicles were driven to the decontamination area. The decontamination method was to position the vehicle on a slope so the water from hoses attached to the Facility flowed into a wastewater drain. The vehicle was then sprayed with water starting at the top and spraying down. Detergent and long handled brushes were used for scrubbing. Containers placed nearby for contaminated waste and used decontamination tools. If efforts to decontaminate were not successful, the vehicle was impounded in an area separated other vehicles.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.a.1, 6.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.11 Ashtabula County – Lake Co. Health Department - KI Distro

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

As Part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Ashtabula County Health Department (ACHD) successfully demonstrated the ability to provide equipment, displays, potassium iodide (KI), and other supplies to support emergency operations. The demonstration and interview was conducted out-of-sequence from 1800 hours to 1930 hours, at Lakeside High School, located at 6600 Sanborn Road, Ashtabula, Ohio.

The KI distribution station was equipped with an ACHD Suggested Operating Guideline that outlined the procedures for issuing KI, pamphlets that explained the purpose, use, and side effects of KI. Signs were posted that clearly indicated possible side effects and KI dosing based on age. The ACHD maintains an inventory of 55,192 individual 65 mg doses of ThyroSafe™ KI tablets. One sample kit of the KI was available for inspection. The kit contained four blister packs of KI and an instruction sheet for its use. The KI expiration date was April 30, 2020. The ACHD representative stated that if additional KI should be required it would be provided by the Ohio Department of Health.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday, September 12, 2016, the Ashtabula County Health Department (ACHD) successfully demonstrated that potassium iodide (KI) and appropriate instructions were available should a decision to recommend the use of KI by the general public be made. The interview and demonstration was conducted out-of-sequence from 1800 hours to 1930 hours, at Lakeside High School, located at 6600 Sanborn Road, Ashtabula, Ohio.

Through interview with the ACHD representative, it was determined that the ACHD maintains

an inventory of 55,192 individual 65 mg doses of ThyroSafe™ KI. In the event that a Site Area Emergency Classification Level (ECL) should be declared at PNPP, ACHD representatives would transport the KI to the Lakeside High School Reception Center and set up a KI workstation. Should a General Emergency ECL be declared by PNPP, the ACHD representatives would be available at the Reception Center to dispense KI to evacuees. When evacuees arrived at the KI workstation they would be registered using a KI distribution form and issued a plastic bag that contained four ThyroSafe™ KI tablets with an expiration date of April 30, 2020. The ACHD representatives would explain the purpose of ingesting KI, possible side effects and medical conditions that could be considered contraindications for KI ingestion. A comprehensive KI fact sheet would be issued to each evacuee or family unit.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement

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

- a. MET: 1.e.1, 3.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.12 Ashtabula County – Harpersfield (HFD) Backup Rt. Alrt. - DC Briefing

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

Successfully demonstrated – This associated criterion requires no narrative.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday September 14 2016,

the Harpersfield Fire Department (HFD), Station #1, demonstrated the equipment, maps, displays, potassium iodide (KI) and other supplies were sufficient to support emergency operations. The demonstration was conducted out-of-sequence from approximately 1800 hours to 2100 hours, at the Harpersfield Fire Department, Station #1, 1481 Harpersfield Road, Harpersfield, OH.

The HFD Chief indicated there were 5 vehicles available for route alerting, four for paved roads, and 1 all-terrain vehicle available for off-road route alerting.

At 1800 hours, the Dosimetry Coordinator (DC) began a brief of those Emergency Workers (EWs) present in preparation for backup route alerting.

The DC had available 20 pre-organized dosimetry packets available for distribution. These packets contained the one Escort Personnel Dosimetry Thermoluminescent Dosimeter (TLD) by Landauer, with a date of Mar 01-Feb 28. A CD V-742 Direct-Reading Dosimeter (DRD) with a range of 0-200 R, with a calibration date of 3/15/2016 and a due date of 3/15/2017. An Arrow-Tech model 730 DRD with a range of 0-20 R, with a calibration date of 3/15/2016 and a due date of 3/15/2017. Ten 65 Mg KI tablets in individual blister packets with an expiration date of 12/2019. There was also a Consumer Package Insert which contained information pertinent to the KI and a Dosimetry Report Form.

Both of the DRDs above were capable of reading the 5 R turn-back value required of EWs. The above packets were maintained inside the temperature controlled HFD building which would meet the KI requirements.

The entire staff of the HFD was 32. A shift was normally between 12 and 14 people, therefore 20 packets were sufficient. Additionally, more dosimetry, KI, and information was available upon request through the Ashtabula County Emergency Operations Center.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

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As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Wednesday September 14 2016, The Harpersfield Fire Department, Station #1, demonstrated the equipment, maps, displays, potassium iodide (KI) and other supplies were sufficient to support emergency operations. The demonstration was conducted out-of-sequence from approximately 1800 hours to 2100 hours, at the Harpersfield Fire Department, Station #1, 1481 Harpersfield Road, Harpersfield, OH.

At 1800 hours, the Dosimetry Coordinator (DC) conducted a brief to distribute dosimetry and KI to Emergency Workers (EWs). The DC was observed using the Ashtabula County Emergency Management Agency, Suggested Operating Guideline (SOG) for Fire Departments inside the Emergency Planning Zone (EPZ).

During the brief, the DC requested the EWs to verify the contents of their dosimetry packets to contain a 0-20 R Direct-Reading Dosimeter (DRD), a 0-200 R DRD, an Optically Simulated Luminescence Dosimeter, 10 KI tablets, and a Consumer Package Insert for the KI. These packets were observed to be consistent with those described in the SOG.

Requested if any of the EWs were less than 18 years old, allergic to iodine, or pregnant, then to verify the serial numbers on their Dosimetry Report Form (DRF) matched the serial numbers on the dosimetry issued. Additionally verify the initial DRD readings were accurately documented on their DRF. The DC then asked the EWs to verify their dosimetry was reading zero and to check the physical condition of their KI packets for damage. He then directed the EWs to report any readings of 1 R immediately to the DC and instructed the EWs that their turn-back value was 5 R. The DC then directed the EWs that if any of their dosimetry reads 5 R, that all EWs would immediately report to the Lakeside Junior High School Monitoring and Decontamination Station and to wear their dosimetry on the outside of their clothing on the upper center of their body in the front. He then directed the EWs to read their DRDs at least every 30 minutes and report the readings back to the DC. The DC explained these readings were documented on the Emergency Worker Dosimetry Exposure Log.

The DC instructed the EWs that KI was only to protect the thyroid and should be taken only if inside the EPZ and instructed to do so by the DC. The DC reminded the EWs to read the dosage on the provided information prior to ingestion, and if ingested, to document this on their DRF. The DC then instructed the EWs that if they opted to not ingest the KI to report this to the DC and discussed possible side effects from taking KI.

Finally the DC, instructed the EWs to return their dosimetry at the end of shift or mission and to

document the final DRD readings on their DRFs.

The DC asked if there were any questions, answered those questions asked, and then ended the brief.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.3.13 Ashtabula County – Harpersfield (HFD) Backup Rt. Alrt.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the Harpersfield Fire Department (HFD) personnel demonstrated at least two communications systems were available and at least one operated properly, and established and maintained communication links with appropriate locations for the Department. The demonstration was conducted out-of-sequence from approximately 1800 hours to 1930 hours, at the Harpersfield Fire Station 1, located at 1481 Harpersfield Road, Harpersfield, Ohio.

The Harpersfield Fire Station # 1 was equipped with a low-band 150 MHz base radio that was the primary mode of communication for the department and was used for all department calls. The base radio had 9 channels that provided links to area police, fire, EMS, medical facilities, and the Ashtabula County Sheriff. There were six vehicles at the HFD, each of which could be used for backup route alerting that were equipped with mobile and portable radios that link the vehicles to the station. In addition, ten officers carried hand-held radios and a department issued

cellular phone as well as personal cellular phones that were used as backup to the radios. A landline phone was also available at the station. The primary means of notification for the HFD personnel to report the station came from the Ashtabula Sheriff dispatcher to pagers carried by each firefighter.

The various radios used throughout the backup route alerting demonstration all functioned without problem and no communication failures were noted during the event.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the Harpersfield Fire Department (HFD) personnel demonstrated equipment, maps, dosimetry, Potassium Iodide (KI), and other supplies were sufficient to support emergency operations for the Department. The demonstration was conducted out-of-sequence from approximately 1800 hours to 1930 hours, at the Harpersfield Fire Station 1, located at 1481 Harpersfield Road, Harpersfield, Ohio.

The Harpersfield Fire Station 1 is located inside the 10-mile Emergency Planning Zone (EPZ) of the PNPP. Firefighters performing backup route alerting in the 10-mile EPZ were issued a dosimetry kit and received a dosimetry brief prior to deployment. At 1826 hours, the Dosimetry Coordinating Officer (DCO) began issuing dosimetry kits and his brief to two Emergency Workers (EW) assigned to backup route alerting. Each team member received a kit containing the following; One Arrow Tech, Model CD V-730, 0-20 R Direct-Reading Dosimeter (DRD); One Bendix, Model CD V-742, 0-200 R DRD; One Landauer Thermo Luminescent Dosimeter (TLD); One packet (5 day supply) consisting of ten-65 mg tablets of Potassium Iodide (KI); One dosimetry Report Form with Dosimetry Instructions. The DRDs had an annual calibration date of 3-15-2016, the TLDs had an exchange date of 3-31-2017, and the KI an expiration date of 12-2019. A total of 20 dosimetry kits and nine chargers were on hand and was an adequate supply for the personnel at the station. Components of the dosimetry kits were stored in a secured area at the station and calibration and maintenance of the devices was coordinated by Ashtabula County and the State of Ohio.

The department had maps available displaying the location of area sirens and specific maps and directions for the backup route alerting route for siren A-12 and copies of emergency messages that would be read along the route. The firefighters at HFD were not issued radiological personal protective equipment but each had their turnout gear consisting of protective jacket, pants, helmet/face shield, gloves, etc., in the event of a non-radiological emergency. Each team carried procedures and maps with siren numbers and locations, the backup routes for each siren. Lists of special needs or hearing impaired residents were maintained at the County.

A total of six department vehicles were available for backup route alerting. Each was equipped with lights, siren and public address systems. Teams performed operational checks of these systems at 1844 hours while at Station 1.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the Harpersfield Fire Department personnel issued appropriate dosimetry, KI and procedures and managed radiological exposure to emergency workers in accordance with plans and procedures. Emergency workers periodically and at the end of each mission read their dosimetry and recorded readings on appropriate exposure records. The Department maintained appropriate record keeping for the administration of KI to Emergency Workers (EW). The demonstration was conducted out-of-sequence from approximately 1800 hours to 2100 hours, at the Harpersfield Fire Station 1, located at 1481 Harpersfield Road, Harpersfield, Ohio.

At 1815, HFD firefighters received notification via pagers (controller inject) from the Ashtabula County Sheriff dispatch that a Site Area Emergency (SAE) Emergency Classification Level (ECL) had been declared at the PNPP and they were to report to the station. The station DCO immediately began assembling dosimetry kits for distribution to the EWs involved in backup route alerting.

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At 1827, two EWs assigned to a backup route alerting team were given dosimetry kits and a brief by the Dosimetry Control Officer (DCO). Each EW received a kit that included: One Arrow Tech CD V-730, 0-20 R Direct Reading Dosimeter (DRD); One Bendix CD V-742, 0-200 R DRD; One Landauer Thermo Luminescent Dosimeter (TLD); Ten-65 mg Potassium Iodide (KI) tablets (5 day supply); One Dosimetry Report Form; One KI Information Form. Each DRD was zeroed by the DCO prior to distribution.

The DCO conducted a radiological safety briefing at 1827 hours. The DCO read from a script and the briefing consisted of the following: Proper placement of the PRD and TLD; The dose limit and turn-back dose limits, and who to contact if they had increased readings on their DRD; Maximum exposure dose limits; Who to contact if dose readings of 1 R were reached or exceeded. The briefing also included instruction not to eat, drink, smoke, or chew gum or tobacco while performing emergency duties. EWs were instructed to not take KI until a supervisor instructed them to and that taking KI was voluntary; How to read and record DRD readings onto the Dosimetry Report Form every 30 minutes; Who to return the dosimetry and paperwork to at the completion of the mission; Safety and security questions directed to your supervisor; KI instructions and use. The DCO also explained the possible adverse side effects of KI, and if allergic to iodine or pregnant, not to take KI. At the close of the briefing each EW was directed to read their DRDs and recorded the readings onto their form. The DCO then asked for each firefighter's reading and recorded their readings on the Emergency Worker Dosimetry Exposure Log that he started for the event.

At 1841, the station received notification that an ECL of General Emergency (GE) had been declared at PNPP, and that siren A-12 had failed and a backup route alerting team was dispatched. While underway the team members were interviewed to ascertain their knowledge of the dosimetry kits and forms they had been issued.

The EWs were knowledgeable of the dosimetry and KI in the kits and knew the purpose and goal was to minimize radiation exposure. They knew the reason, purpose, and function of the DRDs, TLD and KI included in the kit and were able to answer correctly the questions asked relating to exposure control. They correctly answered several questions pertaining to proper wear of the devices, exposure limits and turn back limits, and what to do if their limit was reached/exceeded. They were aware of how often to read and record results from DRDs every 30 minutes. They knew to return their dosimetry kits and paperwork to the DCO following their mission. If needed, they knew to report to the EW Monitoring and Decontamination Center at the Lakeside High School for monitoring. The basic procedures for ingestion of KI and where to record the

date and time taken were also known by the EWs. They knew KI was a blocking agent used to prevent the absorption of radioactive iodine during an accident and that it should only be ingested when approved to by the Ohio Department of Health. They were aware of the possible side effects after taking KI and to report those to their supervisor, if needed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654/FEMA-REP-1, E.6; Appendix 3.B.2.c)

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation Plume Exposure Pathway Exercise conducted on Wednesday, September 14, 2016, the Harpersfield Fire Department (HFD) personnel demonstrated backup alert and notification of the public was completed in reasonable time following the detection by the Department of a failure of the primary alert and notification system. The demonstration was conducted out-of-sequence from approximately 1800 hours to 1930 hours, at the Harpersfield Fire Station 1, located at 1481 Harpersfield Road, Harpersfield, Ohio.

At 1830 hours, the HFD personnel received notification through Controller inject from the Ashtabula County Sheriff dispatch that PNPP had declared an Site Area Emergency (SAE) Emergency Classification Level (ECL) and that firefighters should report to the station. At 1841, another page was received from sheriff dispatch stating an ECL of General Emergency (GE) had been declared and that siren A-12 had failed. The HFD Fire Chief dispatched a backup route alerting team to the area around the disabled siren. After receiving dosimetry and safety brief, the team performed radio and public address checks before leaving the station at 1845 hours. The team proceeded to the starting point of the route near siren A-12 and arrived there at 1850 hours. The team started the route at 1850 hours, driving at approximately 15 miles per hour with lights flashing and broadcasting the message, "This is an emergency, listen to your radio or television for emergency instructions." The backup route alerting team leader had procedures, maps, and messages that were used on the route. Materials included route alerting procedures, a siren location map with backup route alerting routes outlined and the emergency message. The alert team lead was in contact with the HFD by radio throughout the route and called in whenever the vehicle made a turn. Route alerting teams continued to broadcast the emergency message over the PA through to the end of the route which was completed at 1904 hours. The elapsed time to traverse the route was 15 minutes and easily meets the Federal Emergency

Management Agency recommendation for timely notification.

Ashtabula County and PNPP maintain lists of special needs and hearing impaired residents in the area.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 5.a.3
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.4 Risk Jurisdictions – Geauga County

4.3.4.1 Geauga County – GCSO Dispatch (INP)

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County Sheriff's Dispatch Center, Initial Notification Point used effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. The demonstration was conducted at the Geauga County Sheriff's Department Safety Complex, Dispatch Center, located at 12450 Merritt Road, Chardon, Ohio.

The Geauga County Sheriff's Dispatch Center was staffed 24 hours a day, seven days a week and staff were assigned via duty roster. The Geauga County Sheriff's Dispatch Center was notified of the Alert Emergency Classification Level (ECL) at the PNPP at 0800 hours, through a 5-Way dedicated telephone system which links PNPP, the State of Ohio, Ashtabula County, Lake County and Geauga County. As a dedicated line, this system requires no further verification.

At 0801 hours, the dispatcher used a facsimile machine to send a copy of the Initial Notification Form to the Emergency Operations Center (EOC) at the Geauga County Department of

Emergency Services. At 0802 hours, the dispatcher used a commercial telephone line to notify the Director of the Geauga County Department of Emergency Services of the Alert ECL, who directed her to notify required staff to report to the EOC. At 0808 hours, the dispatcher used the Wireless Emergency Notification System (WENS) to notify required staff of the Alert ECL and to report to the EOC. At 0815 hours, the dispatcher was notified by telephone that staff at the EOC had taken control of the 5-Way dedicated telephone and would receive any future ECL changes.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County Sheriff's Dispatch Center, Initial Notification Point demonstrated that at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The demonstration was conducted at the Geauga County Sheriff's Department Safety Complex, Dispatch Center, located at 12450 Merritt Road, Chardon, Ohio.

The Geauga County Sheriff's Dispatch was notified of the Alert Emergency Classification Level (ECL) at the PNPP at 0800 hours, through a 5-Way dedicated telephone system which links PNPP, the State of Ohio, Ashtabula County, Lake County and Geauga County. As a dedicated line, this system requires no further verification.

At 0801 hours, the dispatcher used a facsimile machine to send a copy of the Initial Notification Form to the Emergency Operations Center (EOC) at the Geauga County Department of Emergency Services. At 0802 hours, the dispatcher used a commercial telephone line to notify the Director of the Geauga County Department of Emergency Services of the Alert ECL. At 0808 hours, the dispatcher used the Wireless Emergency Notification System (WENS) to notify required staff to report to the EOC.

In addition to the 5-Way dedicated telephone system, commercial telephone, facsimile and

WENS, dispatchers also had an 800-megahertz (MHz) digital radio system available.

There were no failures of the communications systems.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

Successfully demonstrated – This associated criterion requires no narrative.

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

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

4.3.4.2 Geauga County – EOC

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County Emergency Operations Center demonstrated effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. The demonstration was conducted at the Geauga County Emergency Operations Center (EOC), located at 12450 Merritt Road, Chardon, Ohio.

The Geauga County Sheriff's Dispatch Center was staffed 24 hours a day, seven days a week and staff were assigned via duty roster. The Geauga County Sheriff's Dispatch Center was notified of the Alert Emergency Classification Level (ECL) at the PNPP at 0800 hours, through a 5-Way dedicated telephone system which links PNPP, the State of Ohio, Ashtabula County, Lake County and Geauga County. As a dedicated line, this system requires no further

verification.

At 0801 hours, the Geauga County EOC received the Initial Notification Form via facsimile from the Geauga County Sheriff's Dispatch Center. At 0802 hours, the Geauga County Department of Emergency Services (GCDES) Director received notification of the Alert ECL via commercial telephone call from the dispatcher. The GCDES Director instructed the dispatcher to notify required staff to report to the EOC and at 0803 hours, EOC staff members began reporting to the EOC. At 0808 hours, the dispatcher used the Wireless Emergency Notification System (WENS) to notify required staff of the Alert ECL and to report to the EOC. At 0815 hours, the GCEMS Director notified the dispatcher by telephone that the EOC staff had taken control of the 5-Way dedicated telephone and would receive any future ECL changes. The EOC was declared operational at 0846 hours and the last staff member reported at 1020 hours.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County Executive Group (EG), comprised of Geauga County Commissioners, the Geauga County Sheriff, the Department of Emergency Services (DES), Director, and the Public Information Officer Liaison, demonstrated direction and control to that part of the overall response effort for which they were responsible. The demonstration was conducted in the Geauga County Emergency Operations Center (EOC), located at 12518 Merritt Road, Chardon, Ohio.

The Geauga County Commissioners were in overall charge of the Executive Group and emergency response efforts. The DES Director served in a dual capacity: as Chief of Staff for the County Commissioners and as the emergency director, responsible for the EOC operations management and overall emergency response effort coordination. The line of order for succession to provide protective action decision-making included the Commissioners (President, Vice-President and Member), the DES Director or DES Director Designee and the Sheriff or Sheriff Designee.

At 0835 hours, the DES Director first participated on an Executive Discussion Line (EDL),

conference call. The EDL, a dedicated line used by the State of Ohio, Geauga County, Lake County, Ashtabula County and PNPP for information coordination was maintained in the Executive Group room as an open conference line throughout the exercise. The DES Director moderated county EG discussions, relaying the EG's decisions to the other agencies monitoring the EDL. This same procedure of notification and verification was followed at the Geauga County EOC for PNPP emergency classification level changes and when Protective Action Recommendations (PARs) were made by PNPP and the State of Ohio. At 1007 hours, a PNPP declared Site Area Emergency was received at the Geauga County EOC via the Five-Way communication line monitored by the Radiological Officer with the 1202 hours, General Emergency declaration received the same way. All three PNPP declarations included information that a 'non-routine' release was in progress. Following a question by the Radiological Officer (RO), to the DES Director about what exactly did the release entail, the DES Director asked the RO to direct a release characterization question to the PNPP using the 5-Way line. The RO was provided an answer via the 5-Way at 1016 hours, indicating an airborne release to the environment from the turbine building vent at PNPP.

Following a 1011 hours, PNPP update to the EG using the EDL, Geauga, Lake and Ashtabula counties declared local state of emergencies effective at 1015 hours. At 1012 hours, Lake County announced the Ohio Governor's State of Emergency declaration using the EDL.

At 1202 hours, via the 5-Way, a Protective Action Recommendation (PAR), was received from PNPP for the evacuation of Subareas 1, 2, 3, 4, 5, 6 and the Lake Erie portion of the 10-mile Emergency Planning Zone (EPZ). The State of Ohio followed with a recommendation to evacuate subareas 1, 2, 3 and the Lake with Potassium Iodide (KI), ingestion recommended for evacuating Subareas and emergency workers assigned to tasks within the EPZ. Following EDL participant discussion a protective action decision occurred at 1214 hours to follow the initial PNPP PAR and for the prescribed dosage ingestion of KI for emergency workers tasked to the EPZ and for institutionalized persons.

Gauga County EOC briefings were conducted hourly and as needed by the Operations Coordinator who, following his update of events, passed a wireless handheld microphone to each emergency support function station for updates and unmet needs support. During the exercise, the DES Director and the Operations Coordinator oversaw the response activities of the various agencies and organizations represented in the EOC. Significant event times and an EOC event log were displayed on large screens wall mounted at the front of the EOC. No outside resources were requested by Geauga County during this exercise and no conflicts were observed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 23, 2014, Geauga County demonstrated equipment, maps, displays, and other supplies were sufficient to support emergency operations at the Geauga County Emergency Operations Center (EOC). The demonstration was conducted at the Geauga County EOC facilities located at 12518 Merritt Road, Chardon, Ohio.

Equipment and supplies common to all areas of the EOC included synchronized digital clocks, tables, chairs and work stations sufficient to support emergency support functions. Additionally there were facility floor plans posted at doorways, fire extinguishers, exit signs, telephones and networked computers with flat panel displays. Room specific equipment for the EOC included three ceiling mounted digital projectors and support function signs located above each station. Wall mounted displays included multiple projection screens at the front of the room, one post board and two dry erase boards to the left side. A Geauga County Emergency Planning Zone Map and a PNPP Emergency Planning Zone map were displayed on the right wall. At the front of the room was a podium with a microphone connected wirelessly to a facility public address system using ceiling mounted speakers. At the rear of the room on the left side was a multifunction copy/printer machine.

The Executive Group room had a centered large conference table with a bookshelf against the rear wall. Just inside the room on the left was a small table with a telephone and a networked laser printer. Wall displays included a large digital display, a television, EPZ maps for Geauga County and PNPP, and a dry erase board.

Next to the Executive Group Conference Room was the Dispatch Center for the Geauga County EOC which served as dispatch communications after the EOC was activated. This room contained two complete dispatch stations as well as the siren system encoder, displayed maps of the county and EPZ Subareas on one wall and a dry erase board used to display radiological information. A copier was also available next to the front entrance.

The Geauga County EOC RO indicated that the State of Ohio was responsible for all dosimetry

equipment, and potassium iodide (KI) in Geauga County and that the State of Ohio maintained all dosimetry and KI at the appropriate field locations.

