



Dominion Energy, Millstone Power Station

Windham Host Community Reception Center

Exercise Date: June 17, 2017

Report Date: August 14, 2017

Radiological Emergency Preparedness Program



FEMA

Region I

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FEMA

Exercise Report

Millstone Power Station

Licensee:	Dominion Energy, Millstone Power Station
Exercise Date:	June 17, 2017
Report Date:	August 14, 2017

**U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
RADIOLOGICAL EMERGENCY PREPAREDNESS
REGION I
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TABLE OF CONTENTS	PAGE
I. EXECUTIVE SUMMARY	1
II. INTRODUCTION	2
III. EXERCISE EVALUATION AND RESULTS	4

List of Appendices

APPENDIX 1 – EXERCISE EVALUATORS	7
APPENDIX 2 – EXTENT OF PLAY	8

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I. EXECUTIVE SUMMARY

On June 17, 2017, the Federal Emergency Management Agency (FEMA), Region I, evaluated a Host Community Reception Center Exercise at Windham High School in Willimantic, Connecticut (CT).

The purpose of this exercise was to assess the capability of the Willimantic Fire Department, Windham Emergency Management, and Community Volunteers to respond to a radiological incident involving the Millstone Power Station. The exercise was held in accordance with FEMA's policies and guidance concerning the exercise of state and local Radiological Emergency Response Plans (RERP) and procedures.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise, including community volunteers. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants were evident during this exercise.

This report contains the final evaluation of the Windham Host Community Reception Center Exercise, as well as the out of sequence evaluation of the Host Community's Emergency Operation Center Facility.

The Windham Host Community, Emergency Management Response Organizations, Fire Department Personnel, and Volunteers successfully demonstrated their knowledge of their emergency response plans and procedure and adequately implemented them. There were no Level 1 Findings as a result of this exercise. There was one Level 2 Finding that was successfully re-demonstrated on the spot and closed. There are no open Level Findings as a result of this exercise.

II. INTRODUCTION

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

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

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

- Taking the lead in offsite emergency planning and in the review and evaluation of 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 June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and
- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:

U.S. Department of Commerce
U.S. Nuclear Regulatory Commission
U.S. Environmental Protection Agency
U.S. Department of Energy
U.S. Department of Health and Human Services
U.S. Center for Disease Control
U.S. Department of Transportation
U.S. Department of Agriculture
U.S. Department of the Interior
U.S. Food and Drug Administration

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

Formal submission of the RERPs for the Millstone Power Station to FEMA Region I by the State of Connecticut and involved local jurisdictions occurred in 1982. Formal approval of the RERP was granted by FEMA in October 1984, under 44 CFR 350.

The findings presented in this report are based on the evaluations of the federal evaluator team, with final determinations made by the FEMA Region I RAC Chairperson, and approved by the Regional Administrator.

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;
- FEMA Radiological Emergency Preparedness Program Manual

III. EXERCISE EVALUATION AND RESULTS

Participating Agencies

Windham Emergency Management
Willimantic Fire Department
Willimantic Police Department
North Windham Volunteer Fire Department
Windham Center Volunteer Fire Department
South Windham Volunteer Fire Department
Town of Windham (Finance, Housing Code, Planning, Human Services, Recreation,
Public Works, Water Works & Water Treatment Depts., Town Clerks Office)
Windham High School
Windham Community Emergency Response Team
American Red Cross, Connecticut Chapter, Area 4
North Central District Health Department
Northeast District Health Department
Windham Health Department/Medical Reserve Corps (MRC)
Ledge Light Health District
Uncas Health District/MRC
Regional Incident Management Team
Individual Volunteers from Connecticut Communities
CT Department of Emergency Services and Public Protection
CT Division of Emergency Management and Homeland Security
CT Department of Environmental Protection, Radiation Division
CT Department of Developmental Services
CT Department of Public Health Emergency Planning, Radiological
Professional Volunteer Program
CT Disaster Behavioral Health Response Network
Dominion Energy, Millstone Power Station
Federal Emergency Management Agency

Contained in this section are the results and findings of the evaluation of the Windham Host Community Reception Center Exercise that was conducted on June 17, 2017. The purpose of the exercise was to test the capabilities of the reception center staff and the adequacy of the host community's plan to be able to respond to an incident involving the Millstone Power Station.

The following is the status of functional entities evaluated at the Windham Host Community Reception Center and Emergency Operation Center:

A. Windham Host Community Reception Center

The Reception Center staff was made up of multiple emergency response entities and volunteer organizations who worked together exceptionally well and demonstrated excellent teamwork.

