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Region III
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FEMA

APR 26 2017

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

To Whom It May Concern:

Enclosed is the final After Action Report/Improvement Plan for the Beaver Valley Power Station (BVPS) Medical Services (MS-1) Drill that was held on March 29, 2017. The Weirton Medical Center and Brooke County Emergency Medical Service participated in the drill.

There were no Level 1 Findings, Level 2 Findings, or Planning Issues identified during the drill.

Based on the results of the exercise and a review of the offsite radiological emergency response plans and procedures submitted, FEMA Region III has determined they are adequate (meet the planning and preparedness standards of NUREG-0654/FEMA-REP-1, Revision 1, November 1980, as referenced in 44 CFR 350.5) and there is reasonable assurance they can be implemented, as demonstrated during this exercise.

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

Sincerely,

Robert P. Welch
Acting Regional Administrator

Enclosure

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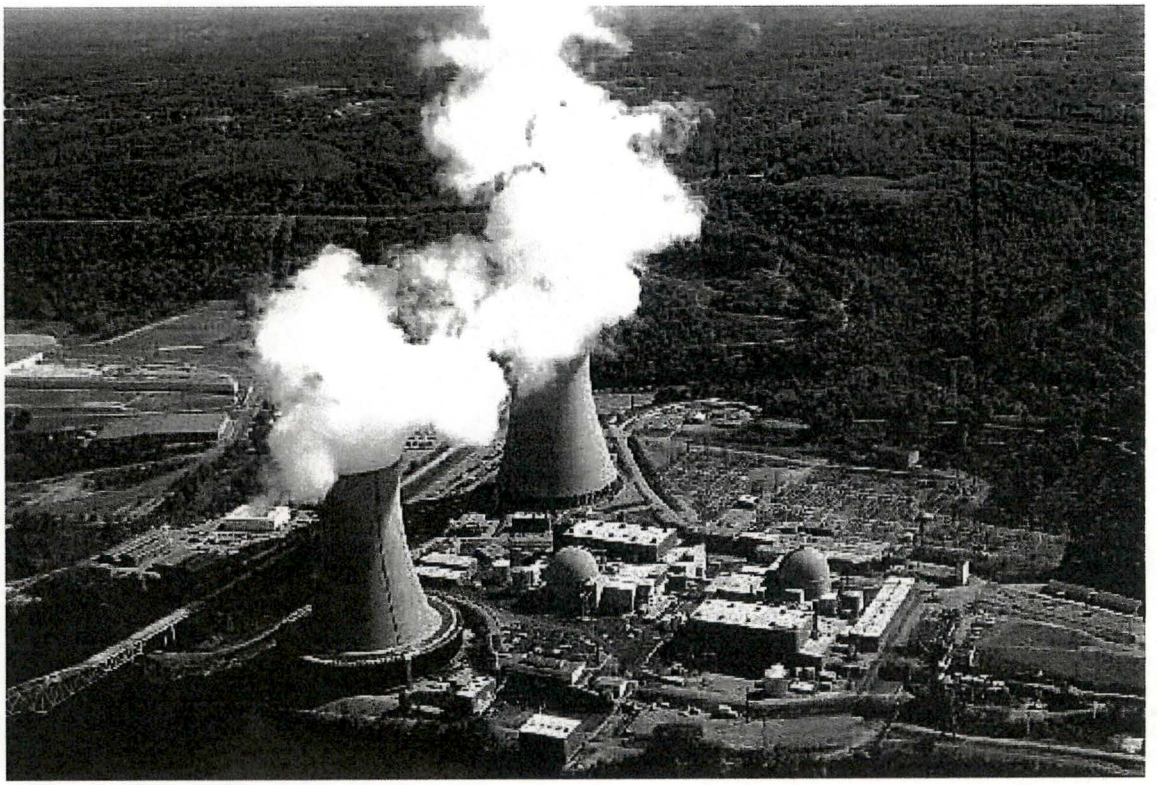
NRR