Although the State of Ohio maintained a storage locker at the Geauga County Department of Emergency Services storage shed, those supplies were solely the responsibility of the State of Ohio. There were 315 dosimetry kits stored at this location. Each dosimetry kit included the following: One Arrow-Tech Model 730 Direct Reading Dosimeter (DRD) (0-20 R), leak tested February 15, 2016; One CD V-742 (0-200 mR) DRD, leak tested February 15, 2016; One Landauer Escort, Thermoluminescent Permanent Record Dosimeter replacement date February 28, 2017; A packet of ThyroSafe™ KI tablets (10 pills, 65 milligrams each), with an expiration date of December 31, 2019; one ThyroSafe™ KI information sheet and one Dosimeter Report Form.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway exercise conducted on Tuesday, September 33, 2016, Geauga County successfully demonstrated the capability to issue appropriate dosimetry, Potassium Iodide (KI), and manage radiological exposure to Emergency Workers (EWs) in accordance with plans and procedures. The demonstration was conducted at the Geauga County Emergency Operations Center (EOC) located at 12518 Merritt Road, Chardon, Ohio.

Following a PNPP declared Site Area Emergency declaration notification received at 1007 hours the Geauga County Radiological Officer (RO) provided a thorough EW dosimetry briefing at 1012 hours, to the Public Information Officer (PIO) and PIO Coordinator prior to their departure to the utility Joint Information Center (JIC) located at the Auburn Career Center, 8140 Auburn Road, Painesville, Ohio.

Of the 315 dosimetry kits stored at this location, two were used for demonstration purposes. Each Ziploc bagged dosimetry kit included: two Direct Reading Dosimeters (DRD), (0-20 R and

0-200mR); a optically stimulated luminescent dosimeter with a plastic clip; a packet of ThyroSafe™ KI tablets (10 pills, 65 milligrams each); one ThyroSafe™ KI information sheet and one Dosimetry Report Form.

The RO issued each worker a dosimetry kit with instructions on how to fill out their included Dosimetry Report Forms. Next the RO briefed a dose limit of 5 rem, a turn-back value of 1R and a DRD reading frequency of 30-minutes driven by an RO call to the team with readings to be documented on the report form. The RO described the contents of the packet having each worker verify zero readings on both issued DRDs. Proper placement of DRDs and the OSLD was then demonstrated by the RO followed by a thorough description of KI ingestion authorization, prophylaxis use, dosage, risks and documentation of ingestion. The workers were then advised not to eat, drink, smoke or chew gum or tobacco during deployment and where to return dosimetry equipment and forms at the completion of their assigned duties.

Both EWs were interviewed after the briefing, and understood how to read their dosimeters and that they needed to record their dosimeter readings every 30 minutes. They also knew where to place the OSLD and DRDs on their bodies, when KI was to be voluntarily ingested and only to ingest KI if directed to do so by the RO.

An information sheet concerning the possible side effects of KI, and why it was available, was in the dosimetry kit for them to refer to during this interview. The EWs knew to turn in their dosimetry to the RO at the end of shift (retaining the PRD if they would be working another shift), as well as the Dosimetry Worksheet they would use to record readings. This form also had a place to record whether KI had been ingested or refused by the EW. They stated they would contact the RO if they were unclear on any points about the briefing, or radiation matters.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County successfully demonstrated the availability of Potassium Iodide (KI), and appropriate instructions available if it was recommended to use KI for the general public and institutionalized individuals. Appropriate record keeping of the administration of KI for

institutionalized individuals was addressed through interview. The demonstration was conducted in the Geauga County Emergency Operations Center (EOC) facilities at 12518 Merritt Road, Chardon, Ohio.

There were no nursing homes or hospitals in the Geauga County portion of the emergency planning zone. At 1214 hours, the Counties of Lake, Geauga and Ashtabula agreed to a protective action decision for the ingestion of KI for institutionalized individuals. The EOC Health Services officer acknowledged receiving the message with no action taken. The County RO stated PNPP had sent out publications to the general public and institutionalized individuals concerning the availability of free KI for pre-distribution at the County Health District Office. During an event, it would be available at Reception Centers. The expiration date for the KI in Geauga EOC is December 31, 2019. According to the RO, if there had been institutionalized individuals in the affected portion of the County, they would have received KI at their locations, along with a document that gave instructions for its prophylaxis use, as well as contraindications and possible side effects. A Dosimetry Worksheet would have also been available to record whether KI had been ingested or refused by the individual concerned.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County demonstrated the capability to implement Protective Action Decisions (PADs) for persons with disabilities and access/functional needs other than schools within areas subject to protective actions. The demonstration/interview was conducted in the Geauga County Emergency Operations Center (EOC) facilities located at 12518 Merritt Road, Chardon, Ohio.

There are no at risk day care centers, assisted living communities, correctional facilities, nursing homes or other health facilities inside the Geauga County portion of the PNPP Emergency Planning Zone (EPZ). However, Geauga County does have pre-identified host facilities for risk facilities located in Lake and Ashtabula Counties with ambulances pre-committed and staged at St. Patrick's Church located at 16550 Rock Creek Road, Thompson, Ohio.

A list of sight/mobility, special needs and hearing impaired persons had been pre-identified and

maintained by an annual Thompson Fire Department conducted survey and kept at both the fire department and the EOC. The list showed residents by name, address, contact information and special need (wheelchair, no phone, non-English speaking, hearing impaired, vital medications, etc.) and was divided by jurisdiction. Groups of people with disabilities and those with access/functional needs were treated as members of the general public and the decision-making process would be the same as that for the general population. The list indicated 18 special needs individuals with five needing direct contact, one non-English speaking, three visibilities impaired and four requiring a medical ambulance.

The Engineer/Transportation Officer made phone calls at 1014 hours, to transportation resources and determined that Chardon School District had three busses available, Geauga County Transit had 15 vans available and eight with two wheelchair capacity and 16 busses, 12 with two wheelchair capacity.

Following the 1202 hours, Geauga County receipt of the PNPP General Emergency declaration the Geauga County Engineer/Transportation Officer contacted Fire/Emergency Medical Services (EMS) requesting the list of special needs personnel with transportation requirements. The Fire/EMS Officer provided the requested special needs list and verified that there were 18 special needs residents in the EPZ, that four ambulances were on standby at their stations awaiting further instructions and confirmed as received by the Engineer/Transportation Officer.

The FIRE/EMS liaison contacted the EOC Transportation Officer requesting a sufficient number of buses be sent to the pre-designated Transportation Staging Area at Saint Patrick Church for possible use in evacuating residents in the EPZ. Thompson and Montville Fire Department personnel operated the Transportation Staging Area at St. Patrick's Church, Thompson. Ambulance service providers in the County were also instructed by telephone to send their available ambulances to the Transportation Staging Area.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County demonstrated the capability of County and School officials to implement protective actions for schools. The demonstration was conducted in the Geauga County

Emergency Operations Center (EOC) facilities located at 12518 Merritt Road, Chardon, Ohio.

There are seven school districts located within Geauga County. However, no schools nor school districts reside inside the Geauga County portion of the PNPP 10-mile Emergency Planning Zone (EPZ). Geauga County EOC School Services had the responsibility to ensure that if an incident at the PNPP was occurring, school children who lived in the EPZ were held at the Berkshire School until picked up by parents or guardians. Those students not picked up by parents within a reasonable amount of time would be transported to the Cardinal High School care center in Middlefield, Ohio.

The Chardon School District (SD), provided buses/drivers for school population and general public evacuation, receiving schools for evacuating students and an emergency worker monitoring/decontamination station. The Cardinal SD provided monitoring/decontamination facilities for evacuees while the Berkshire, Kenston, Newbury and West Geauga SDs provided American Red Cross (ARC), run facilities for alternate care centers for evacuees.

The EOC Schools Services notified all school superintendents by 0940 hours, of the PNPP Alert declaration and ensured the ARC and Department of Health were on standby should an escalation of PNPP events occur. Following the PNPP Site Area Emergency declaration received at 1007 hours, host school districts were directed to prepare to receive relocating student populations. By 1038 hours, Berkshire schools had been notified by the EOC Schools Services representative to hold Thompson Township and Ledgemont students for parental pick-up; the Cardinal and Notre Dame-Cathedral Latin School (NDCL), had been notified as to primary care center availability; that Chardon SD had been requested to send buses to St. Patrick's for evacuation and Ashtabula and Lake Counties were contacted to provide contact information to Geauga County School Services.

All Geauga County schools were made aware of the General Emergency ECL by 1210 hours, and advised that no students were allowed to enter Lake County or western Ashtabula County. At 1238 hours, School Services reported that there were no students needing transport from Chardon SD to NDCL.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County successfully demonstrated the capability to establish appropriate traffic and access control and to provide accurate instructions to traffic and access control personnel. The demonstration was conducted by interview in the Geauga County Emergency Operations Center (EOC) located at 12518 Merritt Road, Chardon, Ohio.

The Law Enforcement Coordinator (LEC) from the County Sheriff's Department and the Ohio State Highway Patrol were responsible for establishing and maintaining eight Traffic and Access Control Posts (TACPs), and the Ohio State Highway Patrol (OSHP) for two. For this exercise, only the Ohio State Highway Patrol was evaluated, since they rotate their evaluation for TACPs. The locations of all TACPs in the county have been pre-determined in accordance with existing plans and procedures. There are reference documents in the EOC with maps and specific details for needed personnel and equipment for each TACP. As per the Extent-of-Play Agreement, no TACPs were physically activated for this exercise.

Gauga County EOC received notification at 1007 hours, that a Site Area Emergency, Emergency Classification Level (ECL) had been declared by PNPP. The LEC and OSHP representative identified eight TACPs they simulated establishing at this time. The Emergency Workers needed to staff these positions would have been notified, and reported to the EOC for instructions as to controlling/restricting traffic, plus information they would give to the public, such as where the Reception Center was located. Deployment of the EWs would have been after receiving a radiological safety briefing from the Radiological Officer. The County Highway Department would have assisted in setting up the TACPs, by delivering any equipment needed at each site. They would have also coordinate the placement of traffic control signs along with the barriers. If additional resources were needed, they would be obtained from the State EOC.

At 1202 hours, the County EOC was notified that a General Emergency ECL had been declared by PNPP. The State EOC recommended persons in Subareas one through six and the Lake Erie be evacuated, and for emergency workers, institutionalized, and the public to ingest KI. According to the LEC, no personnel would be allowed through the TACPs into the 10-mile Emergency Planning Zone, unless they had proper identification and had been cleared by Geauga County EOC to enter.

Air, rail and water traffic restrictions were the responsibility of the State of Ohio.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise on Tuesday, September 13, 2016, Geauga County successfully demonstrated the capability to identify and resolve impediments to evacuation. The demonstration was conducted in the Geauga County Emergency Operations Center (EOC) facilities located at 12518 Merritt Road, Chardon, Ohio.

Gauga County EOC was informed at 1210 hours that a head on automobile accident occurred blocking the intersection of Route 528 and Thompson Road. A Sidley Construction truck ran into an oil tanker causing the tanker to overturn, rupture, and spilled the contents. Clean up crews have been requested, but are not on the scene yet. The Law Enforcement Coordinator (LEC), working with the Ohio State Highway Patrol representative (OSHP), set up road blocks and South-bound traffic on Route 528 was rerouted to Ledge Road to 166. North-bound traffic stopped at 166 to Ledge Road. Police units were to block traffic at Ledge Road and 528; Thompson/Ledge, Route 528/166; Dewey/Thompson; and Clay/Thompson intersections.

A plan was devised by the LEC, OSHP Representative, County Transportation Department, and Fire Department to begin cleaning up the scene and alert the Environmental Protection Agency through the State EOC for assistance with the spill. This detour was simulated being in place for three hours. The Public Information Officer Liaison in Geauga County passed this information on to the Joint Information Center (JIC), in time for the next news briefing, with the public informed of the detours. This traffic information was re-briefed by the JIC until the accident and spill could be cleared.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.c.1, 1.e.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None

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

4.3.4.3 Geauga County – EOC and Executive Room

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County demonstrated that at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The demonstration was conducted at the Geauga County Department of Emergency Services (DES), Emergency Operations Center (EOC), located at 12518 Merritt Road, Chardon, Ohio.

The Geauga County Sheriff's Dispatch was notified of the Alert Emergency Classification Level (ECL) at PNPP at 0800 hours, through a 5-Way dedicated telephone system which links PNPP, the State of Ohio, Ashtabula County, Lake County and Geauga County. As a dedicated line, this system requires no further verification.

At 0801 hours, the dispatcher used a facsimile machine to send a copy of the Initial Notification Form to the Emergency Operations Center (EOC) at the Geauga County DES. At 0802 hours, the dispatcher notified the Director of the Geauga County DES of the Alert ECL by commercial telephone. At 0808 hours, the dispatcher used the Wireless Emergency Notification System (WENS) to notify required staff to report to the EOC. At 0815 hours, the staff at the EOC took control of the 5-Way dedicated telephone and received all ECL changes there. Staff continued to be notified of ECL changes via WENS and briefings in the EOC.

At 0835 hours, the Director at the Geauga County EOC participated in a conference/roll call through the Executive Discussion Line (EDL). The EDL was a special telephone line which was kept open and linked the State of Ohio EOC, Geauga County, Lake County and Ashtabula County EOCs and PNPP and allowed for immediate and constant contact between the decision makers at each level. The Five-Way and EDL systems were used throughout the exercise.

Additional communications between staff at the EOC and other locations were maintained via commercial and cellular telephones, and the Storm Chaser messaging program. The Geauga County Amateur Radio Association was also located in a room just outside the EOC and had various radios capable of Ultra High Frequency, Very High Frequency and High Frequency communications with the State of Ohio, as well as Lake and Ashtabula counties. Radio communications were also maintained throughout the exercise.

There were no failures of the communications systems.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654/FEMA-REP-1, C-6; J-10.e, f; K.3.a, 4)

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County Executive Group used a decision-making process, considered relevant factors and used appropriate coordination, to ensure that an exposure control system, including the use of Potassium Iodide (KI), was in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. The demonstration was conducted at the Geauga County Department of Emergency Services, Emergency Operations Center (EOC), located at 12518 Merritt Road, Chardon, Ohio.

The Geauga County Executive Group was notified of a Site Area Emergency Classification Level (ECL) at the PNPP at 1007 hours, and directed the Public Information Officer (PIO) and PIO Coordinator to report to the Joint Information Center (JIC) located at the Auburn Career Center, 8140 Auburn Road, Painesville, Ohio. At 1012 hours, the Geauga County Radiological Officer (RO) issued them dosimetry kits and briefed them on the use of KI, dosimetry and the emergency worker exposure limits set in the Geauga County Radiological Emergency Response Plan. Based on the Geauga County Radiological Emergency Response Plan, the dosimetry limit/turn-back values were set at 1 R for all activities, 2 R for protection of valuable property, and 5 R for lifesaving or protection of large populations. These dosimetry limits correlated to Total Effective Dose Equivalent (TEDE) dose limits of 5 rem, 10 rem, and 25 rem, respectively.

At 1202 hours, the EOC had been notified of a General Emergency ECL. At 1203 hours, PNPP used the Executive Discussion Line (EDL) to notify the Executive Group of the General Emergency ECL. The State of Ohio Department of Health recommended administration of KI to emergency workers in accordance with State procedures and based on the plant status, release of radioactive materials and meteorological data. The State of Ohio also recommended that the dosimeter limit/turn-back values in the 10-mile Emergency Planning Zone (EPZ) be changed from 5 R to 2 R for lifesaving or protection of large populations, 2 R to 1 R for protecting valuable property, and 1 R to 1 R for standard response functions. They also recommended that the dosimeter limit/turn-back values outside the 10-mile EPZ remain unchanged.

At 1214 hours, the Executive Group made the decision to use the dosimeter limit/turn-back values and KI recommendations from the State of Ohio for emergency workers. The EOC Operations Officer, briefed the EOC staff at 1220 hours, and directed them to disseminate the new dosimeter limit/turn-back values and KI order to any emergency workers in the 10-mile EPZ. The PIO liaison in the Executive Group telephoned the PIO and PIO Coordinator at the JIC to ensure they were aware of the KI order and the changes to the dosimeter limit/turn-back values.

There were no requests for excess exposure levels for any Geauga County emergency workers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County Executive Group used a decision-making process which involved consideration of appropriate factors and necessary coordination was used to make precautionary and/or protective action decisions for the general public, including the recommendation for the use of potassium iodide (KI). The demonstration was conducted at the Geauga County Department of Emergency Services, Emergency Operations Center (EOC), located at 12518 Merritt Road, Chardon, Ohio.

At 0835 hours, the Director at the Geauga County EOC participated in a conference/roll call

through the Executive Discussion Line (EDL). The EDL was a special telephone line which was kept open and linked the State of Ohio EOC, Geauga County, Lake County and Ashtabula County EOCs and PNPP. The EDL allowed for immediate and constant contact between the decision makers at each location as more information became available and as the Emergency Classification Levels (ECL) changed.

At 1203 hours, PNPP used the EDL to notify the Executive Group of the General Emergency ECL and issued a Protective Action Recommendation (PAR) from the utility to evacuate Subareas 1 through 6 and the lake, and to administer KI to emergency workers and institutionalized individuals based on the plant status, release of radioactive materials and meteorological data. The State of Ohio recommended the less conservative evacuation of Subareas 1 through 3 and the lake and administration of KI to emergency workers, institutionalized individuals and the general public in those Subareas. The State of Ohio also recommended that the dosimeter limit/turn-back values in the 10-mile Emergency Planning Zone (EPZ) be changed from 5 R to 2 R for lifesaving or protection of large populations, 2 R to 1 R for protecting valuable property, and 1 R to 1 R for standard response functions. They also recommended that the dosimeter limit/turn-back values outside the 10-mile EPZ remain unchanged.

After discussion, the Executive Groups of Geauga, Lake, and Ashtabula Counties agreed to issue a Protective Action Decision at 1214 hours, to evacuate Subareas 1 through 6, and the lake in accordance with the more conservative PAR from PNPP. The Executive Group also made the decision to use the dosimeter limit/turn-back values and KI recommendations from the State of Ohio for all evacuated Subareas.

The Executive Groups agreed that Lake County would activate the sirens at 1222 hours, and initiate the Emergency Alert System at 1225 hours. The EOC Operations Officer, briefed the EOC staff at 1220 hours, and directed them to disseminate the new dosimeter limit/turn-back values and KI order with any emergency workers in the field.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial

Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County Executive Group demonstrated that precautionary and/or protective action decisions were made, as appropriate, for groups of persons with disabilities and access/functional needs. The demonstration was conducted at the Geauga County Department of Emergency Services, Emergency Operations Center (EOC), located at 12518 Merritt Road, Chardon, Ohio.

There were no hospitals, nursing homes or other health facilities, assisted living communities, correctional facilities, schools or licensed day care centers in the 10-mile Emergency Planning Zone (EPZ) portion of Geauga County.

A list of 12 persons with disabilities and/or access/functional needs had been identified in advance and was available in the EOC and at the Thompson Fire Department. The list included names, addresses, contact information and type of special need: mobility, hearing or visually impaired, no phone, non-English speaking, and/or medical. The list was maintained and updated when residents notified Geauga County by filling out and mailing a postcard included in the Emergency Preparedness Information brochure or via the Geauga County DES website. The Engineer/Transportation Officer at the EOC contacted (simulated) the individuals on the list beginning at 1010 hours, when the EOC was notified of a Site Area Emergency (SAE), Emergency Classification Level (ECL) at the PNPP at 1007 hours, and again when the EOC had been notified of a General Emergency (GE) ECL at 1202 hours.

Gauga County had no schools in the 10-mile EPZ. The Geauga County EOC School Services Representative began notifying all schools in the county at 1007 hours, when the EOC was notified of a Site Area Emergency ECL at PNPP. The notification was a courtesy and to notify schools to prepare for use as host schools or alternate care centers, if needed. Notifications were completed at 1026 hours. Two high schools, Cardinal and Notre Dame Cathedral Latin were notified to prepare to serve as primary care centers.

At 1202 hours, Geauga County was notified of a GE ECL. The Executive Groups of Geauga, Lake, and Ashtabula Counties agreed to issue a Protective Action Decision at 1214 hours, to evacuate Subareas 1 through 6, and the lake in accordance with the PAR from PNPP. Potassium Iodide (KI) was also recommended for the general public in all evacuated Subareas. Students living inside the 10-mile EPZ, but attending Berkshire High School, which was located outside the 10-mile EPZ, were retained at the school for pick-up by parents.

Groups of people with disabilities and/or access/functional needs were treated as members of the general public and the decision-making process was the same as for that of the general

population.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County demonstrated that activities associated with primary alerting and notification of the public were completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public included, as a minimum, the elements required by current FEMA REP Guidance. The demonstration was conducted at the Geauga County Department of Emergency Services (DES), Emergency Operations Center (EOC), located at 12518 Merritt Road, Chardon, Ohio.

The Geauga County Sheriff's Dispatch was notified of the Alert Emergency Classification Level (ECL) at PNPP at 0800 hours. At 0802 hours, the Director of the Geauga County DES was notified and directed the activation of the EOC. At 0808 hours, EOC staff received a message via the Wireless Emergency Notification System (WENS) to report to the EOC.

Two Public Inquiry representatives reported to the Geauga County EOC at 0828 and 0837 hours, to respond to calls from the public on the pre-established Public Inquiry Line. A total of 18 calls were made to the Public Inquiry Line between 0917 and 1258 hours. Calls were answered professionally and callers were given accurate and concise information.

The EOC was notified of the Site Area Emergency ECL at 1007 hours. The Executive Group directed the PIO and PIO Coordinator to report to the Joint Information Center (JIC) located at the Auburn Career Center, 8140 Auburn Road, Painesville, Ohio. The PIOs departed the EOC at 1029 hours, en-route to the JIC.

The JIC was activated at 1102 hours, and a telephone link was established between the Geauga County PIOs at the JIC and the EOC at 1103 hours. Once established, the JIC was responsible

for all press releases with input from the Executive Groups from Geauga, Lake and Ashtabula Counties. Press releases included information on the event at PNPP, the current ECL, location of emergency preparedness information, public inquiry telephone numbers and where to listen for additional information and EAS messages.

At 1202 hours, the Executive Group was notified of a General Emergency ECL. The Executive Groups of Geauga, Lake and Ashtabula Counties discussed and agreed upon a joint Protective Action Decision (PAD) effective at 1214 hours, to evacuate Subareas 1 through 6 and the lake and to direct ingestion of KI for emergency workers, institutionalized individuals and the general public. They also agreed to sound the sirens at 1222 hours, followed by an Emergency Alert System (EAS) Message at 1225 hours. In accordance with the Geauga County Radiological Emergency Response Plan, once the PAD was agreed on by the Executive Groups of Geauga, Lake and Ashtabula Counties, Lake County EOC staff took responsibility and sounded the sirens and prepared and sent the EAS message.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 2.a.1, 2.b.2, 2.c.1, 5.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.4.4 Geauga County – EOC - PIO

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County Public Information Officer (PIO) provided accurate subsequent emergency information and instructions to the public and the news media in a timely manner. The

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demonstration was conducted at the Geauga County Department of Emergency Services, Emergency Operations Center (EOC), located at 12518 Merritt Road, Chardon, Ohio.

Three Geauga County PIO representatives reported to the EOC after being notified at 0808 hours, of an Alert Emergency Classification Level (ECL) being declared at PNPP. Upon their arrival in the Executive Group room between 0815 and 0838 hours, they began following their procedures for an Alert ECL and reviewing procedures for future ECL changes.

Two Public Inquiry representatives also reported to the Geauga County EOC at 0828 and 0837 hours, to respond to calls from the public on the pre-established Public Inquiry Line. The first call was received on the Public Inquiry Line at 0917 hours. A total of 18 calls were made to the Public Inquiry Line between 0917 and 1258 hours. The only trend identified was that several members of the public were unable to locate their PNPP Emergency Preparedness Information brochures. Callers were directed to use the information in their local telephone book, the FirstEnergy Nuclear Operating Company website and to monitor their local television and radio stations.

The EOC was notified of the Site Area Emergency ECL at 1007 hours. The Executive Group directed the PIO and PIO Coordinator to report to the Joint Information Center (JIC) located at the Auburn Career Center, 8140 Auburn Road, Painesville, Ohio, after they received their radiation safety briefing and dosimetry kits with potassium iodide (KI). The PIOs departed the EOC at 1029 hours, en-route to the JIC.

The JIC was activated at 1102 hours, and a telephone link was established between the Geauga County PIOs at the JIC and the EOC at 1103 hours. Once established, the JIC was responsible for all press releases with input from the Executive Groups from Geauga, Lake and Ashtabula Counties. At 1202 hours, the Executive Group was notified of a General Emergency ECL. The Executive Groups of Geauga, Lake and Ashtabula Counties discussed and agreed upon a joint Protective Action Decision effective at 1214 hours, to evacuate Subareas 1 through 6 and the lake and to direct ingestion of KI for emergency workers, institutionalized individuals and the general public. They also agreed to sound the sirens at 1222 hours, followed by an Emergency Alert Message at 1225 hours. This information was confirmed between the Geauga County EOC PIO liaison and the Geauga County PIOs at the JIC at 1210 hours.