The Reception Center Manager/Incident Commander demonstrated excellent direction and control throughout the exercise. The Reception Center staff did a terrific job of setting up their sections in preparation to receive evacuees from the Millstone Emergency Planning Zone communities of New London and Fishers Island.

Reception Center Staff were very much engaged in their position responsibilities and successfully demonstrated knowledge of their plans and procedures. The Reception Center Staff did an excellent job of radiation exposure control and decontamination of evacuees and emergency workers, starting from vehicle monitoring onto portal and secondary monitoring and personal decontamination.

Staff did an excellent job throughout the registration process of which included, but not limited to potassium iodide, registering evacuees, facilitating reunification, and providing shelter and transportation referrals.

a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1, 3.d.1, 6.a.1, and 6.b.1

b. LEVEL 1 FINDING: NONE

c. LEVEL 2 FINDING: 6.a.1

d. NOT DEMONSTRATED: NONE

e. PRIOR LEVEL 2 FINDING RESOLVED: NONE

f. PRIOR LEVEL 2 FINDING UNRESOLVED: NONE

Re-demonstration: Criterion 6.a.1

Condition: The team initially did not set up the gym in accordance with the appropriate floorplan. The survey meter distribution table was placed in the incorrect location.

Analysis: Incorrect placement of the table could result in traffic flow problems for evacuees during an actual event, in addition to increasing the risk for potential radiological cross-contamination.

Reference: Criteria 6.a.1, Windham Host Community Floorplan

Corrective Action Demonstrated: After the controller briefly stopped exercise play to discuss the layout, players consulted the appropriate floorplan and moved the table to the appropriate location. Players confirmed that in the future they will consult all maps while setting up the Reception Center.

B. Windham Host Community Emergency Operations Center

Per the Extent of Play Agreement, Criterion 1.b.1 (Facilities) was conducted out of sequence. The Windham Host Community Emergency Operations Center Facility was evaluated on July 13, 2017.

The facility had an excellent set-up with multiple smart screens, televisions, and radiological incident wallboards to maintain superior situation awareness, as well as communication equipment and plans and procedures. The updated Emergency Operations Center was very impressive and could surely be a model facility.

- a. MET: 1.b.1**
- b. LEVEL 1 FINDING: NONE**
- c. LEVEL 2 FINDING: NONE**
- d. NOT DEMONSTRATED: NONE**
- e. PRIOR LEVEL 2 FINDING RESOLVED: NONE**
- f. PRIOR LEVEL 2 FINDING UNRESOLVED: NONE**

APPENDIX 1

Windham Reception Center Exercise

Evaluator Matrix

June 17, 2017

EVALUATION SITE	EVALUATOR	AREA	CRITERION
Reception Center	Helen LaForge	Mobilization Facilities Direction & Control Communications & Equipment Equipment & Supplies	1.a.1 1.b.1* 1.c.1 1.d.1 1.e.1
Reception Center	Helen LaForge	Dosimetry Issue & Briefing, Emergency Worker Dosimeter	3.a.1
Reception Center	Ingrid Pierce	Portal Monitoring	6.a.1, 6.b.1
Reception Center	John Rice** Ingrid Pierce	Secondary Monitoring	6.a.1, 6.b.1
Reception Center	Taneeka Hollins (F) Steve Colman (M)	Evacuee Monitoring and Decontamination	3.a.1, 6.a.1
Reception Center	Barbara Thomas	Evacuee Registration Implement KI Decision	6.a.1 3.b.1
Reception Center	Barbara Thomas	Evacuee Registration	6.a.1
Reception Center	Ryan Jones** Helen LaForge	Vehicle Monitoring and Decontamination, and Traffic Control Around Reception Area	3.d.1, 6.b.1

* 1.b.1 also for Host Community EOC per Extent of Play

** For Functional Rehearsal Drill.

APPENDIX 2

EXTENT OF PLAY

ASSESSMENT AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

Intent

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

Criterion 1.a.1: Off-site Response organization use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4., D.3., 4., E.1., 2., H.4)

Assessment/Extent of Play

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

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

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

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

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

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

Exercise Specific Extent of Play

1. The Windham Host Community will be mobilized by phone call or controller message from the State Division of Emergency Management and Homeland Security (CT DEMHS) Region 4 Coordinator via the Windham Dispatch to the Windham Emergency Management Director.
2. Windham Fire Department personnel may be prepositioning at a nearby location for the rehearsal, but there will be no prestaging during the evaluated exercise. Personnel will respond as they are notified.
3. Activation of congregate care facilities will be simulated.
4. Additional responders such as American Red Cross, Disaster Behavioral Health Response Network (DBHRN), CT Department of Developmental Services (DDS), Community Emergency Response Teams (CERT), Medical Reserve Corps (MRC), and the Regional Incident Management Team (IMT) may be pre-staged at a nearby location for both the rehearsal and the evaluated exercise.
5. The State Animal Response Team (SART) and Radiation Professional Volunteer Program (RPVP) will not be evaluated. The SART may demonstrate selected capabilities. The RPVP participants will be observed at the rehearsal and may choose to demonstrate selected capabilities at the evaluated exercise.