Beaver Valley Power Station Medical Services Drill

After Action Report/Improvement Plan

Drill Date – March 29, 2017

Radiological Emergency Preparedness (REP) Program

FEMA

Published April 21, 2017

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Beaver Valley Power Station
Medical Services Drill
After Action Report/Improvement Plan
Published Date: April 22, 2017

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EXECUTIVE SUMMARY

On March 29, 2017 a Medical Services (MS-1) Drill was conducted for the 10-mile Plume Exposure Pathway, Emergency Planning Zone (EPZ) around the Beaver Valley Power Station (BVPS) by the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA) Region III. The most recent prior MS-1 Drill for this site was conducted on March 12, 2015.

The purpose of the Beaver Valley Power Station MS-1 Drill was to assess the State and local offsite response organizations preparedness in responding to a radiological medical emergency. The Drill was held in accordance with FEMA's policies and guidance concerning the evaluation of State and local Radiological Emergency Response Plans (RERP) and procedures.

FEMA wishes to acknowledge the efforts of the many individuals in the State of West Virginia, Hancock County Office of Emergency Management, Brooke County Emergency Management Agency, Weirton Medical Center and Brooke County Emergency Medical Services who participated during this Drill.

Protecting the public health and safety is the full-time job of some of the Drill participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility as volunteers providing vital emergency services twenty-four (24) hours a day to the communities in which they live. Cooperation and teamwork of all the participants was observed during this Drill.

This report contains the final evaluation of the MS-1 Drill. The State of West Virginia and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Level 1 or Level 2 Findings or Plan Issues as a result of this Drill.

SECTION 1: EXERCISE OVERVIEW

1.1 Drill Details

Drill Name
Weirton Medical Center 2017 Medical Services Drill

Type of Drill
Medical Services

Drill Date
March 29, 2017

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Radioactive Contaminated/Injured Person

1.2 Planning Team Leadership

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1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the BVPS 2017 Medical Services Drill:

County Jurisdictions
Brooke County Emergency Management Agency
Hancock County Office of Emergency Management

Private Sector Organizations
Brooke County Emergency Medical Service
Weirton Medical Center

SECTION 2: DESIGN SUMMARY

2.1 Purpose and Design

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

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

A. Taking the lead in offsite emergency planning and in the review and evaluation of radiological emergency response plans and procedures developed by State and local governments;

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

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

D. Coordinating the activities of the following Federal agencies with responsibilities in the radiological emergency planning process:

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

Representatives of these agencies serve on the Region III Regional Assistance Committee (RAC), which is chaired by FEMA. A Radiological Emergency Preparedness MS-1 Drill was conducted on March 29, 2017, to assess the capabilities of State and local emergency preparedness organizations in implementing their radiological emergency response plans and procedures to protect the public health and safety during a radiological emergency involving BVPS.

The purpose of this After Action Report is to present the Drill results, and findings on the performance of the Off-site Response Organizations (OROs) during a simulated radiological emergency involving a contaminated injured individual.

The Drill was designed to demonstrate and evaluate the responder's knowledge of patient and responder personal protective measures, equipment preparation and employment, and decontamination procedures. All activities were demonstrated in accordance with the participants' plans and procedures as they would be performed in an actual emergency, except as agreed to in the Exercise Plan and Extent-of-Play Agreement.

The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the FEMA Region III Regional Assistance Committee (RAC) Chairperson and approved by FEMA Headquarters. These reports are provided to the NRC and participating States. State and local governments utilize the findings contained in these reports for the purposes of planning, training, and improving emergency response capabilities.

- Section 1 of this report, entitled Overview, presents the Exercise Planning Team and the Participating Organizations.
- Section 2 of this report, entitled Design Summary, and includes the Purpose and Design, Objectives, Capabilities, and Activities, and the Scenario Summary.
- Section 3 of this report entitled Analysis of Capabilities contains detailed Evaluation and Results; a Summary Results of Evaluation; and Criteria Evaluation Summary. Information on the demonstration for each jurisdiction or functional entity evaluated is presented in a jurisdiction-based, issue-only format.
- Section 4 of this report entitled Conclusion, is a description of FEMA's overall assessment of the capabilities of the participating organizations.