At 1212 hours, the Geauga County EOC PIO was informed of a two vehicle accident on the evacuation route in Geauga County. Traffic was rerouted and a general message was sent by the Traffic Control representative in the EOC to the Geauga County EOC staff, including law

enforcement and the PIOs in the EOC and the JIC. At 1215 hours, the PIO liaison in the EOC telephoned the PIOs at the JIC and confirmed their receipt of the message with the detour information.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.4.5 Geauga County – TCP DC Brief at Geauga County EOC

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

Successfully demonstrated - This associated criterion requires no narrative.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County adequately demonstrated equipment, maps, displays, and other supplies were sufficient to support emergency operations at the Geauga County Emergency Operations Center (EOC). The demonstration was conducted in the Geauga County EOC facilities located at 12518 Merritt Road, Chardon, Ohio.

The Geauga County EOC had sufficient equipment, supplies to support TACP operations. The Geauga County RO assigned and briefed the Ohio State Highway Patrol Officer on the dosimetry and Potassium Iodide (KI) kit. The dosimetry kit assigned included the following: One Arrow-

Tech Model 730 Direct Reading Dosimeter (DRD) (0-20 R), leak tested on February 15, 2016; One CD V-742 (0-200 mR) DRD, leak tested on February 15, 2016; One Landauer Optically Stimulated Thermoluminescent Dosimeter due to be replaced on February 28, 2017; a packet of KI tablets (10 pills, 65 milligrams each), with an expiration date of December 31, 2019, and one Dosimeter Report Form. A large copy of the TACP locations, evacuation routes, and other maps was also available in the Geauga County EOC.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, The Geauga County Radiological Officer adequately demonstrated the ability to brief and issue dosimetry, Potassium Iodide (KI) and procedures, and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of their mission read their dosimetry and recorded the readings on their exposure record card, and maintained appropriate record keeping of the administration of KI. This demonstration was conducted in the Geauga County EOC located at 12518 Merritt Road, Chardon, Ohio.

At 1010 hours, after the Site Area Emergency, The Geauga County Radiological Officer (RO) provided a thorough radiological briefing to the Ohio State Highway Patrol Officer responsible for manning of the traffic access and control points in the county portion of the Emergency Planning Zone (EPZ). The RO assigned the Officer two Direct Reading Dosimeters (DRDs) a 0-20 R and 0-200 R, a Permanent Record Dosimeter (PRD), as a way of measuring exposure control and for thyroid protection a supply of KI. A Dosimetry/KI Report Form was provided for recording readings and the ingestion of KI if required. Instructions were also provided on who should not take KI, risks, and that it should only be taken if directed by Ohio Department of Public Health.

The RO briefing provided to the Officer included how to charge, read and check the DRDs in the event that it was necessary, and instructions were provided to check the DRDs every 30 minutes. The RO also informed the Officer to report to his supervisor upon reaching a reading of 1R, to leave his post upon reaching 5R, after checking with the supervisor first. For life saving operations, the RO stated emergency workers could work until reaching a 25R reading, and that dosimeters were to be worn at around chest level on the outside the Officer's clothing. He also informed the Ohio State Highway Patrol Officer that at end of his shift or upon release from work, to report to the Emergency Worker Monitoring and Decontamination Station, which was located at the Chardon High School. Upon reporting to the Emergency Worker Monitoring and Decontamination Station, the officer was informed by the RO, that he would be monitored and decontaminated if necessary, and would also turn in his dosimetry.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.4.6 Geauga County – OSHP TCP/ACP at Geauga County EOC

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County Director of Emergency Services supported by the Ohio State Highway Patrol adequately demonstrated that least two communication systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The

demonstration was conducted outside of the Geauga County EOC located at 121518 Merritt Road, Chardon, Ohio.

The Ohio State Highway Patrol had the responsibility to conduct Traffic and Access Control Point (TACP) duties in Geauga County. The primary means of communications with his supervisor and the Geauga County Sheriff's Dispatch Center was through his patrol vehicle 800 MHz Motorola radio. A communication check performed by the Ohio State Police Highway Patrol Officer with his portable handheld 800 MHz Motorola radio was successfully conducted with the Ohio State Highway Patrol District 28 Office. Other backup forms of communication available were a hand held Motorola 800 MHz radio, cell phone/pager, CB radio and laptop computer.

There were no malfunctions or failures in communication during this exercise.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County Sheriff's Department Emergency Operations Center (EOC) demonstrated equipment and supplies sufficient to support emergency operations. The demonstration was conducted in the Geauga County EOC facilities located at 12518 Merritt Road, Chardon, Ohio.

The Ohio State Highway Patrol Officer responsible for manning the TACP had flares, traffic cones, rain gear, traffic vests, CB radio, cell phone/pager, laptop computer, and 800 MHz Motorola radio in his patrol vehicle. He also had a copy of the traffic and access control locations in Geauga County and a dosimetry/Potassium Iodide (KI) kit with instructions. His dosimetry/KI kit included the following: One Arrow-Tech Model 730 Direct Reading Dosimeter (DRD) (0-20 R), leak tested on February 15, 2016; One CD V-742 (0-200 mR) DRD, leak tested on February 15, 2016; One Landauer Thermoluminescent Permanent Reading Dosimeter due to be sent back to the manufacturer on February 28, 2017; A packet of KI tabs (10 pills, 65 milligrams each), with an expiration date of December 31, 2019, and one Dosimeter Report Form. He also had a copy the TACP procedures and a copy of the evacuation routes, Reception/Mass Care/Monitoring and Decontamination location and Emergency Worker Monitoring and

Decontamination location, and a map of the EPZ for use in directing and diverting traffic to alternate routes.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, The Ohio State Highway Patrol (OSHP) Officer adequately demonstrated the knowledge and understanding of dosimetry, KI and procedures, and managed radiological exposure in accordance with the plan and procedures. Emergency workers periodically and at the end of their mission would read their dosimetry and record the reading on their exposure record card, and maintain appropriate record keeping of the administration of Potassium Iodide (KI). This demonstration was conducted in the Geauga County EOC located at 12518 Merritt Road, Chardon, Ohio.

A Ohio State Highway Patrol (OSHP) Officer assigned to perform TACP duties, reported to Geauga County EOC with his patrol vehicle. He was provided a briefing on exposure limits, KI use and side effects, and assigned a dosimetry/KI kit by Geauga County RO. After this occurred the OSHP Officer was interviewed to determine his knowledge on dosimetry/KI and exposure control procedures.

The OSHP Officer indicated through interview that he understood the dose limit of 1 R, event turn-back (5 R) and lifesaving (25 R) radiation exposure limits. He knew how to read the Direct Reading Dosimeters (DRD) and confirmed the reading was at 0 R when issued. The OSHP Officer placed the DRD and Optically Stimulated Luminescence Dosimeter on his uniform appropriately outside his clothing at chest level. The deputy knew he should read his DRD every 30 minutes and record the reading. He understood that he should report these readings to his supervisor and seek permission to exceed limits before doing so. The OSHP Officer knew the purpose for KI, who should not take it, side effects, what to do if an allergic reaction were to

occur, and understood he was not to take KI unless directed to by the Ohio Department of Health or his supervisor. Only after being directed to ingest KI would he take it and record the date and time of ingestion. He was also aware not to eat, drink, smoke, and chew gum or tobacco while performing his duties. The OSHP Officer knew he would return the dosimetry kit to the Chardon High School Emergency Worker/Monitoring and Decontamination Station at the end of his shift and be monitored.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, the Geauga County Sheriff's Department was responsible for eight Traffic Access Control Points (TACPs) for that portion of the county that is in the PNPP Emergency Planning Zone (EPZ). The demonstration was conducted in the Geauga County EOC located at 12518 Merritt Road, Chardon, Ohio.

Gauga County operates eight traffic control points which guide traffic for the evacuees away from the PNPP and out of the EPZ to reception centers. The TACPs were activated upon reaching an Emergency Classification Level (ECL) of Site Area Emergency. The Geauga Sheriff's Department coordinated that activity with adjacent counties, the Ohio State Highway Patrol, and the State EOC. TACP personnel received a radiological briefing and were issued the necessary dosimetry and KI. The Ohio State Highway Patrol Officer assigned to TACP duty had traffic cones in their vehicles and should additional traffic control devices be needed they would report requirements to the Law Officer on duty in the Geauga County EOC. The Deputy Sheriff that made TACP assignments demonstrated how the assignments would be made and coordinated with the Ohio State Highway Patrol who was responsible for manning the TACP location assigned. Ohio State Highway Patrol Officer had a copy of the TACP predesignated locations and evacuation routes on his clip board and a map of the EPZ for Geauga County. They would be briefed where monitoring and decontamination stations were located, and if they needed additional traffic control devices they were to call the Deputy Sheriff in the county EOC.

All activities described in the demonstration criterion were carried out in accordance with the

plan, procedures and extent-of-play agreement.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.d.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.4.7 Geauga County – County PIO at FENOC JIC

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

During the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016, Geauga County demonstrated the capability to provide accurate emergency information in a timely manner to the public and news media at the FirstEnergy Nuclear Operating Company (FENOC) PNPP, Joint Information Center (JIC). The demonstration was conducted at the Auburn Career Center (ACC), located at 8140 Auburn Road, Concord, Ohio.

At approximately 1040 hours, the Geauga County Public Information Officer (PIO) arrived and signed in at the JIC Security desk located in the lobby of the Auburn Career Center facility, proceeding upstairs to the State/County Work Area, a.k.a., the Networking Room. Upon arrival, she checked in with the Geauga County Emergency Operations Center (EOC) to confirm her arrival, establish communications, and receive the most current information. PIOs from Lake and Ashtabula counties, and the State of Ohio, all arrived at about the same time and were briefed by the FENOC Government Liaison, and agreement was reached to conduct the first media briefing at 1130 hours. With all functions staffed, the JIC was declared operational by the JIC manager at 1102 hours.

Physically, the ACC was well suited to serve its intended purpose of gathering and coordinating information and disseminating it to the public and the media in various ways. The first floor was available to members of the press who were prevented by security from going upstairs to the JIC

work areas. The media briefing room was a large, modern auditorium with a stage and table for the presenters and a podium for the moderator. Graphics were available and projected on a screen as needed to enhance the presentations. Both table and lapel microphones were used to be sure everyone in the auditorium could hear. Plenty of seats were available for the media and an upstairs balcony was used by observers. Presenters could access the stage via a separate stairway. Plenty of work space was provided for media representatives and a liaison person was on hand to assist the media as needed.

At 1110 hours, prior to the first media briefing, the FENOC JIC Manager facilitated a pre-briefing in the JIC Pre-Brief Room among FENOC personnel, and PIOs from the State of Ohio and the three counties. The JIC Information Supervisor for PNPP was assigned as moderator. Other participants at this and other media briefings were the PNPP Technical Spokesperson, the State of Ohio PIO, and Lake, Geauga and Ashtabula County PIOs. With the event having begun more than two hours earlier, it was decided that this media briefing would report information related to the declaration of the Site Area Emergency (SAE), plant conditions, and offsite implications. The JIC Information Supervisor said that once basic plant information was shared, the counties, beginning with Lake County, as the lead, would present information affecting local area residents, followed by the State. Once the counties concluded, the Technical Spokesperson was to provide more detailed plant information. Questions were then to be entertained from the assembled mock media.

In each of the pre-briefings, the JIC Manager, with the assistance of the Information Supervisor for PNPP serving as moderator, specified the purpose(s) of the briefing, identified who would participate and the order of speakers, identified and led the discussion of rumors and trends with the help of the FENOC Communications Coordinator, and identified the graphics to be displayed.

At approximately 1120 hours, the pre-brief concluded and the PIOs left to check in with their respective EOCs to determine whether there was new information to provide. The participants then reconvened outside of the Auditorium, had a brief discussion, and the first media briefing commenced at 1130 hours.

The Lake County PIO led off the presentation by reporting on the precautionary measures that had been taken. Geauga County addressed the "parental retrieval of schoolchildren" at the school(s), that Red Cross shelters were being set up, and provided the hotline number for residents of Geauga to call. The FENOC Communications Coordinator said that calls were coming into the hotline related to plant conditions and the possibility of evacuation.

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No mock media questions were directed to the Geauga County PIO. The first briefing ended at 1152 hours, with the next one scheduled for 1220 hours.

Immediately after this and other media briefings the JIC Manager, with the assistance of the Information Supervisor for PNPP (the moderator), led the discussion in the JIC Pre-Brief Room of lessons learned from the previous media briefing and ensured that a response was planned for information requiring follow-up.

At 1203 hours, the Lake County PIO received the initial report that PNPP had escalated to a GE, sharing it with his colleagues in the Work Area. Although the second media briefing had been scheduled for 1220 hours, a short delay was requested to confirm the protective action decisions (PADs) being made, receipt of the special news bulletin providing PAD details, and the timing of siren activation (at 1222 hours) and broadcasting of the EAS message (at 1225 hours). The Lake County PIO presentation occupied the bulk of the time reading the lengthy special news bulletin containing the details of the evacuation of Subareas 1-6 and Lake Erie out to a 10-mile radius from the plant, also affecting Geauga and Ashtabula counties. The Geauga County PIO reported that children had been retained at schools for parental pickup, and that care centers were open. The hotline number was again provided.

In response to a question from the mock media, all three county PIOs indicated that, in the unlikely event a care center neared capacity, secondary, or alternate, care centers would be opened. The briefing ended at 1247 hours, with the next one scheduled for 1315 hours.

As before, 1305 hours, a pre-brief was facilitated by the JIC Manager in anticipation of the third media briefing following the same procedure. The third media briefing began at 1316 hours. The same representatives participated, and once again, the PNPP Information Supervisor acted as moderator. Again, Lake County took the lead. The Geauga PIO provided an update that a highway accident that could affect evacuation had been cleared and no impediments remained. Again care centers were addressed and the hotline number provided. The FENOC Communications Coordinator said that calls were coming requesting information on the magnitude of the rad release, and that some individuals were saying that they could "see" the plume.

During the question-and-answer period when the Geauga PIO was asked why the schoolchildren still appeared to be at school, she discussed the status and special considerations of the Thompson resident students within the EPZ.

The exercise was terminated at 1340 hours, following conclusion of the third news briefing.

Throughout the exercise, a log of activities was maintained. Activation and operation of the JIC were conducted in accordance with the utility procedure, JIC-0003, "Emergency Public Information Organization Instruction: Joint Information Center Activation, Operation, and Deactivation," Revision 5, dated September 19, 2014.

The public inquiry hotline function at the PNPP JIC was conducted by FENOC staff on behalf of the three counties and the State, and is reported on separately under the State narrative.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 5.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.4.8 Geauga County – Chardon Village (CV) FD M&D Emergency Workers – DC Briefing

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday September 13, 2016 the Chardon and Hambden Fire Departments Emergency Worker Dosimetry Briefing, demonstrated equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies were sufficient to support emergency operations. The demonstration was conducted during an out-of-sequence activity on Monday September 12, 2016 from approximately 1900 to 2100 hours at the Chardon High School located at 151 Chardon Ave. Chardon, OH 44024.

In accordance with the Geauga County Fire Departments' procedure for Emergency Worker Monitoring/Decontamination, walk ways for incoming Emergency Workers (EW) were covered with paper and labeled for direction and clean and contaminated EWs. EWs wore latex

examining gloves and Tyvec booties.

Emergency Workers assigned at the Emergency Worker Monitoring and Decontamination Facility were equipped with a Landauer Optically Stimulated Permanent Record Dosimeter (PRD) that was authorized for use until January 31, 2017, a Dosimetry Corporation 0-200 mR Direct Reading Dosimeter (DRD) that was within current calibration and due to be recalibrated by February 6, 2017. Each EW was observed to properly record the dosimetry information and personal identification on a Personal Dosimetry Record. Each EW was told to return the dosimetry to the Dosimetry Coordinator at the end of the mission. There were 25 dosimetry kits. Each dosimetry kit contained a blister pack of 10, 65 mg potassium iodide tablets and instruction/precaution form. Additional dosimetry was available from the Geauga County Emergency Operations Center.

A Bicron TPM903 Portal Monitor was set up and properly source checked with a 1 μ Ci Cs-137 source at the knee, waist, and head level. The portal monitor was within current calibration and due for recalibration on June 10, 2016. Six Ludlum model 3 portable survey instruments equipped with 44/9 open window probes were observed to be properly source checked. They were due for recalibration by February 15, 2017. Each Ludlum 3 had a 1 μ Ci Cs-137 source attached and a label with acceptable responses to the source. The EWs were equipped with Motorola 800 MHz portable radios and pagers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday September 13, 2016 the Chardon and Hambden Fire Departments Emergency Worker Dosimetry Briefing, issued appropriate dosimetry, potassium iodide and procedures, and managed radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on

appropriate exposure record or chart. The Fire Departments maintained appropriate record keeping of the administration of potassium to emergency workers. The demonstration was conducted during an out-of-sequence activity on Monday September 12, 2016 from approximately 1900 to 2100 hours at the Chardon High School located at 151 Chardon Ave. Chardon, OH 44024.

Emergency Workers (EW) assigned at the Emergency Worker Monitoring and Decontamination Facility were equipped with a Landauer Optically Stimulated Permanent Record Dosimeter (PRD) that was authorized for use until January 31, 2017, a Dosimetry Corporation 0-200 mR Direct Reading Dosimeter (DRD) that was within current calibration and due to be recalibrated by February 6, 2017. Each EW was observed to properly record the dosimetry information and personal identification on a Personal Dosimetry Record. Each EW was told to return the dosimetry to the Dosimetry Coordinator at the end of the mission. There were twenty five dosimetry kits. Each dosimetry kit contained a blister pack of 10, 65 mg potassium iodide tablets and instruction/precaution form. Additional dosimetry was available from the Geauga County Emergency Operations Center.

Each EW was observed to properly record the dosimetry information and personal identification on a Personal Dosimetry Record. Each EW was told to return the dosimetry to the Dosimetry Coordinator at the end of the mission.

The Dosimetry Coordinator used a scripted Emergency Worker Briefing Checklist for Emergency Workers serving outside the Emergency Planning Zone. Each EW was briefed to read the dosimeter at least every 30 minutes and report any increase to the Dosimetry Coordinator, their turn-back limit was 5 R/hr, wear the dosimetry on the front of their torso, their limit for the mission was 5 rem. Emergency Workers were interviewed and the properly recited the instructions they had heard. They knew that limits were higher for life saving.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.a.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None

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

4.3.4.9 Geauga County – Chardon Village (CV) FD M&D - Emergency Workers

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday September 13, 2016 the Chardon and Hambden Fire Departments Emergency Worker Monitoring/Decontamination team, demonstrated the ability to provide direction and control to key personnel with leadership responsibilities and control the overall emergency response effort within their authority and responsibilities. The demonstration was conducted during an out-of-sequence activity on Monday September 12, 2016 from approximately 1900 to 2100 hours at the Chardon High School located at 151 Chardon Ave. Chardon, OH 44024.

The Chardon Fire Chief was in charge of the Emergency Worker Monitoring and Decontamination facility during the exercise. He described how the facility was set up and stated he would notify the Emergency Manager in the Geauga County Emergency Operations Center when the facility was operational. He conducted briefings and provided oversight of the dosimetry briefing and the decontamination of one Emergency Worker.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday September 13, 2016 the Chardon and Hambden Fire Departments Emergency Worker Monitoring/Decontamination team, demonstrated at least two communications systems were available, at least one operated properly, and communication links were established and maintained with appropriate locations. Communications capabilities were managed in support of emergency operations. The

demonstration was conducted during an out-of-sequence activity on Monday, September 12, 2016 from approximately 1900 to 2100 hours at the Chardon High School located at 151 Chardon Ave. Chardon, OH 44024.

The Emergency Workers (EWs) were equipped with Motorola 800 MHz, multi-channel portable radios, cell phones, and pagers. The vehicles were equipped with mobile radios. A series of booster towers throughout Geauga County ensure no loss of signal coverage. The communication equipment was demonstrated with no failures observed.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016 the Chardon and Hambden Fire Departments Emergency Worker Monitoring and Decontamination, demonstrated equipment, maps, displays, dosimetry, potassium iodide (KI) and other supplies were sufficient to support emergency operations. The demonstration was conducted during an out-of-sequence activity on Monday, September 12, 2016 from approximately 1900 to 2100 hours at the Chardon High School located at 151 Chardon Ave. Chardon, OH 44024.

In accordance with the Geauga County Fire Departments' procedure for Emergency Worker Monitoring/Decontamination, walk ways for incoming Emergency Workers (EW) were covered with paper and labeled for direction and clean and contaminated EWs. The EW performing the Monitoring and Decontamination wore a full Tyvec suit. All other EWs wore latex examining gloves and Tyvec booties.

Emergency Workers assigned at the Emergency Worker Monitoring and Decontamination Facility were equipped with a Landauer Optically Stimulated Permanent Record Dosimeter (PRD) that was authorized for use until January 31, 2017, a Dosimetry Corporation 0-200 mR Direct Reading Dosimeter (DRD) that was within current calibration and due to be recalibrated by February 6, 2017. Each EW was observed to properly record the dosimetry information and personal identification on a Personal Dosimetry Record. Each EW was told to return the dosimetry to the Dosimetry Coordinator at the end of the mission. There were 25 dosimetry kits. Each dosimetry kit contained a blister pack of 10, 65 mg potassium iodide tablets and

instruction/precaution form. Additional dosimetry was available from the Geauga County Emergency Operations Center.

A Bicron TPM903 Portal Monitor was set up and properly source checked with a 1 μCi Cs-137 source at the knee, waist, and head level. The portal monitor was within current calibration and due for recalibration on June 10, 2016. Six Ludlum model 3 portable survey instruments equipped with 44/9 open window probes were observed to be properly source checked. They were due for recalibration by February 15, 2017. Each Ludlum 3 had a 1 μCi Cs-137 source attached and a label with acceptable responses to the source. The EWs were equipped with Motorola 800 MHz portable radios and pagers.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016 the Chardon and Hambden Fire Departments Emergency Worker Monitoring/Decontamination, issued appropriate dosimetry, potassium iodide and procedures, and managed radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on appropriate exposure record or chart. The Fire Departments maintained appropriate record keeping of the administration of potassium to emergency workers. The demonstration was conducted during an out-of-sequence activity on Monday, September 12, 2016 from approximately 1900 to 2100 hours at the Chardon High School located at 151 Chardon Ave. Chardon, OH 44024.

Emergency Workers (EW) assigned at the Emergency Worker Monitoring and Decontamination Facility were equipped with a Landauer Optically Stimulated Permanent Record Dosimeter (PRD) that was authorized for use until January 31, 2017, a Dosimetry Corporation 0-200 mR Direct Reading Dosimeter (DRD) that was within current calibration and due to be recalibrated

by February 6, 2017. Each EW was observed to properly record the dosimetry information and personal identification on a Personal Dosimetry Record. Each EW was told to return the dosimetry to the Dosimetry Coordinator at the end of the mission. There were 25 dosimetry kits. Each dosimetry kit contained a blister pack of 10, 65 mg potassium iodide tablets and instruction/precaution form. Additional dosimetry was available from the Geauga County Emergency Operations Center.

Each EW was observed to properly record the dosimetry information and personal identification on a Personal Dosimetry Record. Each EW was told to return the dosimetry to the Dosimetry Coordinator at the end of the mission.

The Dosimetry Coordinator used a scripted Emergency Worker Briefing Checklist for Emergency Workers serving outside the Emergency Planning Zone. Each EW was briefed to read the dosimeter at least every 30 minutes and report any increase to the Dosimetry Coordinator, their turn-back limit was 5 R/hr, wear the dosimetry on the front of their torso, their limit for the mission was 5 rem. Emergency Workers were interviewed and the properly recited the instructions they had heard. They knew that limits were higher for life saving.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Tuesday, September 13, 2016 the Chardon and Hambden Fire Departments Emergency Worker Monitoring/Decontamination team, demonstrated had adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles. The demonstration was conducted during an out-of-sequence activity on Monday, September 12, 2016 from approximately 1900 to 2100 hours at the Chardon High School located at 151 Chardon Ave. Chardon, Ohio 44024.

In accordance with the Geauga County Emergency Worker Monitoring/Decontamination Procedure, traffic pathways from the entrance to the portal monitor were covered with craft paper and direction arrows. From the portal monitor uncontaminated Emergency Workers were directed on craft paper to registration. Contaminated Emergency Workers were directed on craft

paper to the decontamination room. There were separate decontamination rooms and adequate spaces for male and female emergency workers. Plastic bag lined waste cans were used for contaminated items.