Sub-element 1.b – Facilities

Intent

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

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

Assessment/Extent of Play

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

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

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

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

Exercise Specific Extent of Play

1. The Windham EOC has been renovated. It will not be activated for the exercise and will be evaluated by FEMA out of sequence.
2. The Windham Host Community/Reception Center at the Windham High School will be evaluated.

Sub-element 1.c – Direction and Control

Intent

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

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

Assessment/Extent of Play

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

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

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

Exercise Specific Extent of Play

1. During exercise, Windham Host Community/Reception Center will follow the procedures in the Host Community Procedures within the REP plan.

Sub-element 1.d.1. Communications and Equipment.

Intent

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

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

Assessment/Extent of Play

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

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

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

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

Exercise Specific Extent of Play

1. Immediate correction of performance issues relating to communications and equipment where remediation is possible will be allowed.

**This criterion has been approved for re-demonstration of performance only, actual equipment cannot be re-demonstrated.*

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

Intent

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

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

Assessment/Extent of Play

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

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

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

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

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

Dosimetry: Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers must be available for issuance to all emergency workers who will be dispatched to perform an ORO mission. In addition, OROs must demonstrate provisions to make dosimetry available to specialized response teams (e.g., civil support team, Special Weapons and

Tactics Teams, urban search and rescue, bomb squads, HAZMAT, or other ancillary groups) as identified in plans/procedures.

Appropriate direct-reading dosimetry must allow an individual(s) to read the administrative reporting limits and maximum exposure limits contained in the ORO's plans/procedures. Direct-reading dosimeters must be zeroed or operationally checked prior to issuance. The dosimeters must be inspected for electrical leakage at least annually and replaced when necessary. Civil Defense Victoreen Model 138s (CD V-138s) (0-200 mR), due to their documented history of electrical leakage problems, must be inspected for electrical leakage at least quarterly and replaced when necessary. This leakage testing will be verified during the exercise, through documentation submitted in the ALC and/or through an SAV.

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

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

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

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

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

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

Exercise Specific Extent of Play

1. A limited number of supplies (for demonstration purposes only) will be brought to the Reception Center.

** This criterion has been approved for re-demonstration of performance only, actual equipment cannot be re-demonstrated.*

Assessment Area 3 – Protective Action Implementation

Sub-element 3.a.1. Implementation of Emergency Worker Exposure Control.
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Intent

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

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures.

Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, K.3.a, b; K.4)

Assessment/Extent of Play

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

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

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

During a plume phase exercise, emergency workers must demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker must report accumulated exposures during the exercise as indicated in the plans/procedures. OROs must demonstrate the actions described in the plans/procedures by determining whether to replace the worker, authorize the worker to incur additional exposures, or take other actions. If exercise play does not require emergency workers to seek authorizations for additional exposure, evaluators must interview at least two workers to determine their knowledge

of whom to contact in case authorization is needed, and at what exposure levels. Workers may use any available resources (e.g., written procedures and/or coworkers) in providing responses.

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

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

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

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

Exercise Specific Extent of Play

1. Dosimetry will be issued to radiological emergency workers only. Non-radiological emergency workers (on the "clean side") such as KI issue and registration staff will not be issued dosimetry.

NOTE: if Behavioral Health, CERT, MRC, RPVP or other non-radiological workers are assigned to supplement radiological areas such as Decon, they will be given just-in-time training and issued dosimetry.

**This criterion has been approved for re-demonstration during the exercise.*

Sub-element 3.b.1 – Implementation of KI Decision

Intent

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide radio-protective drugs for emergency workers, institutionalized individuals, and, if in the plan and/or procedures, to the general public for whom immediate evacuation may not be feasible, very difficult, or significantly delayed. While it is necessary for OROs to have the capability to provide KI to emergency workers and institutionalized individuals, the provision of KI to the general public is an ORO option, reflected in ORO's plans and procedures. Provisions should include the availability of adequate quantities, storage, and means of the distribution of radioprotective drugs.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals is maintained. (NUREG-0654, E. 7., J. 10. e., f.)