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

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

2.2 Objectives, Capabilities and Activities

The Beaver Valley Power Station MS-1 Drill evaluated by FEMA, was designed to demonstrate that the ORO can transport, transfer, monitor, decontaminate and treat a contaminated/injured person while minimizing any cross contamination during a radiological emergency.

The demonstration included the ability to:

A. Respond to a radiation medical emergency following Hancock County Office of

Emergency Management, Weirton Medical Center and Brooke County Emergency Medical Services procedures.

B. Monitor for radiation contamination and uptake, and to validate persons providing these services are adequately prepared to handle contaminated individuals.

C. Conduct timely and accurate communications between the hospital and offsite response agencies.

D. Exhibit correct priorities and appropriate techniques in Emergency Medical Services (EMS); transportation of patients; and pre-hospital and hospital emergency care of radioactively contaminated patients.

E. Demonstrate inter-agency cooperation between the Ambulance Service/EMS and the hospital.

2.3 Scenario Summary

The scenario for this Medical Services Drill consisted of simulated notifications of escalating emergency classification levels at the BVPS from Site Area Emergency to General Emergency. Subsequent to a release of radiological material the plant declared a General Emergency.

During the incident, an evacuee with a vehicle being decontaminated trips over a parking stop, twisting their right knee, but catches themselves before falling on the potentially contaminated vehicle with their forearms. The victim has an injured right knee (not immediately known without X-rays) and is complaining of great pain in the area. The victim's right forearm area is also abraded and bruised. Brooke County Emergency Medical Services was dispatched to the scene to provide medical support and transport to the nearest MS-1 Hospital.

Upon arrival at Weirton Medical Center, the Radiation Emergency Medical Team met the Emergency Medical Services (EMS) team at the exterior entrance to the Radiation Emergency Area (REA) to receive and treat the patient. The hospital's medical team assessed the patient's condition and surveyed the patient for radiological contamination. There were contamination readings of 1800 cpm on the right and left forearms. First decontamination attempt decreases readings to 800 cpm. Second decontamination attempt results in a reading of less than 100 cpm.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Evaluation and Results

Contained in this section are the results and findings of the evaluations of all jurisdictions and locations that participated in the March 29, 2017 Beaver Valley Power Station MS-1 Drill. The Drill was conducted to demonstrate the ability of the OROs to respond to a potentially contaminated injured person associated with BVPS.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the appropriate Demonstration Criteria contained in the REP Program Manual. Detailed information on the Demonstration Criteria and the Extent-of-Play Agreement are found in Appendix C.

The Drill was conducted and evaluated in accordance with the Radiological Emergency Preparedness Program Manual (January 2016) and NUREG-0654/FEMA-REP-1, Rev. 1. The Demonstration Criteria included:

1.e.1- Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

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.

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.

3.2 Summary Results of Evaluation

The matrix presented in Table 3.1, on the following pages, presents the status of the Demonstration Criteria from the REP Program Manual that were scheduled for demonstration during this Drill by all participating jurisdictions and functional entities. Drill Demonstration Criteria are listed by number and the demonstration status of the criteria is indicated by the use of the following letters:

(L1) Level 1 Finding: An observed or identified inadequacy of organizational performance in an exercise that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in event of a radiological emergency to protect the health and safety of the public living in the vicinity of a Nuclear Power Plant (NPP).

(L2) Level 2 Finding: An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety.

(P) Plan Issue: An observed or identified inadequacy in the off-site response organizations' emergency plan/implementing procedures, rather than that of the ORO's performance.

(N) Not Demonstrated: The term applied to the status of a REP Evaluation Area Criterion indicating that the ORO, for a justifiable reason, did not demonstrate the Evaluation Area Criterion, as required in the Extent-of-Play Agreement or at the two-year or eight-year interval required in the FEMA REP Program Manual.