Set up of the facility, equipment checks, contamination control procedures, exposure control, were strictly followed using the checklists in the Geauga County Emergency Worker Monitoring/Decontamination Procedure. One Emergency Worker was simulated to be contaminated on his left hand. The Action Level was 300 counts per minute using a Ludlum 3/44-9. He was successfully decontaminated after two washings with soap and water. One Emergency Worker performed the monitoring and one recorded the Personnel Monitoring Record body map. The decontamination process was supervised by the Fire Chief. They stated that after three attempts to decontaminate the Emergency Worker, the Emergency Worker would be referred to a medical facility.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

- a. MET: 1.c.1, 1.d.1, 1.e.1, 3.a.1, 6.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None

4.3.4.10 Geauga County – Chardon Village (CV) FD M&D - Emergency Worker Vehicle and Equipment

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday September 12 2016, the Chardon Fire Department sufficient equipment, maps, instruments, and supplies including dosimetry and potassium iodide (KI) at emergency worker vehicles and equipment

decontamination. The demonstration was conducted out-of-sequence from approximately 1900 hours to 2100 hours, at the Geauga County Emergency Worker Monitoring/Decontamination Station (EWM/DS) located at the Chardon High School at 151 Chardon Ave., Chardon, OH.

Appropriate information, directions and directional travel signage were posted along the entire route from the initial entrance to the monitoring area station, through the monitoring and decontamination area and into the emergency worker monitoring area. There were also signs reminding personnel of the 5R exposure limit, to check their dosimeters every 30 minutes, and what the initial background readings were in those specific areas where signs were posted. Orange cones were used to line the entire route to delineate where the vehicles would be monitored, decontaminated, and returned to the clean vehicle area or towards the impounded area if necessary.

There were plastic containers that kept personal protective equipment for emergency workers consisted of nitrile and latex gloves, Tyvec suits with hoods, Tyvec shoe booties and dosimetry kits. Each dosimetry kit consisted of one CDV Model 730 Direct Reading Dosimeter (DRD) with a range 0-20 R (Calibration due dates of February 15, 2017), one CDV Model 742 DRD with a range 0-200 R (Calibration due dates of February 15, 2017) one Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (PRD) (dates good from January 1, 2016 – December 31, 2016), ten 65 mg KI tablets (Expiration date of December 2019), one pen, one KI instruction sheet, one Dosimetry Report Form in a zip-lock bag. Additional doses of KI are stored at the Geauga and Ashtabula County Emergency Operations Centers and at the Ashtabula County Health Department.

Vehicle decontamination equipment was kept in rubberized plastic containers with attached contents inventory sheets matching the lists indicated in the plan were available for inspection. The containers had all the necessary equipment to successfully decontaminate vehicles and equipment. This equipment included hoses, brushes, sponges, tape, soap, radioactive signs and labels, as well as copies of procedures, maps of the layout, and plenty of equipment and vehicle monitoring record forms. There were also several plastic bins for contaminated equipment and clothing which could be labeled and decontaminated or disposed of at a later time.

Monitoring equipment used in the decontamination areas consisted of Ludlum model 3 meters. The team leader demonstrated the proper operational checks using the check source for the Ludlum meters. Calibration dates for the survey meters were current through February 15, 2016.

All activities described in the demonstration criteria were carried out in accordance with the

plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday September 12 2016, the Kirkland Fire Department demonstrated the implementation of emergency worker (EW) exposure control and the implementation of the decision to ingest potassium iodide (KI) at emergency worker vehicles and equipment decontamination. The demonstration was conducted out-of-sequence from approximately 1900 hours to 2100 hours, at the Geauga County Emergency Worker Monitoring/Decontamination Station (EWM/DS) located at the Chardon High School at 151 Chardon Ave., Chardon, OH.

The Chardon Fire Chief had boxes with the EW dosimetry and radiological monitoring supplies to the Chardon High School. The Chief delivered 20 dosimetry packets. The Chardon Fire and Rescue firefighter briefed the EWs by reading from a laminated EW Briefing Checklist and distributed dosimetry packets to the firefighters.

Each dosimetry packet consisted of one CDV Model 730 Direct Reading Dosimeter (DRD) with a range 0-20 R (Calibration due dates of February 15, 2017), one CDV Model 742 DRD with a range 0-200 R (Calibration due dates of February 15, 2017) one Optically Stimulated Luminescence (OSL) Permanent Record Dosimeter (PRD) (dates good from January 1, 2016 – December 31, 2016), ten 65 mg KI tablets (Expiration date of December 2019), one pen, one KI instruction sheet, one Dosimetry Report Form in a zip-lock bag.

When interviewed the firefighters recalled that they should record the dosimetry readings every 30 minutes. The firefighters also knew to wear the dosimetry outside of his clothing, the maximum exposure limits of 1 R and a turn-back value of 5 R, and where to return the dosimetry and exposure report form. This included returning the packet used for area dosimetry in the gym, monitoring area, and decontamination area.

All activities described in the demonstration criterion were carried out in accordance with the plan, procedures and extent-of-play agreement.

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

As part of the Perry Nuclear power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on Monday September 12 2016, the Kirkland Fire Department demonstrated the capability to establish adequate facilities, resources, and trained personnel to provide monitoring and decontamination for emergency worker vehicles and equipment. The demonstration was conducted out-of-sequence from approximately 1900 hours to 2100 hours, at the Geauga County Emergency Worker Monitoring/Decontamination Station (EWM/DS) located at the Chardon High School at 151 Chardon Ave., Chardon, OH.

The EWM/DS was located in the rear of the High School facility, with traffic cones directing cars to the drop-off point, where emergency workers would leave their vehicles and proceed inside the facility for monitoring and decontamination, if necessary. The areas supporting vehicle monitoring and decontamination start at the drop off point, where vehicle information is obtained from the driver. The vehicle was then moved to the vehicle monitoring station, where it was either determined to be clean or contaminated. If clean, it would be moved to the clean parking area, which was on the street east of the school. Access is controlled by cones. If contaminated, the vehicle would be moved to the decontamination station, where it was washed and cleaned inside if necessary, and re-monitored for contamination. If clean after decontamination, the vehicle would be parked in the clean area. If the vehicle was still contaminated, it would be impounded in the contaminated vehicle parking area.

Through interview, it was determined that personnel assignments were made by the Fire Chief (Officer in Charge). Personnel on hand included members of the Chardon and Hambden Fire Departments.

There was a Team Leader/Recorder, a Transportation Attendant, a Vehicle/Equipment Monitor, a Vehicle/Equipment Decontamination Attendant, and a Vehicle/Equipment Movement Attendant.

For this exercise, the Transportation Attendant was stationed at the vehicle drop off point. He would booties and gloves, coveralls, along with a full dosimetry kit. In a real situation, this position would be stationed at the entrance to the High School and would be responsible for directing emergency worker vehicles and passengers to the drop off point. Members of the public would be directed to the nearest reception facility. The Team Leader/Recorder,

Vehicle/Equipment Movement Attendant, and Vehicle/Equipment Monitor staffed the vehicle monitoring station. They respectively moved the vehicle from the drop off point, recorded vehicle ownership and monitoring information, and performed vehicle monitoring for contamination. Each member of the Decontamination Team simulated and explained they would be wearing booties, gloves, a full coverage Tyvek suit, with wrists and ankles properly taped. The vehicle decontamination station was staffed by a Vehicle/Equipment Decontamination attendant, who would have also wore full protective gear.

A Ludlum 3 hand held radiological survey meter was available at the vehicle monitoring and decontamination stations to conduct radiological surveys of vehicle internal and external compartments. Each survey meter was operationally checked by the issuing Chardon Fire Department instrument technician using a check source on the side of the meter. There were an additional Ludlum 3 survey meters available should additional monitoring and decontamination staff become necessary.

Water was available at the decontamination station and a fire truck water hose was also available for water from a hydrant to the decontamination station if needed. The vehicle Decontamination Station had a storm sewer drain. Barrels were available for discarding contaminated material. Pre-packaged containers of needed materials (booties, latex gloves, coveralls, forms, procedures, cleaning equipment and supplies, etc.) were set at each Station.

The fire department personnel were issued dosimetry kits by the Dosimetry Coordinator and radiological survey instruments by the Dosimetry Coordinator's assistant. At 1930 hours, the Dosimetry coordinator conducted a dosimetry briefing for all emergency workers. Also covered in the brief was the proper technique for using survey instruments for monitoring persons and vehicles. A reading of over 300 counts per minute (cpm) on a survey meter indicates contamination on a person or vehicle.

As per the Extent-of-Play Agreement, one vehicle would be monitored for this exercise. The passenger of the vehicle was directed inside for monitoring. The driver was interviewed by the Vehicle/Equipment Recorder for information about ownership of the vehicle and this was recorded on an Equipment Decontamination Record form. The driver was then sent inside the monitoring facility. The Vehicle/Equipment Movement Attendant then moved the car around 30 feet to the vehicle monitoring area. The Vehicle/Equipment Monitor then proceeded to use a Ludlum 3 radiological survey meter with a pancake probe (covered with a thin plastic bag) and headset to monitor the exterior and interior of the vehicle for contamination. Using proper technique of holding the probe about 1 inch from the surface, and moving it no faster than 12" a

second, the car's wheel wells, front fenders and grill, under rear bumper area, and door handles were monitored. Interior areas such as steering wheel, doors, floor boards, pedals, and seat surfaces were monitored. A reading of 3,000 cpm was recorded on the left wheel well by controller inject.

The Vehicle/Equipment Recorder wrote down all readings on the Equipment Decontamination Record form. Monitoring was completed and the vehicle was moved by the Movement Attendant to the decontamination area.

As per the extent-of-play agreement, decontamination actions were covered through an interview. The Vehicle/Equipment Decontamination Attendant explained that the vehicle would be scrubbed with soap and water and washed with a hose for about two minutes, using a long handled brush, in those areas found to be contaminated at the monitoring station. For interior contamination, hard plastic surfaces would be hand scrubbed with soapy water and washed off. The decontamination team explained surfaces such as seats and carpets would be treated with large width sticky tape. After washing, the area would be monitored using a Ludlum 3 survey meter. If it read under 300 cpm, the vehicle would be released to the clean parking area. If still contaminated, a second attempt would be made to clean it. The vehicle would be re-monitored, and if readings were below 300 cpm, it would be released to the clean parking area. If readings are greater than 30,000 cpm, the vehicle would be impounded and put in the contaminated parking area.

If specific equipment such as ladders, hoses, firefighting and medical equipment, etc. was found to be contaminated, it would be removed from vehicles and decontaminated separately. An area with containers was set aside to store contaminated equipment that could not be decontaminated and the containers would be labeled with radioactive placards and information regarding the contamination levels recorded.

The Dosimetry Officer performed a check of background radiation levels prior, during, and after the demonstration of vehicle monitoring and decontamination areas using a CDV 700 survey meter. Dosimetry Officer reminded all workers to check their dosimetry.

There were waste barrels at each location for disposing of contaminated materials. All of the supplies and materials listed in the SOG for the Chardon Fire Department were on-hand. This guide has specific procedures for each position, and was followed throughout the exercise, either through demonstration or by interview.

All activities described in the demonstration criterion were carried out in accordance with the

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After Action Report/Improvement Plan

Perry Nuclear Power Plant

plan, procedures and extent-of-play agreement.

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

- a. MET: 1.e.1, 3.a.1, 6.b.1
- b. LEVEL 1 FINDINGS: None
- c. LEVEL 2 FINDINGS: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES: RESOLVED: None
- g. PRIOR ISSUES: UNRESOLVED: None



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SECTION 5: CONCLUSION

This section summarizes the findings from the of the evaluation of all jurisdictions and functional entities that participated in the September 13, 2016, Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile and 50- mile EPZs surrounding the Perry Nuclear Power Plant (PNPP).

The State of Ohio was not evaluated for Plume Exposure Pathway response activities during this exercise, but did participate in a manner sufficient to support demonstrations by Lake, Ashtabula, and Geauga Counties.

No Level 1 or 2 Findings or Plan Issues were identified for the State of Ohio or Lake, Ashtabula, or Geauga Counties. Two previous Level 2 Findings and one previous Plan Issue for the State of Ohio were resolved during the exercise. One previous Plan Issue for the State of Ohio remained unresolved.

Sections 4 and 5 of this report provide detailed information regarding any Level 1 or 2 Findings, Plan Issues and the Corrective Actions demonstrated, as applicable.



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APPENDIX A: IMPROVEMENT PLAN

This section summarizes the findings from the of the evaluation of all jurisdictions and functional entities that participated in the September 13, 2016, Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Perry Nuclear Power Plant, recommended corrective actions, and a schedule of corrective actions for the identified Primary Responsible Agency.



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Issue Number: 03-16-2a1-L2-01		Criterion: 2a1
<p><u>ISSUE:</u> The Ohio State Emergency Operations Center (SEOC) Assessment Room Field Monitoring Team Communicator (MTC) issued direction to the Field Monitoring Team Coordinator (FMTC) for the State Field Monitoring Teams (FMTs) to administer potassium iodide (KI) before the KI decision was officially made.</p>		
<p><u>RECOMMENDATION:</u> Comply with existing plans and procedures. The MTC self-identified his mistake, and in the post-exercise debriefing, indicated that he was aware of the procedural requirement to wait for the formal KI decision before contacting the FMTC. Another consideration is that the State could perform automatic KI administration upon declaration of a General Emergency. This may require a letter from the Ohio Department of Health that pre-authorizes KI administration for emergency workers at a General Emergency.</p>		
<p><u>CORRECTIVE ACTION DESCRIPTION:</u> Based on an interview with the MTC, after being advised of the issue during the June 14, 2016, Beaver Valley exercise, the MTC acknowledged the procedural error and cautioned the other Ohio Environmental Protection Agency individual (who can also function as an MTC) to wait for the official KI decision prior to contacting FMTs. The State of Ohio was to review and revise procedures, as appropriate, provide updated training to dose assessment personnel, and re-demonstrate Criterion 2.a.1 during the next biennial exercise, which is scheduled for the Perry Nuclear Power Plant on September 13, 2016. No MTC performance issues regarding KI administration were observed during this exercise. Per RAC Chair direction, Finding 03-16-2a1-L2-01, is hereby resolved.</p>		
HSEEP CORE CAPABILITY: Operational Coordination	PRIMARY RESPONSIBLE AGENCY: Ohio Emergency Management Agency	
Capability Element: Environmental Response/Health and Safety	START DATE: June 14, 2016	
AGENCY POC: Chris Salz	COMPLETION DATE: September 13, 2016	

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Issue Number: 03-16-5b1-L2-02

Criterion: 5b1

ISSUE: During the Beaver Valley Power Station (BVPS) Full Participation, Plume Exposure Pathway Radiological Emergency Preparedness Exercise conducted on Tuesday, June 14, 2016 the State of Ohio Emergency Operations Center (SEOC) Executive Director and her staff did not fully demonstrate the capability to provide accurate emergency information and instructions to the public and the news media in a timely manner.

News Release #4, released at 2011 hours, reported the General Emergency at the BVPS and the associated Protective Actions. This News Release contained inaccurate information which could have been confusing to the public and first responders. It stated that County officials recommended evacuation from Subarea 1, and evacuating residents, emergency workers, and institutionalized within Subarea 1 were to take potassium iodide (KI) tablets. It then goes on to say that special populations, the institutionalized and emergency workers of Subarea 1 should shelter in place. Both statements were incorrect. There were no considerations to exempt special populations from the general population evacuation recommendation. And emergency workers would not have been directed interrupt response activities to shelter in place.

RECOMMENDATION: Since the Executive Director could be very busy when News Releases are generated by the SEOC JIC PIO and require review, it is recommended to have another knowledgeable member of the Executive staff also review draft public information documents for accuracy. If corrections are necessary, the corrected document should also be reviewed by the same two people before it is released. These practices should be incorporated into the Standard Operating Procedures for the SEOC JIC and Executive Room staff, as appropriate.

CORRECTIVE ACTION DESCRIPTION: The Executive Director will utilize another knowledgeable member of her staff to review the document for accuracy. The State of Ohio will review and revise procedures, as appropriate, submit any revised procedures to FEMA for review, and provide updated training to SEOC Executive and JIC staff, as needed, prior to the Perry Nuclear Power Plant REP Exercise, scheduled for September 13, 2016. The State of Ohio will re-demonstrate Criterion 5.b.1 during the next biennial exercise, which is scheduled for the Perry Nuclear Power Plant (PNPP) on September 13, 2016.

Executive Room guidance was revised and provided to FEMA for review. Training was provided for JIC and Executive Group staff. Two persons were designated who reviewed each release drafted in the JIC Workroom, and two persons were designated in the Executive Group Room who reviewed releases prior to their approval by the Executive Director. During the PNPP exercise on September 13, 2016, news releases accurately reflected the current information and actions being implemented by the State of Ohio in response to the simulated incident at the PNPP. Per RAC Chair direction, Finding 03-16-5b1-L2-02, is hereby resolved.

HSEEP CORE CAPABILITY:
Public Information and Warning

PRIMARY RESPONSIBLE AGENCY:
Ohio Emergency Management Agency

Capability Element:
Environmental Response/Health and Safety

START DATE:
June 14, 2016

AGENCY POC:
Chris Salz

COMPLETION DATE:
September 13, 2016

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Issue Number: 03-16-2b1-P-01		Criterion: 2b1
<p>ISSUE: Values for the projected child thyroid Committed Dose Equivalent (CDE) differed from those calculated by the BVPS staff by a factor of 13, which is greater than the factor of 10 (or less) that is considered acceptable agreement.</p>		
<p>RECOMMENDATION: Review the library of data available to MIDAS and ensure that all BVPS effluent monitors are included and that parameter definitions used by RAB staff are consistent with those used by BVPS staff. Where differences in the dose assessment methodology using MIDAS are found to exist, ensure that they are resolved and/or thoroughly understood. Consider the use of alternative dose assessment methods as a backup to MIDAS, such as the RASCAL program, to aid in resolving differences in dose projections.</p>		
<p>CORRECTIVE ACTION DESCRIPTION: The State of Ohio will review and revise procedures, as appropriate, submit any revised procedures to FEMA for review, and provide updated training to Dose Assessment staff, as needed, prior to the Perry Nuclear Power Plant REP Exercise, scheduled for September 13, 2016.</p> <p>During the Perry Nuclear Power Plant REP Exercise on September 13, 2016, the Systems Operator was very knowledgeable in operation of the Meteorological Information and Dose Assessment System (MIDAS). He was also meticulous in verifying source term, meteorological, and plant conditions used for his models and those run by the licensee. All concentrations, exposure rates, and doses varied by less than a factor of one between State of Ohio and licensee models. Per RAC Chair direction, Plan Issue: 03-16-2b1-P-01 SEOC is hereby resolved.</p>		
HSEEP CORE CAPABILITY: Operational Coordination	PRIMARY RESPONSIBLE AGENCY: Ohio Emergency Management Agency	
Capability Element: Environmental Response/Health and Safety	START DATE: June 14, 2016	
AGENCY POC: Chris Salz	COMPLETION DATE: September 13, 2016	

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Issue Number: 03-16-2b2-P-02		Criterion: 2b2
<p><u>ISSUE:</u> Ohio Department of Health Procedure 10-RAD-01, “Distribution and Use of potassium iodide (KI) for the 10-Mile Emergency Planning Zone Population” (dated April 10, 2015) does not contain threshold values for Committed Dose Equivalent (CDE) that would trigger a recommendation for the use of KI for the public.</p>		
<p><u>RECOMMENDATION:</u> Add thyroid CDE from the EPA Protective Action Guides to DOH Procedure 10-RAD-01 and designate if values used are for child thyroid or adult thyroid.</p>		
<p><u>CORRECTIVE ACTION DESCRIPTION:</u> The State of Ohio will revise Ohio Department of Health Procedure 10-RAD-01, “Distribution and Use of potassium iodide (KI) for the 10-Mile Emergency Planning Zone Population” (dated April 10, 2015) to contain threshold values for Committed Dose Equivalent (CDE) that would trigger a recommendation for the use of KI for the public, and submit the revised procedure to FEMA for review.</p> <p>An update to Ohio Department of Health Procedure 10-BEHRP-01, dated August 12, 2016, includes the guidance to advise KI use by institutionalized populations and emergency workers when there is “significant probability of a radioactive material release results in a CDE of 5 rem child thyroid.” (This Procedure is consistent with FDA guidance.) However, no similar guidance is provided to recommend KI use by members of the public. Consequently, prior Plan Issue 03-16-2b2-P-02 SEOC remains unresolved.</p>		
HSEEP CORE CAPABILITY: Operational Coordination	PRIMARY RESPONSIBLE AGENCY: Ohio Department of Health	
Capability Element: Environmental Response/Health and Safety	START DATE: June 14, 2016	
AGENCY POC: Pamela Hintz	COMPLETION DATE: September 13, 2016	

APPENDIX B: EXERCISE TIMELINE

Table B-1, below, presents the times at which key events and activities occurred during the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 13, 2016.



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**TABLE B-1: Timeline for Perry Nuclear Power Plant Partial Participation
Plume Pathway Exercise 2016**

Emergency Classification Level Event or Action	Time Utility Declared	EOF	SEOC ASSMT Room	SEOC EXEC Group	SEOC JIC Room	LAKE County	LAKE County FMT	GEAUGA County	ASHTABULA County	PNPP JIC
Unusual Event	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alert (Initial Notification Point):	0752	0903	0800	NA	NA	0757	0852	0800	0801	NA
Site Area Emergency:	0954	1010	1007	1011	1015	1007	1057	1007	1010	1034
General Emergency:	1150	1150	1202	1204	1208	1202	1206	1202	1202	1203
Release of Rad Material Started: ²	0745	NA	0805 / 1007	0805 / 1007	0805 / 1007	0754 / 1040 / 1202		0800	0801	1101
Release of Rad Material Terminated: ³	NA Ongoing	NA	NA	NA	NA	NA	NA	NA	NA	NA
Facility Declared Operational: ⁴		1100	0906	0925	1020	0911		0846	0905	1102
Declaration of State/Local Emergency: ⁵		NA	1024	1020	1020	1015 (L)		1015 (S)	1015 (L)	1030 (S&L)
Exercise Terminated		1317		1310	1310	1310 / 1340 ₈	1346 ₈	1310	1310	1340 ₈₈
Early Precautionary Action Recommendations: ⁶ [Briefly Describe]										
1. Relocate School Children:		NA	1010	(1015)	1054	1022	NA	1020	1009	1035
2. Restrict Boating Traffic:		NA	1010	1020	1054	1020	NA	1020	1033	1029
3. Restrict Air and Rail Traffic:		NA	1010	1025	1054	NA	NA	NA	NA	1054
4. Close Parks:		NA	1010	1022	1054	1022	NA	1024	1033	1029
5. Livestock Advisory:		1010	1010	1033	1054	1010	NA	1033	1032	1032
General Information Message Only: ⁷ [Briefly Describe] “JIC Activation / Precautionary Actions ” (Decision Made)		1022	NA	0928	0928	0828	NA	1023	1023	NA
1 st Siren Activation: ⁸		NA	NA	NA	NA	1222	NA	1222	1222	1222
1 st EAS/EBS Message: ⁹		NA		1225	1225	1228		1225	1225	1222
1 st Protective Action Recommendation: Util: Evac SA 1-6 State PAR[s] to County: Evacuate SA 1,2,3 + Lake		1236	1209	1217	1222	1203	NA	1202	1217	1222
1 st Protective Action Decision[s] = County PAD[s]: ¹¹ <input type="checkbox"/> No Action <input type="checkbox"/> Shelter-In-Place Subareas [List]: _____ <input checked="" type="checkbox"/> Evacuate Subareas: 1-6		1301	1213	1214	1223	1214	1217	1214	1221	1222
DRD Correction Values: 5R → 2R; 2R → 1 R; 1R → 1R										
2 nd Siren Activation: ⁸		NA	NA	NA	NA	NA	NA	NA	NA	NA
2 nd EAS/EBS Message: ⁹		NA	NA	NA	NA	NA	NA	NA	NA	NA
KI Emerg. Workers: <input checked="" type="checkbox"/> PAR/PAD: ¹¹ Subarea[s] 1-6		1236 / 1301	1209	1213	1229	1215		1231	1221	1229
KI Inst. Persons: <input checked="" type="checkbox"/> PAR/PAD: ¹¹ Subarea[s] 1-6		1236 / 1301	1209	1213	1229	1215	NA	1231	1221	1229
KI Gen. Public: <input checked="" type="checkbox"/> PAR/PAD: ¹¹ Subarea[s] 1-6		1236 / 1301	1209	1213	1229	1215	NA	1231	1221	1216

APPENDIX C: EXERCISE EVALUATION TEAM

The following personnel participated in the evaluation of the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise on September 13, 2016.