Assessment/Extent of Play

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

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

If a recommendation is made for the general public to take KI, appropriate information must be provided to the public by the means of notification specified in the ORO's plans/procedures. All activities must be based on the ORO's plans/procedures and completed as they would be in an actual emergency, unless noted above or otherwise specified in the Extent-of-Play Agreement.

Exercise Specific Extent of Play

1. The supply of general public (evacuee) KI will be available for evaluator inspection, but only a representative number of tables will be used for simulated distribution during the evaluated exercise.
2. Reception center staff will demonstrate the process, procedures and supplies for KI distribution and direction to ingest KI through discussion to simulated evacuees at the facility. KI will not be ingested by any exercise participants.

**This criterion has been approved for re-demonstration during exercises.*

Sub-element 3.d.1. Implementation of Traffic and Access Control are established.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g., j., k.)

Intent

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement protective action plans, including relocation and restriction of access to evacuated areas. This sub-element focuses on selecting, establishing, and staffing of traffic and access control points and removal of impediments to the flow of evacuation traffic.

Assessment/Extent of Play

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

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

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

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

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

Exercise Specific Extent of Play

1. Traffic and access control will be demonstrated through interview and/or at designated locations. Traffic control points, designated in the plan may not actually be posted.

**This criterion has been approved for re-demonstration during exercises.*

ASSESSMENT AREA 6: SUPPORT OPERATIONS/FACILITIES

Sub-element 6.a.1. Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees.
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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)

Intent

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

Assessment/Extent of Play

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

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

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

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

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

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

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

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

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

Exercise Specific Extent of Play

1. Three portal monitors assigned to Windham will be demonstrated- two for personnel and one for vehicles.
2. The monitoring sequence of 6 evacuees per station to demonstrate the 12 hour requirement is met will be performed at a time during the exercise that is agreed upon by the FEMA evaluator and the controller.
3. At least one staff radiological monitor will demonstrate hand-held instrument "frisking" techniques for personnel at the Secondary Monitoring Station.
4. Contamination control measures and decontamination techniques for at least two males and two females will be simulated and the requirements met through interviews.

5. Vehicle monitoring will be demonstrated via portal monitor only for evacuee's vehicles that arrive at the Host Community/Reception Center.
6. A representative sample of replacement clothing resources for decontaminated individuals will be available in the male and female decontamination areas.
7. Monitoring and decontamination of pets may be demonstrated, but will not be evaluated. CT SART may opt to observe this exercise.

**This criterion has been approved for re-demonstration during exercises.*

Sub-element 6.b.1. Monitoring and Decontamination of Evacuees and Emergency Worker equipment.
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Intent

This sub-element is derived from NUREG-0654, which provides that OROs have the capability to implement radiological monitoring and decontamination of emergency worker equipment, including vehicles.

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

Assessment/Extent of Play

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

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

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

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

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

and if necessary, decontamination must include establishing a registration record consisting of the emergency worker's name, address, results of the monitoring, and time of decontamination (if any), or as otherwise designated in the plans/procedures. Audio recorders, camcorders, or written records are all acceptable means for registration.

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

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

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

Exercise Specific Extent of Play

1. Two of the simulated evacuees being monitored will be designated as emergency workers.
2. In accordance with the OROs plans and procedures, decontamination of evacuee vehicles is not an emergency function. Contaminated vehicles will be segregated to the contaminated vehicle parking area for decontamination at a later time.
3. Criteria requirements for decontamination capabilities, and provisions for vehicle and equipment will be met through interviews.
4. At least one of the vehicles to be monitored will be considered an Emergency Worker Vehicle. The vehicle monitoring team will demonstrate the ability to monitor the vehicle, to include the radiator grill, wheel wells, tires, and door handles. The vehicle monitoring team will also demonstrate the ability to monitor the interior of the emergency worker vehicle where the worker may have contacted, such as the driver's seat, steering wheel, shifter lever, etc.

**This criterion has been approved for re-demonstration during exercises*

Sub-element 6.c.1 Temporary Care of Evacuees

Intent

This sub-element is derived from NUREG-0654, which provides that OROs demonstrate the capability to establish relocation centers in host areas. Congregate care is normally provided in support of OROs by the American Red Cross under existing letters of agreement.

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

Assessment/Extent of Play

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

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

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

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

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

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

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

If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility(ies). However, availability of such items must be verified by providing the evaluator a list of sources with locations and estimates of quantities.

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

Exercise Specific Extent of Play

1. There are no new shelters. Congregate care facilities will not be demonstrated.
2. The American Red Cross **Safe and Well** program will be simulated and will not be formally evaluated.