(M) Met: The status of a REP Evaluation Area Criterion indicating that the participating ORO demonstrated all demonstration criteria for the Evaluation Area Criterion to the level required in the Extent-of-Play Agreement with no findings assessed in the current exercise and no unresolved prior findings.

Table 3.1 – Summary of Drill Evaluation

Date: March 29, 2017 Site: Beaver Valley Power Station (M) Met, (1) Level 1 Finding, (2) Level 2 Finding, (P) Planning Issue		WMC	BCEMS
Emergency Operations Management			
Mobilization	1a1		
Facilities	1b1		
Direction and Control	1c1		
Communications	1d1		
Equipment and Supplies to Support Operations	1e1	M	M
Protective Action Decision Making			
Emergency Worker Exposure Control	2a1		
Accident Assessment and Pars for the Emergency Event	2b1		
PAD decision-making process and coordination for the General Public	2b2		
PADs for disabilities & access/functional needs people	2c1		
Radiological Assessment & Decision making for the Ingestion Pathway	2e1		
Radiological Assessment & Decision making for Relocation/Reentry/Return	2d1		
Protective Action Implementation			
Implementation of Emergency Worker Exposure Control	3a1	M	M
Implementation of KI PAD for Institutionalized Individuals/Public	3b2		
Implementation of PADs for disabilities & access/functional needs people	3c1		
Implementation of PADS for Schools	3c2		
Implementation of Traffic and Access Control	3d1		
Impediments to Evacuation	3d2		
Implementation of Relocation/Reentry/Return Decisions	3f1		
Field Measurements and Analysis			
RESERVED	4a1		
Field Team Management	4a2		
Plume Phase Field Measurement, Handling, & Analyses	4a3		
Post Plume Phase Field Measurements & Sampling	4b1		
Emergency Notification and Public Information			
Activation of the Prompt Alert & Notification System (ANS)	5a1		
RESERVED	5a2		
Activation of the Back-up ANS	5a3		
Activation of the Exception Area ANS	5a4		
Emergency Information & Instructions to the Public/Media	5b1		
Support Operations/Facilities			
Monitoring, Decontamination, & Registration of Evacuees	6a1		
Monitoring/Decontamination of Emergency Workers and Equipment	6b1		
Temporary Care of Evacuees	6c1		
Transportation/Treatment of Contaminated Injured Individuals	6d1	M	M

3.3 Criteria Evaluation Summaries

3.3.1 Private Organizations

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

3.3.1.1 Hancock County, Weirton Medical Center

a. MET: 1.e.1; 3.a.1; 6.d.1
b. LEVEL 1 FINDINGS: NONE
c. LEVEL 2 FINDINGS: NONE
d. PLAN ISSUES: NONE
e. PRIOR ISSUES – RESOLVED: NONE
f. PRIOR ISSUES – UNRESOLVED: NONE

3.3.1.2 Brooke County, Brooke County Emergency Medical Service

a. MET: 1.e.1; 3.a.1; 6.d.1
b. LEVEL 1 FINDINGS: NONE
c. LEVEL 2 FINDINGS: NONE
d. PLAN ISSUES: NONE
e. PRIOR ISSUES – RESOLVED: NONE
f. PRIOR ISSUES – UNRESOLVED: NONE

SECTION 4: CONCLUSION

The State of West Virginia and private sector organizations, except where noted in this report, demonstrated knowledge of their radiological emergency response plans and procedures and they were successfully implemented during the BVPS MS-1 Drill evaluated on March 29, 2017.

Three FEMA evaluators provided analyses of six evaluation criteria. These analyses resulted in a determination of no Findings, no new Plan Issues, and no unresolved Plan Issues.

The Brooke County Emergency Medical Service (BCEMS) successfully demonstrated that necessary equipment and supplies were available to support the treatment of an injured/contaminated patient. EMS personnel prioritized life-saving medical practices over contamination concerns, implemented protective measures through the use of Personal Protective Equipment, regular glove changes, and control of cross contamination. Appropriate patient assessments were demonstrated as well as regular and ongoing communications with Weirton Medical Center.