Exercise Management

MANAGEMENT TITLE	NAME	ORGANIZATION
Regional Assistance Committee Chair	Sean O’Leary	DHS/FEMA
Exercise Director	Dwaine Warren	DHS/FEMA
Assistant Exercise Director	Edward Golinski	DHS/FEMA
Assistant Exercise Director	Stephen Tulley	DHS/FEMA
PNPP Site Specialist	Karl Rabenhorst	DHS/FEMA
Team Leader – State of Ohio	Carl Bebrich	DHS/FEMA
Team Leader – Lake County	David Persaud	DHS/FEMA
Team Leader – Ashtabula County	David Ortman	DHS/FEMA
Team Leader – Geauga County	Don Daniel	DHS/FEMA
Regional Coordinator	Jill Leatherman	ICF
Administrative Support	Lindsay Mackey	ICF

Exercise Evaluators

LOCATION	EVALUATOR	AGENCY
Ashtabula County	Alahmadi, Kim	DHS/FEMA
Gauga County; Lake County	Bates, Darren	DHS/FEMA
Ashtabula County	Biernacki, Ronald	ICF
Lake County; State of Ohio	Blake, Alvin	DHS/FEMA
State of Ohio	Boyce, Katherine*	DHS/FEMA
Lake County; Ashtabula County	Burris, Michael	ICF
State of Ohio	Christiansen, Henry	ICF
Lake County	Coombs, David*	DHS/FEMA
Lake County	Dalton, Mark	ICF
Ashtabula County	Duffy, Clark	ICF
Lake County; Ashtabula County	Duggleby, Robert	ICF

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LOCATION	EVALUATOR	AGENCY
State of Ohio	Essig, Tom	ICF
Lake County; Ashtabula County	Gahan, Tom	ICF
Lake County; State of Ohio	Goldberg, Gary	ICF
Ashtabula County	Hegele, Tom	ICF
Geauga County	Hlavarty-LaPosa, Janet	DHS/FEMA
Lake County; State of Ohio	Howe, Mike	DHS/FEMA
Lake County	Jobe, Roger	ICF
State of Ohio	Leatherman, Jill	ICF
Lake County	Loomis, Danny	ICF
Geauga County; Ashtabula County; State of Ohio	Meshenberg, Michael	ICF
Lake County	Murray, Tom	DHS/FEMA
Geauga County	Nied, Paul	ICF
Geauga County	Price, John	DHS/FEMA
Ashtabula County	Ringheiser, Paul	ICF
Lake County; State of Ohio	Rodgers, Reginald	ICF
State of Ohio	Roe, Christopher	DHS/FEMA
Lake County; State of Ohio	Schneck, Debra	ICF
Lake County	Swearingen, Meg	ICF
Lake County	Ward, Paul	DHS/FEMA
Lake County	Wierman, Ken	DHS/FEMA
Geauga County	Wilford, Dennis	ICF

*OJT / Observer

APPENDIX D: ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms used in this AAR/IP.

ACRONYM	MEANING
μR	micro (10 ⁻⁶) Roentgen (R)
ACSO	Ashtabula County Sheriff's Office
ARC	American Red Cross
ARES	Amateur Radios Emergency Service
CDE	Committed Dose Equivalent
CFD	Concord Fire Department
cpm	counts per minute
CVFD	Chardon Village Fire Department
DC	Dosimetry Coordinator
DD	Dosimetry Distribution
DRD	Direct-Reading Dosimeters
EAS	Emergency Alert System
ECL	Emergency Classification Level
EMA	Emergency Management Agency
EMD	Emergency Management Director
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPHSC	East Palestine High School Complex
EPZ	Emergency Planning Zone
EV-2	Reference to FEMA REP Guidance Memorandum - GM EV-2, Protective Actions for School Children, November 13, 1986
EW	Emergency Worker
FD	Fire Department
FENOC	FirstEnergy Nuclear Operating Company
FMT	Field Monitoring Team
FMTC	Field Monitoring Team Coordinator
GCSO	Geauga County Sheriff's Office
GE	General Emergency
GIS	Geographic Information System

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ACRONYM	MEANING
HF	High Frequency
HFD	Harpersfield Fire Department
IC	Incident Commander
INP	Initial Notification Point
JIC	Joint Information Center
KFD	Kirkland Fire Department
KI	potassium iodide
LCGHD	Lake County General Health District
LCSO	Lake County Sheriff's Office
LEADS	Law Enforcement Automated Data System
LHS	Lakeside High School
M/D	Monitoring / Decontamination
MARCS	Multi-Agency Radio Communications System
MARCS	Multi-Agency Radio Communications System
MIDAS	Meteorological Information and Dose Assessment System
MSD	Madison School District
MTC	Monitoring Team Communicator
MTPD	Madison Township Police Department
MVPD	Madison Village Police Department
ODH	Ohio Department of Health
ODNR	Ohio Department of Natural Resources
OEMA	Ohio Emergency Management Agency
OEPA	Ohio Environmental Protection Agency
O-LG	Ohio Liaison Group
ONG	Ohio National Guard
ORO	Offsite Response Organization(s)
OSHP	Ohio State Highway Patrol
OSLD	Optically Stimulated Luminescence Dosimeter
OSU	Ohio State University
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PD	Police Department
PIO	Public Information Officer
PNPP	Perry Nuclear Power Plant
PRD	Permanent Record Dosimeter
R	Roentgen
RAC	Regional Assistance Committee

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ACRONYM	MEANING
RACES	Radio Amateur Civil Emergency Service
RC	Radiological Coordinator / Reception Center [context sensitive]
REP	Radiological Emergency Preparedness
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
SA	Staging Area
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
SIP	Shelter In Place
SNB	Special News Bulletin
SOG	Standard Operating Guideline / Suggested Operational Guidance
SSP	Sampling Screening Point
TCP	Traffic Control Point
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Dosimeter
UHF	Ultra-High Frequency
VHF	Very-High frequency



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APPENDIX E: EXTENT-OF-PLAY AGREEMENTS

This Appendix presents the Extent-of-Play Agreements and lists the exercise criteria that were scheduled for demonstration in the Perry Nuclear Power Plant (PNPP) Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise on September 13, 2016, and the offsite scenario and extent-of-play agreements accepted by DHS/FEMA Region V on August 11, 2016. The exercise criteria, contained in the FEMA P-1028 REP Program Manual, of January 2016, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980. Because the exercise criteria are intended for use at all nuclear power plants sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and accepted by DHS/FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

The specific Radiological Emergency Preparedness criteria that were scheduled for demonstration during the exercise are listed in the State of Ohio and the Lake, Ashtabula, and Geauga County Extent-of Play Agreements, which follow.



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State of Ohio Extent-Of-Play Agreement

2016 Perry Nuclear Power Plant Exercise

State of Ohio Extent of Play Agreement

(Revision 5a of August 15, 2016)

Overview

Introduction

This document constitutes the State of Ohio's Extent of Play Agreement (EoPA) for the 2016 Perry Nuclear Power Plant Radiological Emergency Preparedness Plume Pathway Exercise being conducted on September 13, 2016. The exercise will be a Partial Participation exercise for the State of Ohio. This Extent of Play Agreement was developed by the Exercise Planning Team in consultation with FEMA and the January 2016 edition of the FEMA REP Program Manual.

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Acronyms

PNPP	-	Perry Nuclear Power Plant
DRD	-	Direct Reading Dosimeter
ECL	-	Emergency Classification Level
EMA	-	Emergency Management Agency
EOF	-	Emergency Operations Facility
FEMA	-	Federal Emergency Management Agency
FMT	-	Field Monitoring Team
JIC	-	Joint Information Center
KI	-	Potassium Iodide
MSEL	-	Master Scenario Events List
NRC	-	Nuclear Regulatory Commission
ODH	-	Ohio Department of Health
ORO	-	Offsite Response Organization
OSHP	-	Ohio State Highway Patrol
PAD	-	Protective Action Decision
PAG	-	Protective Action Guide
PAR	-	Protective Action Recommendation
PRD	-	Permanent Reading Dosimeter
SEOC	-	State Emergency Operations Center
TACP	-	Traffic & Access Control Point

General Information

Exercise Scope The State of Ohio will partially participate in this exercise, sufficient to support demonstrations by Ashtabula, Geauga, and Lake Counties. In-sequence activities will be conducted on Tuesday, September 13, 2016, at the following locations:

- Emergency Operations Facility (EOF)
- State Initial Warning Point (OSHP Dispatch Center)
- State Emergency Operations Center (SEOC)
 - State Executive Room
 - State Assessment Room
 - State Operations Room
 - State JIC
- Perry Nuclear Power Plant (PNPP) Joint Information Center (JIC).

Out-of-sequence activities will be conducted on Wednesday, September 14, 2016 at the:

- Ohio Department of Natural Resources

Continued on next page

General Information, Continued

Exercise Support	<p>The State will develop and implement a Master Scenario Events List (MSEL) sufficient to drive actual and simulated State play. Sufficient Controllers will be on hand to provide injects to drive the scenario. All Controller Injects and the MSEL will be provided to FEMA for review at least 30 days prior to the exercise.</p> <p>The State of Ohio will brief FEMA Evaluators regarding conduct of the exercise at the FEMA Pre-Exercise Meeting on Monday, September 12, 2016.</p>
Criteria	<p>Criteria that will be demonstrated during this exercise and can be re-demonstrated immediately for credit, at the decision of the evaluator, include the following: 3.a.1, 3.b.1, and 3.d.1.</p> <p>Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairman of the Radiological Preparedness Coordinating Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1.</p>
Participating Organizations	<p>Organizations participating in this exercise include:</p> <ul style="list-style-type: none"> • Ohio Department of Public Safety • Ohio Emergency Management Agency • Ohio Department of Health • Ohio Environmental Protection Agency • Ohio State Highway Patrol • Ohio Department of Natural Resources
State Field Participation	<p>State personnel to staff field positions will be pre-positioned in the local area at the following locations:</p> <ul style="list-style-type: none"> • PNPP Emergency Operations Facility • PNPP Joint Information Center • State Liaison/Radiological Analyst at Lake County EOC

Evaluation Area 1 – Emergency Operations Management

Criterion 1.a.1	<p>OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.</p>
Extent of Play 1.a.1	<p>The State Emergency Operations Center (SEOC) and the Ohio Highway Patrol Dispatch Center will receive initial notification over the PNPP 5-way dedicated line. Once the SEOC Assessment Room is activated, all subsequent notifications by phone/fax communications will be received there. Initial warning point responsibilities will terminate following the initial notification, unless the Assessment Room is unable to receive notifications.</p> <p>The State will mobilize all the participating organizations that have responsibilities in the SEOC. The State representatives assigned to the PNPP EOF, PNPP JIC, and the Lake County EOC will be prepositioned in the area and arrive 10-20 minutes after the exercise begins to simulate travel time.</p>
Criterion 1.b.1	<p>Facilities are sufficient to support the emergency response.</p>
Extent of Play 1.b.1	<p>Not Selected - State facilities were successfully demonstrated during the May 2015 Davis-Besse Nuclear Power Station exercise.</p>
Criterion 1.c.1	<p>Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.</p>
Extent of Play 1.c.1	<p>Direction and control of State activities will be demonstrated at the SEOC. The Executive Director of Ohio EMA will coordinate decisions on behalf of the Governor's Office from the SEOC Executive Room and the overall State response from the Executive Room and of the components of the SEOC. The Ohio Department of Health (ODH) is responsible for the determining the State Protective Action Recommendations (PARs) in the SEOC Assessment Room and will provide periodic briefings to the SEOC Executive Group.</p>

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Evaluation Area 1 – Emergency Operations Management,

Continued

Criterion 1.d.1	At least two communication systems are available, at least one operates properly, and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.
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Extent of Play 1.d.1	The primary means of communications between the SEOC, the Ashtabula, Geauga, and Lake County EOCs, PNPP JIC, and EOF is by commercial and/or dedicated telephone. Backup communications will be demonstrated via a MARCS radio check. This may be accomplished either as a result of a real-time communications failure or by Controller inject at a time during or after the exercise that does not interfere with exercise play.
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Criterion 1.e.1	Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.
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Extent of Play 1.e.1	The State will demonstrate the use of equipment, maps and displays to support emergency operations. The maps traditionally used in the SEOC will be available and used for exercise evaluation purposes.
---------------------------------	--

Evaluation Area 2 – Protective Action Decision Making

Criterion 2.a.1 OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

Extent of Play 2.a.1 The SEOC Dose Assessment Group will consider PAGs and Administrative Limits to develop recommendations, including KI, based on their technical evaluation of the available data. Recommendations will be briefed to the SEOC Executive Group and subsequently to the Ashtabula, Geauga, and Lake County EOCs. The State and County will disseminate recommendations to their emergency workers. Field monitoring data, appropriate to the scenario, will be provided to the SEOC Dose Assessment Group via the Field Monitoring Team Coordinator (FMT).

The Dose Assessment Group will re-demonstrate the Level 2 finding (03-16-2a1-L2-01) from the 2016 Beaver Valley Power Station exercise. KI will be recommended to the FMTs at the appropriate time.

Criterion 2.b.1 Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and Licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions.

Extent of Play 2.b.1 The SEOC Dose Assessment Group will evaluate the Licensee information and complete independent dose projections and assessment, as appropriate, based on that information and field monitoring data. Assessment Room staff will evaluate the data and brief PARs to the SEOC Executive Room. Approved PARs will then be forwarded to the Ashtabula, Geauga, and Lake County EOCs via a conference line.

Criterion 2.b.2 A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy).

Continued on next page

Evaluation Area 2 – Protective Action Decision Making,

Continued

Extent of Play 2.b.2	<p>The Governor, or his designee, will demonstrate the ability to make appropriate PARs based on technical information from the SEOC Dose Assessment Group. Recommendations concerning the use of KI for the general public, institutionalized individuals, and emergency workers are the responsibility of the ODH. They are made in the SEOC Dose Assessment Room in accordance with the ODH KI Directive and will accompany the PAR.</p> <p>Coordination will take place in the SEOC Executive Room with Ashtabula, Geauga, and Lake Counties to ensure consideration of local needs. After the PAD is made by Ashtabula, Geauga, and Lake Counties, the Counties will disseminate protective actions to the general public.</p>
Criterion 2.c.1	<p>Protective action decisions are made, as appropriate, for groups of persons with disabilities and those with access/functional needs</p>
Extent of Play 2.c.1	<p>The recommendation to take KI is issued by the ODH in the SEOC Assessment Room and accompanies the PAR. Upon being briefed to and approved by the Executive Group, it is then forwarded to Ashtabula, Geauga, and Lake Counties for implementation.</p>
Criterion 2.d.1	<p>Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.</p>
Extent of Play 2.d.1	<p>Not Selected - The State successfully demonstrated this criterion during the 2012 Perry Nuclear Power Plant exercise.</p>
Criterion 2.e.1	<p>Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures.</p>
Extent of Play 2.e.1	<p>Not Selected - The State successfully demonstrated this criterion during the 2012 Perry Nuclear Power Plant exercise.</p>

Evaluation Area 3 – Protective Action Implementation

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

Extent of Play 3.a.1 Direct Reading Dosimeters (DRDs), Permanent Record Dosimeters (PRDs) and KI will be issued to State of Ohio workers who have assignments in the 10-mile EPZ. The State personnel responding to the PNPP EOF, Utility JIC, and County EOCs will be prepositioned in the area in order to participate in-sequence with the rest of the exercise participants (assumes the possibility that these personnel may pass through the simulated plume).

If the scenario does not provide for the demonstration of turn back limits, turn back values will be covered by interview with the Evaluator.

Criterion 3.b.1 KI and appropriate instructions are available if a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals and the general public is maintained.

Extent of Play 3.b.1 The ODH Bureau of Environmental Health and Radiation Protection obtained KI via the U.S. NRC for members of the general public. This KI has been distributed to the County health departments within the 10-mile Emergency Planning Zone. County health departments make this KI available to the general public at reception centers during a nuclear emergency. The County health departments will maintain records of this distribution and make the records available for FEMA inspection. (See County Extent of Play documents for additional information.)

Criterion 3.c.1 Protective action decisions are implemented for persons with disabilities and access/functional needs other than schools within areas subject to protective actions.

Extent of Play 3.c.1 N/A - This is a County function

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Evaluation Area 3 – Protective Action Implementation, Continued

Criterion 3.c.2 OROs/school officials implement protective actions for schools

Extent of Play 3.c.2 N/A - This is a County function

Criterion 3.d.1 Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Extent of Play 3.d.1 The State EOC Dose Assessment Group in coordination with the SEOC Executive Group will procedurally demonstrate restricting air, water and rail traffic within the Emergency Planning Zone, as applicable to the scenario. The OSHP coordinates directly with County law enforcement to provide State TACP support. (See County Extent of Play documents for additional information.)

Criterion 3.d.2 Impediments to evacuation are identified and resolved.

Extent of Play 3.d.2 N/A - This is a County function.

Criterion 3.e.1 The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.

Extent of Play 3.e.1 Not Selected - The State successfully demonstrated this criterion during the 2012 Perry Nuclear Power Plant exercise.

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Evaluation Area 3 – Protective Action Implementation, Continued

Criterion 3.e.2	Appropriate measures, strategies and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk and agricultural production.
Extent of Play 3.e.2	Not Selected - The State successfully demonstrated this criterion during the 2012 Perry Nuclear Power Plant exercise.
Criterion 3.f.1	Decisions regarding controlled re-entry of emergency workers and relocation and return of the public during the post-plume phase are coordinated with appropriate organizations and implemented.
Extent of Play 3.f.1	Not Selected - The State successfully demonstrated this criterion during the 2012 Perry Nuclear Power Plant exercise.

Evaluation Area 4 – Field Measurement and Analysis

Criterion 4.a.1	[RESERVED]
Criterion 4.a.2	Field teams (2 or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure.
Extent of Play 4.a.2	Not Selected - The State FMTs and Sample Screening Point will not be demonstrated in this exercise. The state demonstrated this criterion at the June 2016 Beaver Valley Power Station exercise.
Criterion 4.a.3	Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.

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Evaluation Area 4 – Field Measurement and Analysis, Continued

Extent of Play 4.a.3	Not Selected - The State FMTs and Sample Screening Point will not be demonstrated in this exercise. The state demonstrated this criterion at the June 2016 Beaver Valley Power Station exercise.
Criterion 4.b.1	Field teams (2 or more) demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making.
Extent of Play 4.b.1	Not Selected - The State successfully demonstrated this criterion during the 2012 Perry Nuclear Power Plant exercise.
Criterion 4.c.1	The laboratory is capable of performing required radiological analyses to support protective action decisions.
Extent of Play 4.c.1	Not Selected - The State successfully demonstrated this criterion during the 2012 Perry Nuclear Power Plant exercise.

Evaluation Area 5 – Emergency Notification and Public Information

- Criterion 5.a.1** Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized off-site emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current REP guidance.
1. Identification of the State or local government organization and the official with the authority for providing the alert signal and instructional message.
 2. Identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant.
 3. Reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency.
 4. A closing statement asking the affected and potentially affected population to stay tuned for additional information.

Extent of Play 5.a.1 Once a protective action decision is reached by Ashtabula, Geauga, and Lake Counties that requires the activation of the alert and notification system, the Counties will simulate the initiation of the sirens. EAS messages will be prepared by County officials and they will simulate providing them to the EAS Station. (See Ashtabula, Geauga, and Lake County Extent of Play Agreement for further details.)

The State also notifies the public on Lake Erie (within the 10-mile EPZ) through the U.S. Coast Guard, as supported by Ohio Department of Natural Resources (ODNR).

An out of sequence interview will be conducted with ODNR at 10:00am on Wednesday, September 14th, 2016, at the Division of Parks and Watercraft offices at 1150 East 49th Street, Cleveland, Ohio.

Criterion 5.a.2 [RESERVED]

Criterion 5.a.3 Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system.

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Evaluation Area 5 – Emergency Notification and Public Information, Continued

Extent of Play 5.a.3	N/A - This is a County function.
Criterion 5.a.4	Activities associated with FEMA-approved exception areas (where applicable) are completed within 45 minutes of the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.
Extent of Play 5.a.4	N/A – The State of Ohio has no FEMA-approved Exception Areas at this time.
Criterion 5.b.1	OROs provide accurate subsequent emergency information and instructions to the public and the news media in a timely manner.
Extent of Play 5.b.1	<p>The State PIO and a representative from ODH will be present at the PNPP JIC to address technical aspects of State PARs being implemented, and the activities taking place at the State and County levels. Public information representatives from Ohio EMA will be present in the SEOC (State JIC) to communicate with the PNPP JIC.</p> <p>A Public Inquiry telephone line will be established and demonstrated in the State JIC via Controller injects. Sufficient injects will be used to allow State JIC personnel to identify and respond to trends.</p> <p>A Level 2 Finding (03-16-5b1-L2-02) will be re-demonstrated from the 2016 Beaver Valley Power Station. Press briefing information will be reviewed and approved by the Executive Director, or designee, and accurate press briefing information will be released to the public from the JIC.</p>

Evaluation Area 6 – Support Operation/Facilities

Criterion 6.a.1	The reception center has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers.
<hr/>	
Extent of Play 6.a.1	N/A - This is a County function.
<hr/>	
Criterion 6.b.1	The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles.
<hr/>	
Extent of Play 6.b.1	N/A - This is a County function.
<hr/>	
Criterion 6.c.1	Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.
<hr/>	
Extent of Play 6.c.1	N/A - This is a County function.
<hr/>	
Criterion 6.d.1	The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.
<hr/>	
Extent of Play 6.d.1	N/A - This is a County function.
<hr/>	

Evaluation Locations

Initial Warning Point

Address	2855 West Dublin-Granville Road Columbus, Ohio 43235
Contact	Chris Salz
Phone	614-799-3687
Cell Phone	614-558-2622

State Emergency Operations Center

Address	2855 West Dublin-Granville Road Columbus, Ohio 43235
Contact	Chris Salz
Phone	614-799-3687
Cell Phone	614-558-2622

Assessment Room

Address	2855 West Dublin-Granville Road Columbus, Ohio 43235
Contact	Chris Salz
Phone	614-799-3687
Cell Phone	614-558-2622

State Joint Information Center

Address	2855 West Dublin-Granville Road Columbus, Ohio 43235
Contact	Chris Salz
Phone	614-799-3687
Cell Phone	614-558-2622

PNPP Joint Information Center

Address	Auburn Career Center 8140 Auburn Road Concord Township, Ohio 44077
Contact	TBD
Phone	
Cell Phone	

PNPP EOF

Address	Emergency Operations Facility (EOF) 7751 Auburn Road Concord Township, Ohio 44077
Contact	John Flegal
Phone	419-734-6903
Cell Phone-	419-357-5914

Unclassified

Radiological Emergency Preparedness (REP) Program

After Action Report/Improvement Plan

Perry Nuclear Power Plant

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Lake County Extent-Of-Play Agreement

LAKE COUNTY OHIO

Extent-of-Play Agreement

For the Perry Nuclear Power Plant Evaluated Exercise

**Week of
September 12, 2016**

**Perry Nuclear Power Plant
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The EOC portion of the exercise will take place on September 13, 2016.

Criteria that can be re-demonstrated immediately for credit, by a decision of the evaluator, include the following: 3.a.1, 3.b.1, 3.d.1, 3.d.2, 6.a.1, 6.b.1, 6.c.1, and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairman of the Radiological Preparedness Coordinating Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1, and 5.b.1.

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.

Extent of Play

Lake County EOC Staff will mobilize upon notification from the Lake County Sheriff's Central Communications Dispatch Center, which is the 24-hour notification point and receives the call via a dedicated line from the Perry Plant. Full field notification utilizing primary means of communication will be completed one time only from the EOC, at the Site Area Emergency classification.

Field agency demonstrations will be conducted out-of-sequence and participants will be pre-positioned.

Field activity participants

Concord Fire Department – Back-up Route Alerting
Kirtland Fire Department – Public Monitoring & Decontamination at Kirtland
High School Care Center
Madison School District – Risk School
Fairport Harbor School District – Risk School
American Red Cross – Evacuee registration & congregate care
Lake County General Health District – KI for the general public
Madison Village Police Department – Traffic/Access Control, by interview at
the police department
Madison Township Police Department – Traffic/Access Control, by interview
at the police department
Laketran – Transportation for Fairport Harbor School District

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Criterion 1.b.1: Facilities are sufficient to support the emergency response.

Extent of Play

The Kirtland High School Care Center will be evaluated for this exercise.

The EOC and JIC were both evaluated during the 2014 Exercise; no changes have been made.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

Extent of Play

Direction and control of emergency operations will be demonstrated in accordance with the exercise scenario, the Lake County Radiological Emergency Response Plan, Agency SOG and as appropriate for out-of-sequence field demonstrations.

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.

Extent of Play

Primary (dedicated phone lines and commercial telephone) and secondary (radio/pagers/cell phones) means of communications will be demonstrated at the EOC and as appropriate for out-of-sequence field demonstrations. Controllers will drive field play.

Full field notification utilizing primary means of communication will be completed one time only from the EOC, at the Site Area Emergency classification.

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Criterion 1.e.1: Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

Extent of Play

The EOC will demonstrate the use of equipment, maps and displays to support emergency operations.

In addition to the KI that the local health department made available to the general public to pick up, there is a quantity stockpiled at the EOC that would be transported to the care centers and distributed by the local health department, as requested.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

Extent of Play

Lake County relies on the Ohio Department of Health (ODH) for the recommendation to take KI. For out-of-sequence field agency demonstrations, this will be demonstrated by interview with exercise participants or by controller inject, if necessary.

The use of a Controller inject will begin the process of authorization for radiation exposures in excess of administrative limits.

Criterion 2.b.1: Appropriate protective action recommendations (PARS) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.

Extent of Play

N/A – Lake County relies on the State of Ohio.

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Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make precautionary and/or protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy).

Extent of Play

The Lake County EOC Executive Group will demonstrate this criterion in coordination with Geauga and Ashtabula counties' Executive Groups and the State of Ohio.

The Director, or designee, of the Ohio Department of Health (ODH) makes the decision for the general public and emergency workers to take KI. The ODH through the local health department makes KI available to the general public, by pre-distribution and by supplies available for distribution at the time of the emergency at care centers.

Criterion 2.c.1: Precautionary and/or protective action decisions are made, as appropriate, for groups or persons with disabilities and access/functional needs.

Extent of Play

The Lake County EOC Executive Group will demonstrate this criterion in coordination with Geauga and Ashtabula counties' Executive Groups. Typically, schools relocate at Site Area Emergency per procedures. If not relocated prior to General Emergency, schools follow the protective action decisions for the general public; they are not considered a special population group.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.

Extent of Play

N/A – Lake County relies on the State of Ohio.

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Criterion 2.e.1: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures.

Extent of Play

N/S - This Criterion will not be demonstrated.

EVALUATION AREA 3 – PROTECTIVE ACTION IMPLEMENTATION

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

Extent of Play

The Lake County EOC Radiological Officer will demonstrate radiation exposure control capabilities. Dosimetry and exposure control procedures will be demonstrated by field agencies during out-of-sequence exercise activities.

Field activity participants:

Dosimetry briefing:

Concord Fire Department – Back-Up Route Alerting
Kirtland Fire Department – Public Monitoring/Decontamination at the
Kirtland High School care center
Madison Village Police Department – Traffic/Access Control by interview at
the police department
Madison Township Police Department – Traffic/Access Control by interview
at the police department
Madison School District – Interview of Transportation Supervisor
& bus operator only
Laketran (provides transportation for Fairport Harbor School District) –
Interview of Transportation
Supervisor & bus operator only

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Criterion 3.b.1: KI and appropriate instructions are available if a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals is maintained.

Extent of Play

The Ohio Department of Health (ODH) will make recommendations regarding the use of KI. Lake County's preparedness measures for KI include pre-distribution to emergency response agencies and to the general public, if they chose to pick it up at designated centers. At the time of the emergency, the agencies distribute the dosimetry and KI to the emergency workers. Demonstration of this criterion may be facilitated by discussion with the Lake County General Health District Coordinator at the EOC. For field agency demonstrations, KI procedures will be demonstrated by interview with exercise participants or by controller inject, if necessary.

Dosimetry and KI have been pre-distributed to Offsite Response Organizations (OROs); the monitoring kits and dosimetry are exchanged annually by the State of Ohio. Supporting documentation is included in the Annual Letter of Certification.

Extent of Play

Interview the EOC Lake County General Health District (LCGHD) representative during the exercise regarding the distribution of KI for the public at the care center.

Criterion 3.c.1: Precautionary and/or protective action decisions are implemented for persons with disabilities and access/ functional needs other than schools within areas subject to protective actions.

Extent of Play

Notification to individuals with special needs within the Lake County portion of the EPZ will be simulated. A list of special needs residents within the Lake County portion of the EPZ is maintained by the Lake County Department of Job and Family Services and the Lake County EMA.

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The Department of Job and Family Services Coordinator at the EOC will coordinate special needs notification activities and, upon request, will present the confidential list for review by the FEMA evaluator. At least 4 transportation providers, which in Lake County include school districts, will be contacted to ensure availability of buses and drivers.

Criterion 3.c.2: OROs/School officials implement precautionary and/or protective actions for schools.

Extent of Play

The school districts will demonstrate this criterion out-of-sequence, by interview with the superintendent, high school principal, transportation supervisor and a bus operator. School officials follow the protective action decisions made by the elected officials for the general public, if the school districts' superintendents have not made the decision to relocate prior to a General Emergency.

The use of dosimetry and KI will be discussed with transportation personnel only. If the school district has elected to have KI available for students, it is an internal policy and will be discussed during the interview.

During the Exercise all schools in the EPZ will be notified as identified in Criterion 1.a.1, Extent of Play. The EOC County School Services Representative will follow their Suggested Operating Guideline (SOG) during the Exercise.

There will be no movement of buses or students.

Field agency participants

Fairport Harbor School District
Madison School District
Laketran – provides transportation for Fairport Harbor School District

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Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Extent of Play

A representative of the police departments listed will demonstrate Traffic and Access Control out-of-sequence, by interview at their respective stations.

Notification of rail, water and air traffic is a State function.

Field activity participants:

Madison Village Police Department
Madison Township Police Department

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

Extent of Play

Lake County EOC will demonstrate the capability to identify and take the appropriate actions in dealing with impediments to evacuation. Actual resources will not be utilized. If an impediment cannot be removed in a timely manner, the decision to reroute traffic will be discussed and implemented by the appropriate EOC Staff.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.

Extent of Play

N/A – Lake County relies on the State of Ohio.

Criterion 3.e.2: Appropriate measures, strategies and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk and agricultural production.

Extent of Play

N/A – Lake County relies on the State of Ohio.

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Criterion 3.f.1: Decisions regarding controlled reentry, relocation, and return of individuals during the post-plume phase are coordinated with appropriate organizations and implemented.

Extent of Play

N/S - This Criterion will not be demonstrated.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

Criterion 4.a.1: (RESERVED)

Criterion 4.a.2: Field teams (2 or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

Extent of Play

Lake County Health District will demonstrate the use of two Field Monitoring Teams (FMTs), in sequence with the EOC portion of the exercise.

Lake County FMT data is utilized for validation purposes and is not used to generate PARs.

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.

Extent of Play

For the exercise, expired silver zeolite cartridges will be used; new cartridges will be available for the FEMA evaluator's observation.

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Criterion 4.b.1: The field teams (2 or more) demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision making.

Extent of Play

N/A - Lake County relies on the State of Ohio

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

Extent of Play

N/A - Lake County relies on the State of Ohio

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

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

Extent of Play

Upon a protective action decision (PAD) by the combined Executive Groups of Ashtabula, Geauga and Lake counties, the Lake County EOC Staff will prepare the appropriate Emergency Alert System (EAS) message and simulate sounding the sirens and sending the message over the EAS system. A silent siren test will be demonstrated by the Lake County EOC in lieu of an actual siren sounding.

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Simulation of sending the EAS message(s) will be conducted as follows:

The procedure for the EAS encoder will be followed to deliver the message to WTAM, the Local Primary Station, with the exception that the telephone number to the station will not be dialed. By not connecting to WTAM, there is no possibility of accidentally broadcasting the message over one or more of the participating EAS stations.

The "send" button on the Lake County EAS encoder will be depressed and this action will activate the outgoing alert light and playback of the recorded message. Also, a data sheet will automatically be printed by the encoder and the time recorded on the data sheet. Ashtabula and Geauga counties have EAS equipment (encoder) and could perform this function, if necessary.

Lake County will fax or email a copy of the EAS message(s) to the Joint Information Center (JIC) where Public Information Officers (PIOs) may distribute hard copies to the news media representatives and may, if time and circumstances permit, make an announcement regarding the message. Otherwise, the EAS message can be announced at the next scheduled press briefing or in response to news media inquiries about the PAD message. In delivering information about the EAS message just released, the counties' PIOs may indicate that a corresponding Special News Bulletin (SNB) will be issued soon. Lake County will also fax or email a copy of the EAS message to Ashtabula and Geauga counties' EOCs.

Criterion 5.a.2: (RESERVED)

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Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system.

Extent of Play

The Concord Fire Department will demonstrate back-up route alerting as an out-of-sequence, prepositioned field activity. One predetermined siren located in Concord will be out of service (simulated) and back-up route alerting will be conducted in the siren coverage area. Use of the mobile PA system will be simulated during the demonstration; an audible PA test will be conducted prior to departure. The demonstration will be initiated by the exercise controller.

Field Activity Participants

Concord Fire Department

Criterion 5.a.4: Activities associated with FEMA-approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.

Extent of Play

N/A – There are no exception areas in the PNPP siren coverage area.

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Criterion 5.b.1: OROs provide accurate subsequent emergency information and instructions to the public and the news media in a timely manner.

Extent of Play

Based upon the combined PAD(s) of the Executive Groups of Ashtabula, Geauga and Lake counties, the Lake County EOC Staff will prepare and issue the appropriate EAS message(s) and the corresponding Special News Bulletin(s) (SNB). SNB's give the same message as their corresponding EAS message except SNB's provide greater detail. Lake County will FAX or email the SNB(s) to the Joint Information Center (JIC) where one of the counties' PIOs will represent the three counties by directly proceeding to the briefing room and reading the contents of the message to the assembly of news media representatives and answering any questions pertaining to the message. This briefing should begin in a timely manner after transmission of the EAS message from the Lake County EOC to the Local Primary EAS Station. Hard copies of the SNB(s) will be distributed to the news media representatives.

Ashtabula, Lake and Geauga counties will also coordinate release of other informational and instructional messages as necessary. Such messages may include Special Information Bulletins (SIB), which are a third category of prepared messages contained in the counties' "SOG for EAS Messages, Special News Bulletins, and Special Information Bulletins pertaining to the Perry Nuclear Power Plant." These SIB's are considered routine, meaning that they are to be delivered by one of the counties' PIOs at the next scheduled press briefing.

Public Inquiry Workers at the EOC will answer calls from the public. At least one trend will be demonstrated.

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EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

Criterion 6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees of emergency workers.

Extent of Play

Kirtland Fire Department will demonstrate the evacuee portion of this criterion out-of-sequence at Kirtland High School. One locker room will be fully set up and demonstrated; a walk-through of the remaining locker room will be conducted upon request.

Six (6) monitoring demonstrations will be conducted using a portal monitor. One individual with simulated contamination will be walked through the monitoring/decontamination process, which includes whole body monitoring using a survey meter; contamination levels will be provided by a controller. Decontamination will be simulated.

This facility could accommodate use of two (2) portal monitors, if the need arises. The fire department's guideline includes a diagram for adding the other portal, as necessary. For this demonstration, one (1) portal will be set up and used.

Monitoring of one evacuee's vehicle will be demonstrated; decontamination will be discussed.

The use of kraft paper is optional for the exercise.

Field activity participants

Kirtland Fire Department – Public M/D
American Red Cross – Evacuee registration
Lake County General Health District – KI for the general public

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Lake County
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Criterion 6.b.1: The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles.

Extent of Play

N/S - This Criterion will not be demonstrated.

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.

Extent of Play

The American Red Cross will demonstrate the congregate care center portion of this criterion out-of-sequence at Kirtland High School. American Red Cross personnel will provide a walk-through of the facility and describe their capabilities. Set-up of care center equipment or supplies will be at the discretion of the American Red Cross.

One person will be processed through the Red Cross portion and a copy of the paperwork will be provided to the Evaluator.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

Extent of Play

N/S -This Criterion will not be demonstrated. The MS-1 portion of the Evaluated Exercise was conducted on September 23, 2015.

Ashtabula County Extent-Of-Play Agreement

**ASHTABULA COUNTY
OHIO**

Extent-of-Play Agreement

**For the
Perry Nuclear Power Plant
Evaluated Exercise**

**Week of
September 12, 2016**

**Perry Nuclear Power Plant
Ashtabula County
September 2016 Evaluated Exercise
Extent of Play Agreement**

The EOC portion of the exercise will take place on September 13, 2016.

Criteria that can be re-demonstrated immediately for credit, by a decision of the evaluator, include the following: 3.a.1, 3.b.1, 3.d.1, 3.d.2, 6.a.1, 6.b.1, 6.c.1, and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairman of the Radiological Preparedness Coordinating Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.

Extent of Play

Ashtabula County EOC Staff will mobilize upon notification from the Ashtabula County Sheriff's Dispatch Center, which is the 24-hour notification point and receives the call via a dedicated line from the Perry Plant. Full field notification utilizing primary means of communication will be completed one time only from the EOC, at the Site Area Emergency classification.

Field agency demonstrations will be conducted out-of-sequence and participants will be pre-positioned.

Field activity participants

Harpersfield Volunteer Fire Department – Back-up Route Alerting
Ashtabula City FD, Ashtabula Township FD, Conneaut FD, Saybrook FD at Lakeside High School Reception Center
Ashtabula County Health Department at the Reception Center – KI use
Geneva Police Department - Traffic & Access Control, by interview at the police department

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Ashtabula County
September 2016 Evaluated Exercise
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Criterion 1.b.1: Facilities are sufficient to support the emergency response.

Extent of Play

The Reception Center at Lakeside High School will be evaluated.

The EOC and JIC were both evaluated during the 2014 Exercise; no changes have been made.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

Extent of Play

Direction and control of emergency operations will be demonstrated in accordance with the exercise scenario, the Ashtabula County Radiological Emergency Response Plan, Agency SOG and as appropriate for out-of-sequence field demonstrations.

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.

Extent of Play

Primary (dedicated phone lines and commercial telephone) and secondary (radio/pagers/cell phones) means of communications will be demonstrated at the EOC and as appropriate for out-of-sequence field demonstrations. Controllers will drive field play.

Full field notification utilizing primary means of communication will be completed one time only from the EOC, at the Site Area Emergency classification.

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Ashtabula County
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Criterion 1.e.1: Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

Extent of Play

The EOC will demonstrate the use of equipment, maps and displays to support emergency operations.

In addition to the KI that the local health department made available to the general public to pick up, there is a quantity stockpiled at both the EOC and the Health District that would be transported to the care centers and distributed by the local health department, as requested.

Evaluation Area 2 – Protective Action Decision Making

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

Extent of Play

Ashtabula County relies on the Ohio Department of Health (ODH) for the recommendation to take KI. For out-of-sequence field agency demonstrations, this will be demonstrated by interview with exercise participants or by controller inject, if necessary.

The use of a Controller inject will begin the process of authorization for radiation exposures in excess of administrative limits.

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Criterion 2.b.1: Appropriate protective action recommendations (PARS) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.

Extent of Play

N/A – Ashtabula County relies on the State of Ohio.

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make precautionary and/or protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy).

Extent of Play

The Ashtabula County EOC Executive Group will demonstrate this criterion in coordination with Lake and Geauga counties' Executive Groups and the State of Ohio.

The Director, or designee, of the Ohio Department of Health (ODH) makes the decision for the general public and emergency workers to take KI. The ODH through the local health department makes KI available to the general public, by pre-distribution and by supplies available for distribution at the time of the emergency at reception centers/care centers.

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Criterion 2.c.1: Precautionary and/or protective action decisions are made, as appropriate, for groups or persons with disabilities and access/functional needs.

Extent of Play

The Ashtabula County EOC Executive Group will demonstrate this criterion in coordination with Lake and Geauga counties' Executive Groups. Typically, schools relocate at Site Area Emergency per procedures. If not relocated prior to General Emergency, schools follow the protective action decisions for the general public; they are not considered a special population group.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.

Extent of Play

N/A – Ashtabula County relies on the State of Ohio.

Criterion 2.e.1: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures.

Extent of Play

N/S - This Criterion will not be demonstrated for this exercise.

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Evaluation Area 3 – Protective Action Implementation

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

Extent of Play

The Ashtabula County EOC Radiological Officer will demonstrate radiation exposure control capabilities. Dosimetry and exposure control procedures will be demonstrated by field agencies during out-of-sequence exercise activities.

Field activity participants:

Dosimetry briefing:

Harpersfield Volunteer Fire Department – Back-Up Route Alerting
Ashtabula City FD, Ashtabula Township FD, Conneaut FD, Saybrook FD –
Reception Center

Interview & Dosimetry Briefing

Geneva Police Department – Traffic/Access Control

**Perry Nuclear Power Plant
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Criterion 3.b.1: KI and appropriate instructions are available if a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals is maintained.

Extent of Play

The Ohio Department of Health (ODH) will make recommendations regarding the use of KI. Ashtabula County's preparedness measures for KI include pre-distribution to emergency response agencies and the general public, if they chose to pick it up. At the time of the emergency, the agencies distribute the dosimetry and KI to the emergency workers.

If the ODH recommendation for use of KI excludes the portion of the EPZ that is in Ashtabula County, demonstration of this criterion will be facilitated by discussion with the Ashtabula County Radiological Officer at the EOC. For field agency demonstrations, KI procedures will be demonstrated by interview with exercise participants or by controller inject, if necessary.

Dosimetry and KI have been pre-distributed to Offsite Response Organizations (OROs); the monitoring kits and dosimetry are exchanged annually by the State of Ohio. Supporting documentation is included in the Annual Letter of Certification.

Extent of Play

Interview the EOC Ashtabula County Health Department representative at the EOC during the exercise regarding the distribution of KI for the public at the care center.

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Criterion 3.c.1: Precautionary and/or protective action decisions are implemented for persons with disabilities and access/ functional needs other than schools within areas subject to protective actions.

Extent of Play

Notification to individuals with special needs within the Ashtabula County portion of the EPZ will be simulated. The Ashtabula County EMA maintains a list of special needs organizations within the Ashtabula County portion of the EPZ. The EOC Job and Family Services representative will coordinate special needs notification activities and, upon request, will present the list for review by the FEMA evaluator.

At least 2 transportation providers, which in Ashtabula County are school districts, will be contacted to ensure availability of buses and drivers.

Criterion 3.c.2: OROs/School officials implement precautionary and/or protective actions for schools.

Extent of Play

N/S - This Criterion will not be demonstrated. Geneva School District, the only school district in the portion of the EPZ that is in Ashtabula County, successfully demonstrated this Criterion during the 2014 Exercise.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Extent of Play

A representative of the police department will demonstrate Traffic and Access Control out-of-sequence, by interview at the police station.

Notification of rail, water and air traffic is a State function.

Field activity participants:

Geneva Police Department
Ashtabula County

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Criterion 3.d.2: Impediments to evacuation are identified and resolved.

Extent of Play

Ashtabula County EOC will demonstrate the capability to identify and take the appropriate actions in dealing with impediments to evacuation. Actual resources will not be utilized. If an impediment cannot be removed in a timely manner, the decision process to re-route traffic will be discussed and implemented by the appropriate EOC Staff.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.

Extent of Play

N/A – Ashtabula County relies on the State of Ohio.

Criterion 3.e.2: Appropriate measures, strategies and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk and agricultural production.

Extent of Play

N/A – Ashtabula County relies on the State of Ohio.

Criterion 3.f.1: Decisions regarding controlled reentry, relocation, and return of individuals during the post-plume phase are coordinated with appropriate organizations and implemented.

Extent of Play

N/S - This Criterion will not be demonstrated during this exercise.

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EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

Criterion 4.a.1: (RESERVED)

Criterion 4.a.2: Field teams (2 or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

Extent of Play

N/A – Ashtabula County does not demonstrate this criterion.

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.

Extent of Play

N/A – Ashtabula County does not demonstrate this criterion.

Criterion 4.b.1: The field teams (2 or more) demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision making.

Extent of Play

N/A - Ashtabula County does not demonstrate this criterion.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

Extent of Play

N/A – Ashtabula County does not demonstrate this criterion.

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EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

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

Extent of Play

Upon a protective action decision (PAD) by the combined Executive Groups of Ashtabula, Lake and Geauga counties, the Lake County EOC Staff will prepare the appropriate Emergency Alert System (EAS) message and simulate sounding the sirens and sending the message over the EAS system. A quiet siren test will be demonstrated by the Lake County EOC in lieu of an actual siren sounding.

No siren activation will be performed by Ashtabula County.

Simulation of sending the EAS message(s) will be conducted as follows:

The procedure for the EAS encoder will be followed to deliver the message to WTAM, the Local Primary Station, with the exception that the telephone number to the station will not be dialed. By not connecting to WTAM, there is no possibility of accidentally broadcasting the message over one or more of the participating EAS stations.

The “send” button on the Lake County EAS encoder will be depressed, and this action will activate the outgoing alert light and playback of the recorded message. Also, a data sheet will automatically be printed by the encoder and the time recorded on the data sheet. Ashtabula and Geauga counties have EAS equipment (encoder) and could provide this function if necessary.

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Lake County will fax or email a copy of the EAS message(s) to the Joint Information Center (JIC) where Public Information Officers (PIOs) may distribute hard copies to the news media representatives and may, if time and circumstances permit, make an announcement regarding the message. Otherwise, the EAS message can be announced at the next scheduled press briefing or in response to news media inquiries about the PAD message.

In delivering information about the EAS message just released, the counties' PIOs may indicate that a corresponding Special News Bulletin (SNB) will be issued soon. Lake County will also fax or email a copy of the EAS message to Ashtabula and Geauga counties' EOC's.

Criterion 5.a.2: (RESERVED)

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system.

Extent of Play

Harpersfield Volunteer Fire Department will demonstrate back-up route alerting as an out-of-sequence, pre-positioned field activity. One pre-determined siren located in the fire department's jurisdiction will be out-of-service (simulated) and back-up route alerting will be conducted in the siren coverage area. Use of the mobile PA system will be simulated during the demonstration; an audible PA test will be conducted prior to departure. The demonstration will be initiated by the exercise controller.

Criterion 5.a.4: Activities associated with FEMA-approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.

Extent of Play

N/A – There are no exception areas in the PNPP siren coverage area.

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Criterion 5.b.1: OROs provide accurate subsequent emergency information and instructions to the public and the news media in a timely manner.

Extent of Play

Based upon the combined PAD(s) of the Executive Groups of Ashtabula, Geauga and Lake counties, the Lake County EOC Staff will prepare and issue the appropriate EAS message(s) and the corresponding Special News Bulletin(s) (SNB). SNB's give the same message as their corresponding EAS message except SNB's provide greater detail.

Lake County will FAX or email the SNB(s) to the Joint Information Center (JIC) where one of the counties' PIOs will represent the three counties by directly proceeding to the briefing room and reading the contents of the message to the assembly of news media representatives and answering any questions pertaining to the message.

This briefing should begin in a timely manner after transmission of the EAS message from the Lake County EOC to the Local Primary EAS Station. Hard copies of the SNB(s) will be distributed to the news media representatives.

Ashtabula, Geauga and Lake counties will also coordinate release of other informational and instructional message, as necessary. Such messages may include Special Information Bulletins (SIB), which are a third category of prepared messages contained in the counties' "SOG for EAS Messages, Special News Bulletins, and Special Information Bulletins pertaining to the Perry Nuclear Power Plant." These SIB's are considered routine, meaning that they are to be delivered by one of the counties' PIOs at the next scheduled press briefing.

Public Inquiry Workers at the EOC will answer calls from the public. At least one trend will be demonstrated.

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Ashtabula County
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EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

Criterion 6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees of emergency workers.

Extent of Play

Ashtabula City, Ashtabula Township, Conneaut, Saybrook fire departments will demonstrate the monitoring and decontamination of evacuees portion of this criterion out-of-sequence at Lakeside High School. One locker room will be fully set up and demonstrated; a walk-through of the remaining locker room will be conducted upon request.

Six (6) monitoring demonstrations will be conducted using a portal monitor. One individual with simulated contamination will be walked through the monitoring/decontamination process, which includes whole body monitoring using a survey meter; contamination levels will be provided by a controller. Decontamination will be simulated.

This facility could accommodate use of four (4) portal monitors, if the need arises. The fire department's guideline includes a diagram and procedure for adding the other portals, as necessary. For this demonstration, one (1) portal will be set up and used.

Monitoring of one evacuee's vehicle will be demonstrated; decontamination will be discussed.

The use of kraft paper is optional for the exercise.

Field activity participants

Ashtabula City, Ashtabula Township, Conneaut, Saybrook fire departments
– Reception Center/Public M/D
Ashtabula County Health Department – KI for the general public

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Criterion 6.b.1: The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles.

Extent of Play

N/S - Ashtabula County will not demonstrate this Criterion.

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.

Extent of Play

N/S - Ashtabula County will not demonstrate this Criterion.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

Extent of Play

N/S - Ashtabula County will not demonstrate this Criterion.

Geauga County Extent-Of-Play Agreement

GEAUGA COUNTY OHIO

Extent-of-Play Agreement

For the Perry Nuclear Power Plant Evaluated Exercise

**Week of
September 12, 2016**

**Perry Nuclear Power Plant
Geauga County
September 2016 Evaluated Exercise
Extent-of-Play Agreement**

The EOC portion of the exercise will take place on September 13, 2016.

Criteria that can be re-demonstrated immediately for credit, by a decision of the evaluator, include the following: 3.a.1, 3.b.1, 3.d.1, 3.d.2, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairman of the Radiological Preparedness Coordinating Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1.

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

Criterion 1.a.1: OROs use effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner.