The Weirton Medical Center successfully demonstrated the mobilization of staff, staffing assignments, issue of dosimetry and monitoring equipment, and effective use of Personal Protective Equipment during the exercise. The hospital staff effectively responded to communications from the BCEMS, initiated the set-up and management of a Radiation Emergency Area, and accepted and successfully treated an injured/contaminated patient while administering life-saving medical attention over contamination concerns. In addition, the medical facility provided security control of the facility including the drop off bay for the patient and overall protective measures for contamination control and prevention of cross contamination.

Based on the results of the Drill and a review of the offsite radiological emergency response plans and procedures submitted, FEMA Region III has determined they are adequate (meet the planning and preparedness standards of NUREG-0654/FEMA-REP-1, Revision 1, November 1980, as referenced in 44 CFR 350.5) and there is reasonable assurance they can be implemented, as demonstrated during this Drill.

An Improvement Plan (IP) will not be developed as part of this report.

APPENDIX A: EVALUATORS

The following is the list of Evaluators for the Beaver Valley Power Station 2017 MS-1 Drill evaluated on March 29, 2017. The following constitutes the managing staff for the Evaluation:

- Thomas Scardino, DHS/FEMA, Regional Assistance Committee Chairman
- Christopher Nemcheck, DHS/FEMA, Technological Hazards Program Specialist/Site Specialist

DATE: March 29, 2017

SITE: Beaver Valley Power Station

LOCATION	EVALUATOR	AGENCY
Weirton Medical Center	Nick Buls	FEMA RIII
Brooke County Emergency Medical Service	Lee Torres	FEMA RIII
Brooke County Emergency Medical Service	Christopher Nemcheck	FEMA RIII

APPENDIX B: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
BCEMS	Brooke County Emergency Medical Service
BVPS	Beaver Valley Power Station
DHS	Department of Homeland Security
DRD	Direct Reading Dosimeter
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EPZ	Emergency Planning Zone
FEMA	Federal Emergency Management Agency
FENOC	First Energy Nuclear Operating Company
IP	Improvement Plan
MS-1	Medical Services
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
ORO	Offsite Response Organization
PEMA	Pennsylvania Emergency Management Agency
PPE	Personal Protective Equipment
PRD	Permanent Record Dosimeter
RAC	Regional Assistance Committee
REA	Radioactive Emergency Area
REP	Radiological Emergency Preparedness
RO	Radiological Officer
SAE	Site Area Emergency
WMC	Weirton Medical Center

APPENDIX C: EXERCISE PLAN

The Exercise Plan (ExPlan) was created as an overall tool for facilitation and implementation of the Beaver Valley Power Station MS-1 Drill and to integrate the concepts and policies of the Homeland Security Exercise Evaluation Program with the Radiological Emergency Preparedness Program Exercise Methodology.

2017 WMC MS-1 Evaluated Exercise

Exercise Plan

3/29/2017

The Exercise Plan (ExPlan) gives elected and appointed officials, observers, media personnel, and players from participating organizations information they need to observe or participate in the exercise. Some exercise material is intended for the exclusive use of exercise planners, controllers, and evaluators, but players may view other materials that are necessary to their performance. All exercise participants may view the Exercise Plan.

EXERCISE OVERVIEW

Exercise Name	2017 WMC MS-1 Evaluated Exercise
Exercise Dates	March 29th, 2017
Scope	This exercise is a Functional Exercise, planned for five hours at Weirton Medical Center, Weirton, WV. Exercise play is limited to coordination and management of a potentially radiologically contaminated patient.
Mission Area(s)	Response
Core Capabilities	Public Health and Medical Services; Environmental Response/Health and Safety; Operational Coordination
Objectives	Demonstrate or Explain the ability to alert, mobilize and activate personnel. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations. Demonstrate the ability to continuously monitor and control emergency worker exposure. Demonstrate the adequacy of medical facility's equipment, procedures and personnel for handling contaminated, injured or exposed individuals. Return the facility to pre-emergency conditions (will not be demonstrated, but explained). Demonstrate the ability to communicate with appropriate locations, organizations and field personnel. (Telephones, cell phones, and/or radios) Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated and/or exposed individuals.
Threat or Hazard	Technological/radiological release
Scenario	The exercise scenario will involve a contaminated patient with a minor injury requiring to be surveyed and decontaminated prior to being medically evaluated at the emergency room.
Sponsor	FENOC First Energy Beaver Valley Power Station