Extent of Play

Geauga County EOC Staff will mobilize upon notification from the Geauga County Sheriff's Dispatch Center, which is the 24-hour notification point and receives the call via a dedicated line from the Perry Plant. Full field notification utilizing primary means of communication will be completed one time only from the EOC, at the Site Area Emergency classification.

Field agency demonstrations will be conducted out-of-sequence and participants will be pre-positioned.

Field activity participants

Traffic/Access Control by interview at the EOC during the Exercise
- Ohio State Highway Patrol
Chardon Fire Department at Chardon High School – Emergency Worker
Monitoring/Decon

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

Extent of Play

Chardon High School Emergency Worker Monitoring and Decontamination Station will be used.

The EOC and JIC were evaluated during the 2014 Exercise; no changes have been made.

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Geauga County
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Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

Extent of Play

Direction and control of emergency operations will be demonstrated in accordance with the exercise scenario, the Geauga County Radiological Emergency Response Plan, Agency SOG and as appropriate for out-of-sequence field demonstrations.

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.

Extent of Play

Primary (dedicated phone lines and commercial telephone) and secondary (radio/pagers/cell phones) means of communications will be demonstrated at the EOC and as appropriate for out-of-sequence field demonstrations. Controllers will drive field play.

Full field notification utilizing primary means of communication will be completed one time only from the EOC, at the Site Area Emergency classification.

Criterion 1.e.1: Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

Extent of Play

The EOC will demonstrate the use of equipment, maps and displays to support emergency operations.

In addition to the KI that the local health department made available to the general public to pick up, there is a quantity stockpiled at the Health District that would be transported to the care centers and distributed by the local health department, as requested.

**Perry Nuclear Power Plant
Geauga County
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EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

Extent of Play

Geauga County relies on the Ohio Department of Health (ODH) for the recommendation to take KI. For out-of-sequence field agency demonstrations, this will be demonstrated by interview with exercise participants or by controller inject, if necessary.

The use of a Controller inject will begin the process of authorization for radiation exposures in excess of administrative limits.

Criterion 2.b.1: Appropriate protective action recommendations (PARS) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.

Extent of Play

N/A – Geauga County relies on the State of Ohio.

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

Extent of Play

The Geauga County EOC Executive Group will demonstrate this criterion in coordination with Lake and Ashtabula counties' Executive Groups and the State of Ohio.

The Director, or designee, of the Ohio Department of Health (ODH) makes the decision for the general public and emergency workers to take KI. The ODH through the local health department makes KI available to the general public, by pre-distribution and by supplies available for distribution at the time of the emergency at care centers.

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Criterion 2.c.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria.

Extent of Play

The Geauga County EOC Executive Group will demonstrate this criterion in coordination with Lake and Ashtabula counties' Executive Groups. Typically, schools relocate at Site Area Emergency per procedures. If not relocated prior to General Emergency, schools follow the protective action decisions for the general public; they are not considered a special population group.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria.

Extent of Play

N/A – Geauga County relies on the State of Ohio.

Criterion 2.e.1: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures.

Extent of Play

N/S - This Criterion will not be demonstrated.

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EVALUATION AREA 3 – PROTECTIVE ACTION IMPLEMENTATION

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

Extent of Play

The Geauga County EOC Radiological Officer will demonstrate radiation exposure control capabilities. Dosimetry and exposure control procedures will be demonstrated by field agencies during out-of-sequence exercise activities.

Interview & dosimetry briefing:

Ohio State Highway Patrol – at the EOC during the Exercise

Field Activity Participants

Dosimetry Briefing

Chardon Fire Department – Emergency Worker Monitoring & Decontamination at Chardon High School

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Geauga County
September 2016 Evaluated Exercise
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Criterion 3.b.1: KI and appropriate instructions are available if a decision to recommend use of KI is made. Appropriate record-keeping of the administration of KI for institutionalized individuals is maintained.

Extent of Play

The Ohio Department of Health (ODH) will make recommendations regarding the use of KI. Geauga County's preparedness measures for KI include pre-distribution to emergency response agencies and to the general public, if they chose to pick it up at designated centers. At the time of the emergency, the agencies distribute the dosimetry and KI to the emergency workers. If the ODH recommendation for use of KI excludes the portion of the EPZ that is in Geauga County, demonstration of this criterion may be facilitated by discussion with the Geauga County Radiological Officer at the EOC. For field agency demonstrations, KI procedures will be demonstrated by interview with exercise participants or by controller inject, if necessary.

Dosimetry and KI have been pre-distributed to Offsite Response Organizations (OROs); the monitoring kits and dosimetry are exchanged annually by the State of Ohio. Supporting documentation is included in the Annual Letter of Certification.

Extent of Play

Interview the Geauga County Health District representative at the EOC during the exercise regarding the distribution of KI for the public at the care center.

Criterion 3.c.1: Precautionary and/or protective action decisions are implemented for persons with disabilities and access/ functional needs other than schools within areas subject to protective actions.

Extent of Play

Notification to individuals with special needs within the Geauga County portion of the EPZ will be simulated. A list of special needs residents within the Geauga County portion of the EPZ is maintained by the Geauga County Department of Emergency Services (DES). The Fire/EMS Coordinator at the EOC will coordinate special needs notification activities and, upon request, will present the confidential list for review by the FEMA evaluator.

There are no day cares, nursing homes, hospitals or risk schools in the Geauga County portion of the EPZ.

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Geauga County
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Criterion 3.c.2: OROs/School officials implement precautionary and/or protective actions for schools.

N/A – There are no risk schools in Geauga County.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

Extent of Play

The Ohio State Highway Patrol representative in the EOC will demonstrate Traffic and Access Control by interview at the Geauga County EOC during the exercise.

Notification of rail, water and air traffic is a State function.

Criterion 3.d.2: Impediments to evacuation are identified and resolved.

Extent of Play

Geauga County EOC will demonstrate the capability to identify and take the appropriate actions in dealing with impediments to evacuation. Actual resources will not be utilized. If an impediment cannot be removed in a timely manner, the decision to reroute traffic will be discussed and implemented by the appropriate EOC staff.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.

Extent of Play

N/A – Geauga County relies on the State of Ohio.

**Perry Nuclear Power Plant
Geauga County
September 2016 Evaluated Exercise
Extent-of-Play Agreement**

Criterion 3.e.2: Appropriate measures, strategies and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk and agricultural production.

Extent of Play

N/A – Geauga County relies on the State of Ohio.

Criterion 3.f.1: Decisions regarding controlled reentry, relocation, and return of individuals during the post-plume phase are coordinated with appropriate organizations and implemented.

Extent of Play

N/S - This Criterion will not be demonstrated.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

Criterion 4.a.1: (RESERVED)

Criterion 4.a.2: Field teams (2 or more) are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

Extent of Play

N/A – Geauga County does not demonstrate this criterion.

Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.

Extent of Play

N/A – Geauga County does not demonstrate this criterion.

**Perry Nuclear Power Plant
Geauga County
September 2016 Evaluated Exercise
Extent-of-Play Agreement**

Criterion 4.b.1: The field teams (2 or more) demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision making.

Extent of Play

N/A – Geauga County does not demonstrate this criterion.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

Extent of Play

N/A – Geauga County does not demonstrate this criterion.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

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

Extent of Play

Upon a protective action decision (PAD) by the combined Executive Groups of Ashtabula, Lake and Geauga counties, the Lake County EOC Staff will prepare the appropriate Emergency Alert System (EAS) message and simulate sounding the sirens and sending the message over the EAS system. A quiet siren test will be demonstrated by the Lake County EOC in lieu of an actual siren sounding.

Simulation of sending the EAS message(s) will be conducted as follows:

The procedure for the EAS encoder will be followed to deliver the message to WTAM, the Local Primary Station, with the exception that the telephone number to the station will not be dialed. By not connecting to WTAM, there is no possibility of accidentally broadcasting the message over one or more of the participating EAS stations.

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The "send" button on the Lake County EAS encoder will be depressed, and this action will activate the outgoing alert light and playback of the recorded message. Also, a data sheet will automatically be printed by the encoder and the time recorded on the data sheet. Ashtabula and Geauga counties have EAS equipment (encoder) and could perform this function, if necessary.

Lake County will fax or email a copy of the EAS message(s) to the Joint Information Center (JIC) where Public Information Officers (PIOs) may distribute hard copies to the news media representatives and may, if time and circumstances permit, make an announcement regarding the message. Otherwise, the EAS message can be announced at the next scheduled press briefing or in response to news media inquiries about the PAD message. In delivering information about the EAS message just released, the counties' PIOs may indicate that a corresponding Special News Bulletin (SNB) will be issued soon. Lake County will also fax or email a copy of the EAS message to Ashtabula and Geauga counties' EOCs.

Criterion 5.a.2: (RESERVED)

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system.

Extent of Play

N/S - This Criterion will not be demonstrated.

Criterion 5.a.4: Activities associated with FEMA-approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.

Extent of Play

N/A – There are no exception areas in the PNPP siren coverage area.

**Perry Nuclear Power Plant
Geauga County
September 2016 Evaluated Exercise
Extent-of-Play Agreement**

Criterion 5.b.1: OROs provide accurate subsequent emergency information and instructions to the public and the news media in a timely manner.

Extent of Play

Based upon the combined PAD(s) of the Executive Groups of Ashtabula, Geauga and Lake counties, the Lake County EOC Staff will prepare and issue the appropriate EAS message(s) and the corresponding Special News Bulletin(s) (SNB). SNB's give the same message as their corresponding EAS message except SNB's provide greater detail. Lake County will fax or email the SNB(s) to the Joint Information Center (JIC) where one of the counties' PIOs will represent the three counties by directly proceeding to the briefing room and reading the contents of the message to the assembly of news media representatives and answering any questions pertaining to the message. This briefing should begin in a timely manner after transmission of the EAS message from the Lake County EOC to the Local Primary EAS Station. Hard copies of the SNB(s) will be distributed to the news media representatives.

Ashtabula, Geauga and Lake counties will also coordinate release of other informational and instructional message as necessary. Such messages may include Special Information Bulletins (SIB), which are a third category of prepared messages contained in the counties' "SOG for EAS Messages, Special News Bulletins, and Special Information Bulletins pertaining to the Perry Nuclear Power Plant." These SIB's are considered routine, meaning that they are to be delivered by one of the counties' PIOs at the next scheduled press briefing.

Public Inquiry Workers at the EOC will answer calls from the public. At least one trend will be demonstrated.

EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

Criterion 6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees of emergency workers.

Extent of Play

N/S - This Criterion will not be demonstrated.

**Perry Nuclear Power Plant
Geauga County
September 2016 Evaluated Exercise
Extent-of-Play Agreement**

Criterion 6.b.1: The facility/ORO has adequate procedures and resources to accomplish monitoring and decontamination of emergency workers and their equipment and vehicles.

Extent of Play

Chardon Fire Department will demonstrate the emergency worker facility out-of-sequence at Chardon High School, 151 Chardon Avenue, Chardon Village. One locker room will be fully set up and demonstrated; a walk-through of the remaining locker room will be conducted upon request.

Two monitoring demonstrations will be conducted using a portal monitor. One individual with simulated contamination will be walked through the monitoring and decontamination process, which includes whole body monitoring using a survey meter; contamination levels will be provided by a controller. Decontamination will be simulated.

The use of kraft paper is optional.

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities.

Extent of Play

N/S - This Criterion will not be demonstrated.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

Extent of Play

N/S - This Criterion will not be demonstrated.

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State and County Evaluation Locations

ENCLOSURE 2 PERRY NUCLEAR POWER PLANT RADIOLOGICAL EMERGENCY PREPAREDNESS EVALUATED EXERCISE

ACTION LOCATIONS September 12 - 16, 2016

This document lists participating agencies, dates, times, locations with directions, and contact names and telephone numbers for respective demonstrations.

STATE OF OHIO

Demonstrating Agency/ Location	Date/ Time	Exercise Controller/ [Exercise Evaluator]
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Initial Notification Point	09/13/16	
Ohio Emergency Management Agency	0800 hours	
2855 Dublin Granville Road		
Columbus, OH 43235		

Contact: Chris Salz
(614) 799-3675

State Emergency Operations Center	09/13/16	
Ohio Emergency Management Agency	0800 - 1500 hours	
2855 Dublin Granville Road		
Columbus, OH 43235		

Contact: Chris Salz
(614) 799-3675

State Assessment Room	09/13/16	
Ohio Emergency Management Agency	0800 - 1500 hours	
2855 Dublin-Granville Road		
Columbus OH 43235		

Contact: Chris Salz
(614) 799-3675

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

STATE OF OHIO (continued)

Demonstrating Agency/ Location	Date/ Time	Exercise Controller/ [Exercise Evaluator]
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Emergency Operations Facility (EOF) Concord Line Shop property 7755 Auburn Road Painesville, OH 44077 (Concord Township)	09/13/16 ~0900 - 1500 hours	
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Contact: John Flegal, State of Ohio EOF Liaison
(440) 358-4822

Directions: The EOF is located on the property of FirstEnergy's Concord Line Shop. Take Interstate 90 and exit south on State Route 44; turn west at Auburn Road (BP station on the corner). Travel approximately 1 mile, the Concord Line Shop is located on the east side of the road. Turn in at the southern gate (to the right of the building) and press the button to announce your arrival.

Joint Information Center Auburn Career Center 8140 Auburn Road Painesville, OH 44077	09/13/16 ~1000 - 1500 Hours	
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Contact: State of Ohio Public Information Officer (PIO)
(440) 358-7806/8035

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

LAKE COUNTY

<u>Demonstrating Agency/ Location</u>	<u>Date/ Time</u>	<u>Exercise Controller/ [Exercise Evaluator]</u>
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School District

Madison School District	09/12/16	
South Elementary School	1000	
92 E. Main Street		
Madison, OH 44057		

Contact: Angela Smith, Superintendent
(440) 428-2166

Monitoring/Public

Kirtland High School	09/12/16	
9150 Chillicothe Road	1900	
Kirtland, OH 44094		

Demonstrating Agency: Kirtland Fire Department
Contact: Chief Tony Hutton
(440) 256-8979

Congregate Care Center/Registration

Kirtland High School	09/12/16	
9150 Chillicothe Road	1900	
Kirtland, OH 44094		

Demonstrating Agency: American Red Cross
Contact: Jeremy Bayer
(216) 361-5541

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

LAKE COUNTY (continued)

Demonstrating Agency/ Location	Date/ Time	Exercise Controller/ [Exercise Evaluator]
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Initial Notification Point Lake County Emergency Operations Center (EOC) Central Communications Center 8505 Garfield Road Mentor, OH 44060	09/13/16 ~0800	
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Contact: Larry Greene, Director
(440) 350-5499

Emergency Operations Center Lake County EOC 8505 Garfield Road Mentor, OH 44060	09/13/16 ~0800 – 1500	
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Contact: Larry Greene, Director
(440) 350-5499

Lake County Field Monitoring Teams Lake County Emergency Operations Center 8505 Garfield Road Mentor, Ohio 44060	09/13/16 ~ 0800-1500	
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Contact: Bert Mechenbier, Lake County General Health District FMT Coordinator
(440) 350-5486

Note: The 2 Lake County Field Monitoring Teams will conduct their demonstration in sequence with the evaluated exercise on Tuesday, September 13, 2016, beginning from the Lake County EOC.

FMT kit inventory will be conducted at the Lake County EOC at ~7:00 a.m. prior to the Evaluated Exercise. An FMT Coordinator will meet the Evaluator at the EOC.

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

LAKE COUNTY (continued)

<u>Demonstrating Agency/ Location</u>	<u>Date/ Time</u>	<u>Exercise Controller/ [Exercise Evaluator]</u>
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Joint Information Center Auburn Career Center 8140 Auburn Road Painesville, OH 44077	09/13/16 ~1000 - 1500 hours	
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Contact: Ken Gauntner, Lake County Public Information Officer (PIO)
(440) 358-8017

Traffic/Access Control Madison Township Police Department 2065 Hubbard Road Madison, OH 44057	09/13/16 1000	
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Contact: Chief Matthew Byers
Phone: 440-428-2116

Traffic/Access Control Madison Village Police Department 126 W. Main Street Madison, OH 44057	09/13/16 1400	
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Contact: Chief Dawn Shannon
Phone: 440-428-3421

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

LAKE COUNTY (continued)

<u>Demonstrating Agency/ Location</u>	<u>Date/ Time</u>	<u>Exercise Controller/ [Exercise Evaluator]</u>
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Back-Up Route Alerting
Concord Fire Department
11600 Concord Hambden Road
Concord, OH 44077

09/13/16
1800

Contact: Chief Matt Sabo
(440) 354-7503

School District
Fairport School District
Superintendent's Office
Board of Education
329 Vine Street
Fairport, OH 44077

9/14/16
0800

Contact: Dominic Paolo, Superintendent
(440) 354-5400

NOTE: Laketrans provides bus services for the Fairport School District and will provide a Transportation Supervisor and bus operator for the interview at the school.

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

ASHTABULA COUNTY

Demonstrating Agency/ Location	Date/ Time	Exercise Controller/ [Exercise Evaluator]
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Traffic/Access Control Geneva Police Department 44 North Forest Street Geneva, OH 44041 Contact: Chief Dan Dudik (440) 466-1111	09/12/16 1000	
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Reception Center Lakeside High School 6600 Sanborn Road Ashtabula, OH 44004	09/12/16 1800	
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Demonstrating Agency: Saybrook, Ashtabula City, Ashtabula Twp, Conneaut fire depts.

Contact: Saybrook Chief John Jyurovat
(440) 969-1179

Initial Notification Point Ashtabula County Sheriff's Department Dispatch Center 25 West Jefferson Street Jefferson, OH 44047	09/13/16 ~0800 hours	
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Contact: Mike Fitchet, Director
(440) 576-9148

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

ASHTABULA COUNTY (continued)

Demonstrating Agency/ Location	Date/ Time	Exercise Controller/ [Exercise Evaluator]
Emergency Operations Center Ashtabula County Courthouse 25 West Jefferson Street Jefferson, OH 44047 Contact: Mike Fitchet, Director (440) 576-9148	09/13/16 ~0800 – 1500 hours	
Joint Information Center Auburn Career Center 8140 Auburn Road Painesville, OH 44077 Contact: Byron Landolfi, Ashtabula County Public Information Officer (PIO) (440) 358-8020	09/13/16 ~1000 - 1500 hours	
Back-Up Route Alerting Harpersfield Fire Department Station #1 1481 Harpersfield Road Harpersfield, OH 44041 Contact: Chief Everett Henry (440) 415-5584	09/14/16 1800	

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

GEAUGA COUNTY

<u>Demonstrating Agency/ Location</u>	<u>Date/ Time</u>	<u>Exercise Controller/ [Exercise Evaluator]</u>
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Emergency Worker

Monitoring/Decontamination Station	9/12/16	
Chardon High School	1900	
151 Chardon Ave		
Chardon, OH 44024		

Demonstrating Agency: Chardon Volunteer Fire Department

Contact: Chief Larry Gaspar
(440) 285-4665

Initial Notification Point	09/13/16
Geauga County	~0800
Sheriff's Dispatch Center	
12450 Merritt Road	
Chardon, OH 44024	

Contact: Dale Wedge, Director
Geauga County Department of Emergency Services (DES)
(440) 279-2170

Directions: The Sheriff's Dispatch Center is located in the Geauga County Sheriff's Office complex. Take State Route 44 to Merritt Road. Turn east on Merritt Road and turn in at the first driveway on the left.

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**ENCLOSURE 2
PERRY NUCLEAR POWER PLANT
RADIOLOGICAL EMERGENCY PREPAREDNESS
EVALUATED EXERCISE**

**ACTION LOCATIONS
September 12 - 16, 2016**

GEAUGA COUNTY (continued)

<u>Demonstrating Agency/ Location</u>	<u>Date/ Time</u>	<u>Exercise Controller/ [Exercise Evaluator]</u>
Emergency Operations Center 12518 Merritt Road Chardon, OH 44024 Contact: Dale Wedge, Director 440) 279-2170	09/13/16 ~0800 – 1500	
Traffic/Access Control Ohio State Highway Patrol Demonstration location: Geauga EOC Contact: Dale Wedge (440) 279-2170	09/13/16 By interview, in sequence with the exercise	
Joint Information Center Auburn Career Center 8140 Auburn Road Painesville, OH 44077 Contact, Linda Burhenne, Geauga County Public Information Officer (PIO) (440) 269-7107 or (440) 358-8016	09/13/16 ~1000 - 1500 hours	

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APPENDIX F: SCENARIO DETAILS

This Appendix presents the Off-Site Scenario Timeline provided by the State of Ohio on September 1, 2016 which drove the Perry Nuclear Power Plant Radiological Emergency Preparedness, Partial Participation, Plume Exposure Pathway Exercise conducted on September 13, 2016. The timeline includes both On-Site events and comments and expected Off-Site response actions.



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Perry Nuclear Power Plant

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Off-Site Scenario Summary



August 10, 2016

Mr. Sean O'Leary
Chair, Regional Assistance Committee
DHS/FEMA Region V, 6th Floor
536 South Clark Street
Chicago, IL 60605

Dear Mr. O'Leary:

Perry Nuclear Power Plant (PNPP) Plume Exercise Scenario Review

I have reviewed the materials submitted by the licensee and the information supplied by your staff. A copy of the Scenario Review Checklist is attached. The scenario is adequate for the demonstration of the selected criteria. Level 2 Finding 03-16-2a1-L2-01 for KI recommendations given to the Field Monitoring Team Coordinator and Level 2 Finding 03-16-5b1-L2-02 for press briefing information review/approval by the Executive Director will be re-demonstrated by the State of Ohio from the Beaver Valley Power Station exercise, along with three Plan issues.

Plume Exercise Scenario

(All times listed below are approximate and based on simulator actions – offsite notification is within 15 minutes of declaration times)

The exercise begins at 0730 hours. At 0745 hours, a transported fuel bundle was dropped, impacting surrounding spent fuel with Fuel Handling Building evacuation alarms sounded. An Alert should be declared by 0800 hours due to damage to irradiated fuel (GA2). A small break Loss of Coolant Accident occurs at 0930 hours inside containment. As drywell pressure increases, a reactor scram is initiated with 19 control rods partially withdrawn resulting in an Anticipated Transient Without Scram (ATWS).

At 0945 hours, a Reactor Water Cleanup system line breaks in the steam tunnel, starting the radiological release. By 1000 hours, a Site Area Emergency is declared due to the loss of containment at reactor coolant system barriers (AS3). At 1145 hours, the drywell radiation monitor is greater than 4000 R per hour, indicating a loss of the fuel barrier. By 1200 hours, a General Emergency is declared due to the loss of all three fission barriers (AG1). At 1310 hours, the drill will be terminated.

Plume Exercise Timeline

Major events for offsite agencies are as follows:

Table 1. Exercise Timeline

TIME	EVENT
0800	ALERT
1000	SITE AREA EMERGENCY
0945	RELEASE START
1200	GENERAL EMERGENCY
1310	TERMINATION

State representatives assigned to the Emergency Operations Facility, Joint Information Center, and Lake County Emergency Operations Center will be prepositioned per the extent-of-play agreement. There is sufficient time between the declarations of Emergency Classification Levels (ECLs) to demonstrate applicable criteria with two hours between each ECL.

Plume Exercise Dose Projections and Protective Action Recommendations (PARs)

Perry Nuclear Power Plant is located in North Perry, Ohio on the southeast shoreline of Lake Erie in Lake County, Ohio. In addition to Lake County, the 10-mile Emergency Planning Zone (EPZ) encompasses parts of Geauga and Ashtabula Counties.

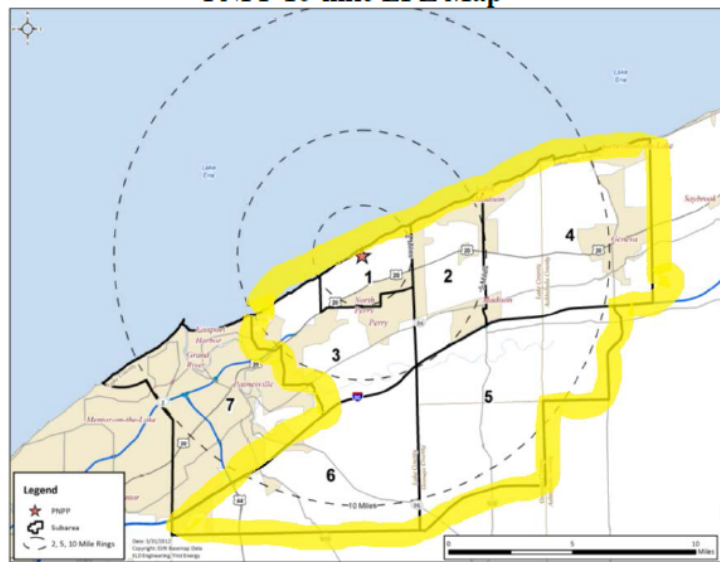
Meteorological conditions at the time of the PARs are wind direction from 310 degrees with a wind speed of six miles per hour and a "D" Stability Class. These conditions remain constant throughout the exercise. Dose projection results were obtained using RASCAL Version 4.3.1 and comparing them to the Meteorological Information and Dose Assessment System (MIDAS) software used by the licensee. Comparison results between RASCAL 4.3.1 and MIDAS dose assessment runs are shown in the table below. The site boundary is located at approximately 0.5 mile. The dose assessments assume a four-hour release. Since the State uses Child Thyroid CDE instead of Adult Thyroid CDE, the more conservative Child Thyroid CDE values were calculated and shown in the table below. The comparisons agreed within a factor of 10.