Participating Organizations	Participants in this exercise will include one federal agency, one state agency, three county level agencies and two private agencies.
Point of Contact	Jason Lively, WV Division of Homeland Security and Emergency Management, 82 Emergency Dr., New Cumberland, WV 26047, 304-545-3058, jason.k.lively@wv.gov

GENERAL INFORMATION

Exercise Objectives and Core Capabilities

The following exercise objectives in Table 1 describe the expected outcomes for the exercise. The objectives are linked to core capabilities, which are distinct critical elements necessary to achieve the specific mission area(s). The objectives and aligned core capabilities are guided by elected and appointed officials and selected by the Exercise Planning Team.

Exercise Objective	Core Capability
Demonstrate or Explain the ability to alert, mobilize and activate personnel.	Operational Coordination
Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.	Public Health and Medical Services
Demonstrate the ability to continuously monitor and control emergency worker exposure.	Environmental Response/Health and Safety
Demonstrate the adequacy of medical facility's equipment, procedures and personnel for handling contaminated, injured or exposed individuals.	Public Health and Medical Services
Return the facility to pre-emergency conditions (will not be demonstrated, but explained).	Environmental Response/Health and Safety
Demonstrate the ability to communicate with appropriate locations, organizations and field personnel. (Telephones, cell phones, and/or radios)	Operational Coordination
Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated and/or exposed individuals.	Public Health and Medical Services

Table 1. Exercise Objectives and Associated Core Capabilities

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

REP Manual Criterion	Demonstration Guidance
	administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, K.3.a, b; K.4)
Criterion 6.d.1	The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654/FEMAREP-1, F.2; H.10; K.5.a, b; L.1, 4)

Table 2. REP Manual Criterion and Demonstration Guidance

Participant Roles and Responsibilities

The term *participant* encompasses many groups of people, not just those playing in the exercise. Groups of participants involved in the exercise, and their respective roles and responsibilities, are as follows:

Players. Players are personnel who have an active role in discussing or performing their regular roles and responsibilities during the exercise. Players discuss or initiate actions in response to the simulated emergency.

Controllers. Controllers plan and manage exercise play, set up and operate the exercise site, and act in the roles of organizations or individuals that are not playing in the exercise. Controllers direct the pace of the exercise, provide key data to players, and may prompt or initiate certain player actions to ensure exercise continuity. In addition, they issue exercise material to players as required, monitor the exercise timeline, and supervise the safety of all exercise participants.

Simulators. Simulators are control staff personnel who role play nonparticipating organizations or individuals. They most often operate out of the Simulation Cell (SimCell), but they may occasionally have face-to-face contact with players. Simulators function semi-independently under the supervision of SimCell controllers, enacting roles (e.g., media reporters or next of kin) in accordance with instructions provided in the Master Scenario Events List (MSEL). All simulators are ultimately accountable to the Exercise Director and Senior Controller.

Evaluators. Evaluators evaluate and provide feedback on a designated functional area of the exercise. Evaluators observe and document performance against established capability targets and critical tasks, in accordance with the Exercise Evaluation Guides (EEGs).

Actors. Actors simulate specific roles during exercise play, typically victims or other bystanders.

Observers. Observers visit or view selected segments of the exercise. Observers do not play in the exercise, nor do they perform any control or evaluation functions. Observers view the exercise from a designated observation area and must remain within the observation area during the exercise. Very Important Persons (VIPs) are also observers, but they frequently are grouped separately.

Media Personnel. Some media personnel may be present as observers, pending approval by the sponsor organization and the Exercise Planning Team.

Support Staff. The exercise support staff includes individuals who perform administrative and logistical support tasks during the exercise (e.g., registration, catering).

Exercise Assumptions and Artificialities

In any exercise, assumptions and artificialities may be necessary to complete play in the time allotted and/or account for logistical limitations. Exercise participants should accept that assumptions and artificialities are inherent in any exercise, and should not allow these considerations to negatively impact their participation.

4 Assumptions

Assumptions constitute the implied factual foundation for the exercise and, as such, are assumed to be present before the exercise starts. The following assumptions apply to the exercise:

[The exercise is conducted in a no-fault learning environment wherein capabilities, plans, systems, and processes will be evaluated.]

[The exercise scenario is plausible, and events occur as they are presented.]

[Exercise simulation contains sufficient detail to allow players to react to information and situations as they are presented as if the simulated incident were real.]

[Participating agencies may need to balance exercise play with real-world emergencies. Real-world emergencies take priority.]

The Weirton Medical Center Radiological Emergency Response Plan assigns radiological monitoring of the patient to the Hospital.

Monitoring of ambulance personnel and vehicle is the responsibility of the Hospital, if available, and the monitoring decontamination center (Emergency Worker Decontamination Center) if the hospital is not available.

5 Artificialities

During this exercise, the following artificialities apply:

[Exercise communication and coordination is limited to participating exercise organizations, venues, and the SimCell.]

Players will be pre-staged for the start of the exercise.

The scenario will be driven by the lead controller at the hospital.

Controllers will also be in the field.

[Only communication methods listed in the Communications Directory are available for players to use during the exercise.]

EXERCISE LOGISTICS

Safety

Exercise participant safety takes priority over exercise events. The following general requirements apply to the exercise:

A Safety Controller is responsible for participant safety; any safety concerns must be immediately reported to the Safety Controller. The Safety Controller and Exercise Director will determine if a real-world emergency warrants a pause in exercise play and when exercise play can be resumed.

For an emergency that requires assistance, use the phrase **["real-world emergency."]** The following procedures should be used in case of a real emergency during the exercise:

Anyone who observes a participant who is seriously ill or injured will immediately notify emergency services and the closest controller, and, within reason and training, render aid.

The controller aware of a real emergency will initiate the ["real-world emergency"] broadcast and provide the Safety Controller, Senior Controller, and Exercise Director with the location of the emergency and resources needed, if any. The Senior Controller will notify the appropriate participants as soon as possible if a real emergency occurs.

6 Fire Safety

Standard fire and safety regulations relevant to the Weirton Medical Center will be followed during the exercise.

7 Emergency Medical Services

The sponsor organization will coordinate with local emergency medical services in the event of a real-world emergency.

8 Electrical and Generating Device Hazards

All applicable electrical and generating device safety requirements should be documented prior to the start of the exercise.

9 Weapons Policy

All participants will follow the relevant weapons policy for the exercising organization or exercise venue.

Site Access

10 Security

If entry control is required for the exercise venue(s), the venue is responsible for arranging appropriate security measures. To prevent interruption of the exercise, access to exercise sites is

limited to exercise participants. Players should advise their venue's controller or evaluator of any unauthorized persons.

11 Media/Observer Coordination

Organizations with media personnel and/or observers attending the event should coordinate with the sponsor organization for access to the exercise site. Media/Observers are escorted to designated areas and accompanied by an exercise controller at all times. Sponsor organization representatives and/or the observer controller may be present to explain exercise conduct and answer questions. Exercise participants should be advised of media and/or observer presence.

POST-EXERCISE AND EVALUATION ACTIVITIES

Debriefings

Post-exercise debriefings aim to collect sufficient relevant data to support effective evaluation and improvement planning.

12 Hot Wash

At the conclusion of exercise play, controllers facilitate a Hot Wash to allow players to discuss strengths and areas for improvement, and evaluators to seek clarification regarding player actions and decision-making processes. All participants may attend; however, observers are not encouraged to attend the meeting. The Hot Wash should not exceed 30 minutes.