Table 2. Dose Projection Comparisons

Expected Maximum TEDE and Child Thyroid CDE 4-Hour Dose Projections								
Distance	Site Boundary		2 miles		5 miles		10 miles	
	RASCAL 4.3.1	MIDAS	RASCAL 4.3.1	MIDAS	RASCAL 4.3.1	MIDAS	RASCAL 4.3.1	MIDAS
Whole Body Dose	27 mrem	140 mrem	2.8 mrem	27 mrem	<1 mrem	6.6 mrem	<1 mrem	2.2 mrem
Child Thyroid Dose	1160 mrem	3900 mrem	118 mrem	730 mrem	40 mrem	170 mrem	18 mrem	56 mrem

RASCAL 4.3.1 and MIDAS dose projections indicate PAGs are NOT exceeded in this scenario beyond the site boundary. At the General Emergency, the licensee will recommend PARs to evacuate Subareas 1, 2, 3, 4, 5, and 6 and the Lake; advise the general public to administer KI in accordance with the State Plan; and heightened awareness for the remainder of the EPZ. Below is the 10-mile EPZ map showing the land areas recommended for evacuation by the licensee, which may be different than the State's Protective Action Decision areas.

PNPP 10-mile EPZ Map



Plume Exercise Field Team Data

According to the Extent of Play agreement, the State of Ohio field teams will not be demonstrated in this exercise. The Lake County Health District will demonstrate two field teams. The field team data was included for the field teams to locate, define, and characterize the plume. Datasets were available from 1130 to 1330 in 15-minute increments for all items below. Field data was provided for the following:

- portable survey instrument readings for open and closed window in mR/hour at 1 meter
- air sample cartridge net counts per minute (cpm) for a 10.6 cubic feet volume
- iodine concentrations in μCi per cubic centimeter

The Lake County General Health District (LCGHD) Field Teams use survey heights of five centimeters, one meter, and two meters from ground level. The Virtual Plume software used by the licensee for controller field data does not calculate the two-meter readings; therefore, the one-meter readings will be assumed. The licensee was notified of these differences in the data for Controller purposes.

Based on the field survey rate data, at 0.5-mile (site boundary) centerline, the dose rate with window closed will reach a maximum value of 2 mR/hour during the exercise. County field teams are instructed to turn-back at an exposure of 1 R and an exposure rate of 1 R/hour; therefore, turn-back limits will not be approached in this exercise. Although the release starts at 0945 hours, all data is assumed to be "as read" until 1200 hours.

The LCGHD Field Teams take air samples if there is a significant difference in the values of the open window results for the different heights. Controller data indicates that a ratio close to two for waist level readings is maintained throughout the exercise for ample opportunities to obtain air samples. Per the licensee, the ground level readings are assumed to be the same as the waist level readings, indicating no deposition in this scenario. The LCGHD Field Teams perform counts on the particulate filter and the iodine cartridge. Per the licensee, the net particulate counts are assumed to be background in this scenario. Air sample data was compared using the RASCAL program and by back calculation of the iodine and particulate sample results.

Plume Exercise Potassium Iodide (KI)

Radioiodine is present in the radioactive release and the field monitoring sample data; therefore, it is likely that there will be a recommendation for emergency workers to ingest KI. The State of Ohio recommends KI to the general public at 5 rem Child Thyroid CDE. The maximum Child Thyroid CDE is 3.9 rem for this scenario. Due to the increasing iodine levels and General Emergency ECL, it is likely that a KI recommendation will be made for the general public.

Out-of-Sequence Evacuee and Emergency Worker Monitoring and Decontamination Demonstrations

The following mini-scenarios were provided:

- Reception Center Monitoring and Decontamination for evacuees and vehicles
 - Kirtland High School in Lake County
 - Lakeside High School in Ashtabula County
- Emergency Worker Monitoring and Decontamination for emergency workers and vehicles
 - Chardon High School in Geauga County

The Ohio decontamination action level is 300 count per minute above background, which was exceeded in the mini-scenarios. All contamination injects were consistent with extent-of-play agreements and applicable plans and procedures. All contamination levels were above the action levels to facilitate responder decontamination actions.

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Perry Nuclear Power Plant

Conclusions

The scenario package is adequate for the demonstration of the selected criteria. During the scenario review, the licensee, State staff members, and your staff members have been willing to assist in answering questions. If you have any questions or if you would like to discuss the scenario, please contact me at jsleatherman@aol.com or 704-500-1559.

Sincerely,



Jill Leatherman, ICFI Scenario Reviewer

Attachment

cc: K. Rabenhorst – FEMA Region V
C. Bebrich – FEMA Region V
D. Warren – FEMA Region V
C. Galloway – FEMA Headquarters
G. Hansen - NRC
D. Solomon - ICFI
H. Crapo – ICFI

**RADIOLOGICAL EMERGENCY PREPAREDNESS
EXERCISE SCENARIO REVIEW CHECKLIST**

The following information should be provided to the scenario review contractor to facilitate the conduct of a comprehensive technical review of the REP exercise scenario submitted in accordance with FEMA-REP-14. The data listed below are not intended to include all of the data that are needed for the scenario. The FEMA Region(s) RAC Chair should make appropriate arrangements assuring that the information listed is provided to the contractor.

FACILITY: Perry Nuclear Power Plant

**CHECK IF
INCLUDED**

I. PRE-EXERCISE AGREEMENTS AND EXERCISE BACKGROUND MATERIALS

- | | |
|---|--|
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 1.* Evaluation Areas to be demonstrated by designated State and local jurisdictions |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 2.* Pre-exercise agreements, including extent-of-play by exercise Evaluation Area |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 3.* Previous exercise evaluation report and related information on any technical issues that remain unresolved (for general informational purposes) |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 4.* Radiological portions (e.g., emergency worker exposure limits, PAGs, air sampling procedures, dose calculation procedures, etc.) of the most recent version of the State, local, and appropriate agency plans and procedures, including detailed and readable maps showing pre-selected reference points |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 5.* NUREG-0654 cross-reference index to the State, local, and appropriate agency plans and procedures |

* Indicates those items that FEMA Region(s) are responsible for providing to the scenario review contractor.

II. SCENARIO INFORMATION - GENERAL

- | | |
|------------|--|
| √
_____ | 1. Utility/State/local scenario timelines |
| √
_____ | 2. All controller injects and messages with data in appropriate units, including those triggering the demonstration of specific technical objectives |

III. SCENARIO INFORMATION - RELEASE PARAMETERS

- | | |
|------------|--|
| √
_____ | 1. Potential-Only or Simulated Release |
| √
_____ | 2. Either gross noble gas, gross radioiodine, and gross particulate release rate, or isotopic release rates. If gross release rates are given, the accident type must be stated. Isotopic release rates are required for post-plume phase activities |
| √
_____ | 3. Site characteristics and topography assumed to affect the dispersion |
| √
_____ | 4. Release point information (height - elevation ground, or mixed; etc.) |
| √
_____ | 5. Time of reactor shutdown |
| √
_____ | 6. Start time and duration of release |
| √
_____ | 7. Meteorological data used |
| √
_____ | 8. Atmospheric mixing depth if not provided, 1250 meters will be used |
| √
_____ | 9. Whether decay during transit is, or is not, included in the calculations |

IV. SCENARIO INFORMATION - PLUME PHASE DATA

- | | |
|---|--|
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 1. Centerline and isopleths of atmospheric dilution factors (X/Q) plotted on a map, including date and times of data values |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 2. Direct radiation readings and locations |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 3. Environmental samples - descriptions, locations, date, times, and results in appropriate units related to offsite instruments and procedures |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 4. Radioiodine and particulate calculation results in appropriate units related to offsite instruments and procedures |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 5. Map(s) that are readable and detailed for the plume phase data with plume location plotted at selected time periods |
| <div style="text-align: center;">√</div> <hr style="width: 80px; margin: 0 auto;"/> | 6. Estimated doses and exposure rates calculated along the plume centerline. If different models are used by the State and Utility, included data for both |


V. SCENARIO INFORMATION - INGESTION/RELOCATION
(See Section I., Item Number 1.)







N/A	1.	Centerline and isopleths of dilution fractions X/Q plotted on a map and times of data values
N/A	2.	Direct radiation readings and locations
N/A	3.	Environmental samples - descriptions, locations, date, times, and appropriate units related to offsite instrument and procedures
N/A	4.	Map(s) that are readable and detailed for the ingestion/relocation the deposition footprint locations indicated at selected time periods appropriate units related to offsite instruments and procedures
N/A	5.	Estimated doses calculated along the plume centerline for the ingestion Phase
N/A	6.	Any planned inconsistencies between plume and ingestion/relocation



Off-Site Exercise Timeline

CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO
0645 -45	Operations briefing in TEC for Simulator and plant operations crew. CAUTION: The Drill will be conducted using an Operations crew in the Simulator providing "live" simulator data to Drill participants. Exact event times provided in this Timeline may vary dependent on crew response.		NOTE: The actual operating shift personnel will not be participating in the drill due to normal plant operations and safety concerns. An Operations crew will be present in the Simulator Control Room to participate. Additional Operations personnel will be present to perform the activities necessary to respond to the simulated plant conditions and will be briefed on the Initial Conditions at this time.	
	Initial Conditions: <ul style="list-style-type: none"> Tuesday - Dayshift Mode 1, 85% power Reactor Feed Pump Turbine (RFPT) B and Motor Feed Pump (MFP) running RFPT A tripped due to low oil pressure all ONI and SOI actions are complete PSA Risk is Green All ECCS and Diesels are operable Fuel Movements are in progress. FHB closure controls are in place. Wind Direction from 310 degrees Wind Speed is 6 mph Schools are in session 	MS-1	[On-Site] MS-1 addresses RFPT A trip	
0700 -30	Controllers ensure clocks are synchronized in all participating facilities.			


CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO
0730 0	PNPP Emergency Response Exercise Begins. Announcements are made to station personnel.	CIS-01	The announcement is made by the Shift Manager in the Simulator as directed by this CIS	
0745 15	Fuel Bundle Dropped Control Room receives report that a fuel bundle been dropped in the Fuel Handling Building	<p>☛</p> <p>CIS-02</p> <p>T-Zero</p> <p>☛</p> <p>MS-2</p>	<p>Verify plant announcement was heard on-site.</p> <p>SIMULATOR DRIVER INSERT EVENT I</p> <p>This CIS is a report (delivered by a fuel bundle being transported has surrounding spent fuel in the FHB, escaping from the impacted fuel and the alarm is sounding. The FHB is evacuated was not placed in a safe condition.</p> <p>THIS IS THE INDICATOR FOR AN GA-2), "Damage to Irradiated Fuel"</p> <p>T-Zero occurs upon receipt of the communication.</p> <p>Record time of T-Zero _____</p> <p>MS-2 addresses FHB dropped bundle</p>	



CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MIS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
0800 30	An ALERT is declared based on EPI-AL, EAL GA2, "Damage to Irradiated Fuel"		<p>The classification of emergencies is an NRC DEP Performance Indicator Opportunity.</p> <p>SIMULATOR CONTROLLER: Declaration Time _____ EAL _____ SAS CONTROLLER: Pager message initiation time _____ (ERO notification)</p>	<ul style="list-style-type: none"> • Rad portion of State EOC begins partial activation • ODH and OEPA notified and requested to respond to State EOC • Notify NRC Region III • Notify FEMA Region V • Notification of contiguous governments • State may consider activating/dispatching field resources (e.g. Field Monitoring Teams, Liaison personnel etc.) to Lake County • Briefings of Assessment and Ops Rooms • Provide news releases 	
0815 45	An ALERT should have been declared by now.	CIS-03X	<i>The Controller should use the contingency card provided if this action has not been completed. However, if discussions are underway which the Controller feels will lead to the declaration, this CIS may be held for an additional time period.</i>		

CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
0815 45	NOTIFICATION (ALERT)		<p>Initiation of Event Notification is an NRC DEP Performance Indicator Opportunity.</p> <p><i>Notifications are considered initiated when the first offsite agency has been contacted to transmit the initial notification. (i.e. first agency answers the conference call)</i></p> <p>SIMULATOR CONTROLLER:</p> <p><i>Time Notifications Initiated _____</i></p> <p><i>Key Information _____</i></p> <p><i>Information Complete _____</i></p> <p><i>Follow-up Notification Time _____</i></p> <p>SIMULATOR DRIVER INSERT EVENT 2</p> <p><i>FHB radiation levels start lowering.</i></p> <p>SIMULATOR DRIVER INSERT EVENT 3</p> <p><i>MS-3 addresses HPSC loss of control power</i></p> <p>TSC CONTROLLER</p> <p><i>TSC Operational _____</i></p> <p>TSC CONTROLLER</p> <p><i>ERDS verification time _____</i></p> <p>OSC CONTROLLER</p> <p><i>OSC operational _____</i></p>		
0830 1:00	Lowering Plant Radiation levels				
0845 1:15	HPSC experiences a loss of control power	 MS-3			
0900 1:30	Technical Support Center (TSC) is declared operational per EPI-A6.				
0900 1:30	ERDS verified operating using Simulator Data Source				
0900 1:30	Operations Support Center (OSC) is declared operational per EPI-A7.				

CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME /DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
0900 1:30	NRC Notification of an ALERT		SIMULATOR / TSC CONTROLLER NRC notification complete		
0910 1:40	PIRT Manager receives message from Site Vice President to activate JIC.	CIS-04	PIRT CONTROLLER Provide message to PIRT Manager. This CIS provides message recommending that the PIRT Manager activate the JIC.		
0930 2:00	A small break LOCA develops inside containment. Drywell pressure begins to rise.		SIMULATOR DRIVER INSERT EVENT 6		
0935 2:05	Drywell pressure reaches 1 psig				
0935 2:05	A Reactor Scram should be initiated based upon EOP-03 and EOP-01				
	RFPT B and Motor Feed Pump trip following the scram	MS-7	Reactor Scram results in 19 control rods partially withdrawn.		
		MS-8	Multiple control rods will remain out of the core and power will be below 4%		
	Operator actions taken per EOP/SPIs 1.1-1-7 are not successful in individually inserting the 19 control rods.	MS-9	MS-9 addresses EOP-SPI 1.5, CRD over piston vent failure		


CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
	RPV level is expected to lower to level 2 following the scram causing a RWCU isolation signal. Neither RWCU G33-F001 nor G33-F004 will close on the signal. G33-F001 will experience a loss of control power if attempts are made to close the valve. G33-F004 will experience a loss of control power upon the isolation signal.	MS-5 MS-6	No Simulator Driver actions necessary MS-5 addresses G33-F001 failure MS-6. MS-6 addresses G33-F004 failure.		
0938 2:08	Drywell pressure reaches 1.68 psig		This is an indicator for an ALERT (A42) based on loss of the RCS barrier. ALERT was previously declared at 0800 under G42.		

CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
0945 2:15	RWCU line break in the Steam Tunnel	<p></p> <p>MS-4</p> <p>T-Zero</p>	<p>SIMULATOR DRIVER INSERT EVENT 4</p> <p><i>Initiates Rad File for increasing radiation levels in TB.</i></p> <p><i>MS-4 addresses RWCU leak in steam tunnel</i></p> <p>THIS IS THE INDICATOR FOR A SITE AREA EMERGENCY (EAL AS3),</p> <p>“Challenge to either the Fuel Clad barrier OR Reactor Coolant System barrier, AND the loss of any additional barrier.”</p> <p><i>T-Zero occurs upon the indication of the RWCU line</i></p> <p><i>break (RWCU delta flow alarm) in conjunction with the</i></p> <p><i>inability to close the RWCU F001 and F004 the control room.</i></p> <p><i>There is a release in progress based on the location of the RWCU leak in the steam</i></p>		



CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
1000 2:30	A SITE AREA EMERGENCY (SAE) is Declared based on EPI-A1, EAL AS3 based on a loss of the RCS barrier (DW pressure > 1.68 psig with indication of a leak in the DW) and a loss of the Containment barrier (RWCUI line break in steam tunnel with inability to isolate the leak from the control room)		The classification of emergencies is an NRC DEP Performance Indicator Opportunity. TSC CONTROLLER: Declaration Time _____ EAL _____ Pager message initiation time _____		
1000 2:30	SITE ACCOUNTABILITY (SIMULATED) Accountability will be simulated for the exercise. Do NOT sound the accountability alarm.		TSC CONTROLLER: Site Accountability requested time _____		
1015 2:45	A Site Area Emergency (SAE) should have been declared by now.	CIS- 05X	The Controller should use the contingency card provided if this action has not been completed. However, if discussions are underway which the Controller feels will lead to the declaration, this CIS may be held for an additional time period.		

Timeline



Perry 9/13/2016 Exercise

REAL TIME DRILL TIME	CONFIDENTIAL PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	CONFIDENTIAL EXPECTED OFF-SITE ACTIONS STATE of OHIO
1015 2:45	NOTIFICATION (SAE)		<p>Initiation of Event Notification is an NRC DEP Performance Indicator Opportunity.</p> <p><i>Notifications are considered initiated when the first offsite agency has been contacted to transmit the initial notification. (i.e. first agency answers the conference call)</i></p> <p>SIMULATOR CONTROLLER:</p> <p><i>Time Notifications Initiated</i> _____</p> <p><i>Key Information</i> _____</p> <p><i>Information Complete</i> _____</p> <p><i>Follow-up Notification Time</i> _____</p>	<ul style="list-style-type: none"> • Full staffing of State EOCs is initiated, if not previously completed • Governor's Declaration • State Field Monitoring Teams are deployed to Lake County if not already completed • Regional Liaison personnel deployed to Lake County if not already completed • Communications resources deployed to Lake County, if not already completed • Livestock Advisory issued • Flight and rail restrictions completed • Notify NRC Region III • Notify FEMA Region V • Notification of contiguous governments • Request DOE RAP Team • Counties and States coordinate siren activation and EAS messages • Notify 50 mile counties • Briefings of Assessment and Ops Rooms • Provide news releases


CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MIS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
1100 3:30	NRC Notification of a Site Area Emergency (SAE)		TSC CONTROLLER NRC notification complete _____ Follow-up notification complete _____		
1110 3:40	The JIC should be operational within two hours of notification to activate.		JIC CONTROLLER JIC operational _____		
1130 4:00	EOF is declared operational per EPI-A8		EOF CONTROLLER EOF Operational _____		
1142 4:12	Dry well Rad Monitor 1D19- K100/K200 reading begins to rise		SIMULATOR DRIVER INSERT EVENT 7		
1145 4:15	Drywell Rad Monitor 1D19-K100/K200 reaches 4,000 R/hr This is an indication of Loss of Fuel Clad Barrier	T-Zero 	THIS IS THE INDICATOR FOR A GENERAL EMERGENCY (EAL AG1) T-Zero occurs when the DW D19-K100 or K200 Rad Monitor reads > 4000 Rem/hr. This is indicative of a loss of the Fuel Clad barrier. Loss of two barriers and loss or challenge to the third barrier. Record time of T-Zero _____		

CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
1200 4:30	A GENERAL EMERGENCY (GE) is declared based on EPI-A1, EAL AG1 – Loss of two barriers AND a loss or challenge to the third barrier. There is a loss of all three barriers.		The classification of emergencies is an NRC DEP Performance Indicator Opportunity. EOF CONTROLLER: Declaration Time _____ EAL _____ Pager message initiation time _____		
1200 4:30	Recommended Protective Actions [UTILITY PARS] Recommendation of Protective Actions (based upon EAL AG1 with wind from 310 degrees): Evacuate sub areas 1, 2, 3, 4, 5, 6 and Lake. Recommend administering KI per State Plan and Heightened Awareness for the remainder of the EPZ.		Development of a Protective Action Recommendation (PAR) is an NRC Performance Indicator Opportunity. PAR development must be completed within 15 minutes of the time the data becomes available. In this case, the data was available at the time of the S/G tube rupture and radiation monitor increase. PAR completion Time _____		

CONFIDENTIAL **Timeline** **CONFIDENTIAL**
Perry 9/13/2016 Exercise

REAL TIME DRILL TIME	PNPP EVENT	PNPP CISMS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO
	Crew may Emergency Depressurize based on EOP- 05 guidance <i>If crew ED's, simulator driver insert event</i>		SIMULATOR DRIVER INSERT EVENT 8 <i>Increased Containment Radiation monitor levels following Emergency Depressurization.</i>	
		MS-10 MS-11 MS-12	<i>MS-10 addresses H2 analyzer startup MS-11 addresses PEL-SPI 2.2, Bypass of CVCW isolation MS-12 addresses PASS sample</i>	
1215 4:45	A General Emergency (GE) should have been declared by now.	CIS-06X	<i>The Controller should use the contingency card provided if this action has not been completed. However, if discussions are underway which the Controller feels will lead to the declaration, this CIS may be held for an additional time period.</i>	
1215 4:45	NOTIFICATION (GE) Notifications of off-site agencies are initiated from the EOF.		Initiation of Event Notification is an NRC DEP Performance Indicator Opportunity. <i>Notifications are considered initiated when the first offsite agency has been contacted to transmit the initial notification. (i.e. first agency answers the conference call)</i> EOF CONTROLLER: <i>Time Notifications Initiated _____</i> Key Information _____ PAR Provided _____ Information Complete _____ Follow-up Notification Time _____	<ul style="list-style-type: none"> • Protective Action Recommendations (PAR) are discussed between states & counties (including KI discussion) • Protective Action Decisions (PAD) are made • Siren / EAS activations are coordinated between the states & counties • Sirens within the EPZ are sounded • EAS activation occurs • Route verification / back-up route alerting may be conducted • Consider request of Presidential Emergency Declaration

CONFIDENTIAL **Timeline** **CONFIDENTIAL**
Perry 9/13/2016 Exercise

REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO
<u>1300</u> 5:30	NRC Notification of a General Emergency (GE)		EOF CONTROLLER <i>NRC notification complete _____</i>	
<u>1300</u> 5:30	Repairs to G33-F004 are complete and the valve is successfully closed.	MS-6	SIMULATOR DRIVER INSERT EVENT 9 & 11 <i>Deletes malfunction for G33-F004 and causes a ramp down of TB/HB and Unit 1 Plant Vent rad levels.</i>	
<u>1310</u> 5:40	Drill Termination.	CIS-07	<i>Announce Exercise Termination to the site</i>	Exercise Terminated [location specific]
After Drill	Ready Emergency Facilities for Reuse Inventory material, restock, and erase place-keeping marks. Store all equipment and ensure facility is ready for immediate use. Record comments and discrepancies on critique forms. Announce critique start time.			
After Drill	Critique Facilitated critiques with the facility participants shall occur in each Emergency Facility after termination of the drill. All Controllers / Observers / Evaluators shall complete their notes and obtain the Facility Critique comments (Plus/Deltas). They shall ensure all records generated for the Drill for their respective areas are gathered (including rosters) and present these records and comments to the Lead Drill Controller at the scheduled Controller Critique.			

CONFIDENTIAL		Timeline Perry 9/13/2016 Exercise		CONFIDENTIAL	
REAL TIME DRILL TIME	PNPP EVENT	PNPP CIS/MS	PNPP COMMENTS	EXPECTED OFF-SITE ACTIONS STATE of OHIO	
After Drill	Restore Simulator Communications per PYBP-ERS- 0010, Section 2.6		<i>SIMULATOR DRIVER / CONTROLLER</i> <i>Refer to the procedure excerpt in the</i> <i>scenario package</i>		
After Drill	Direct Control Room turn the ringer on for the facility ring-down telephone (line 1).		<i>SIMULATOR DRIVER/CONTROLLER</i>		
After Drill	Notify NRC HOO of Drill Completion.		<i>SIMULATOR DRIVER / CONTROLLER</i>		
After Drill	Restore Simulator Control Room phone speed dial labels, i.e., white labels.		<i>SIMULATOR DRIVER/CONTROLLER</i>		
After Drill	Restore Alarm Typer and Log Typer Bit Bucket to "OFF."		<i>SIMULATOR DRIVER/CONTROLLER</i>		
After Drill	Change Screensaver wait time from 480 minutes (8 hours) to 240 minutes (4 hours) on Simulator		<i>SIMULATOR DRIVER/CONTROLLER</i>		

Unclassified

Radiological Emergency Preparedness (REP) Program

After Action Report/Improvement Plan

Perry Nuclear Power Plant

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