13 Controller and Evaluator Debriefing

Controllers and evaluators attend a facilitated C/E Debriefing immediately following the exercise. During this debriefing, controllers and evaluators provide an overview of their observed functional areas and discuss strengths and areas for improvement.

14 Participant Feedback Forms

Participant Feedback Forms provide players with the opportunity to comment candidly on exercise activities and exercise design. Participant Feedback Forms should be collected at the conclusion of the Hot Wash.

Evaluation

15 Exercise Evaluation Guides

EEGs assist evaluators in collecting relevant exercise observations. EEGs document exercise objectives and aligned core capabilities, capability targets, and critical tasks. Each EEG provides evaluators with information on what they should expect to see demonstrated in their functional area. The EEGs, coupled with Participant Feedback Forms and Hot Wash notes, are used to evaluate the exercise and compile the After-Action Report (AAR).

16 After-Action Report

The AAR summarizes key information related to evaluation. The AAR primarily focuses on the analysis of core capabilities, including capability performance, strengths, and areas for improvement. AARs also include basic exercise information, including the exercise name, type of exercise, dates, location, participating organizations, mission area(s), specific threat or hazard, a brief scenario description, and the name of the exercise sponsor and POC.

Improvement Planning

Improvement planning is the process by which the observations recorded in the AAR are resolved through development of concrete corrective actions, which are prioritized and tracked as a part of a continuous corrective action program.

17 After-Action Meeting

The After-Action Meeting (AAM) is a meeting held among decision- and policy-makers from the exercising organizations, as well as the Lead Evaluator and members of the Exercise Planning Team, to debrief the exercise and to review and refine the draft AAR and Improvement Plan (IP). The AAM should be an interactive session, providing attendees the opportunity to discuss and validate the observations and corrective actions in the draft AAR/IP.

18 Improvement Plan

The IP identifies specific corrective actions, assigns them to responsible parties, and establishes target dates for their completion. It is created by elected and appointed officials from the organizations participating in the exercise, and discussed and validated during the AAM.

PARTICIPANT INFORMATION AND GUIDANCE

Exercise Rules

The following general rules govern exercise play:

Real-world emergency actions take priority over exercise actions.

Exercise players will comply with real-world emergency procedures, unless otherwise directed by the control staff.

All communications (including written, radio, telephone, and e-mail) during the exercise will begin and end with the statement [**"This is an exercise."**]

Exercise players who place telephone calls or initiate radio communication with the SimCell must identify the organization or individual with whom they wish to speak.

Players Instructions

Players should follow certain guidelines before, during, and after the exercise to ensure a safe and effective exercise.

19 Before the Exercise

Review appropriate organizational plans, procedures, and exercise support documents.

Be at the appropriate site at least 30 minutes before the exercise starts. Wear the appropriate uniform and/or identification item(s).

Sign in when you arrive.

If you gain knowledge of the scenario before the exercise, notify a controller so that appropriate actions can be taken to ensure a valid evaluation.

[Read your Player Information Handout, which includes information on exercise safety.]

20 During the Exercise

Respond to exercise events and information as if the emergency were real, unless otherwise directed by an exercise controller.

Controllers will give you only information they are specifically directed to disseminate. You are expected to obtain other necessary information through existing emergency information channels.

Do not engage in personal conversations with controllers, evaluators, observers, or media personnel. If you are asked an exercise-related question, give a short, concise answer. If you are busy and cannot immediately respond, indicate that, but report back with an answer as soon as possible.

If you do not understand the scope of the exercise, or if you are uncertain about an organization's participation in an exercise, ask a controller.

Parts of the scenario may seem implausible. Recognize that the exercise has objectives to satisfy and may require incorporation of unrealistic aspects. Every effort has been made by the exercise's trusted agents to balance realism with safety and to create an effective learning and evaluation environment.

All exercise communications will begin and end with the statement [**"This is an exercise."**] This precaution is taken so that anyone who overhears the conversation will not mistake exercise play for a real-world emergency.

When you communicate with the SimCell, identify the organization or individual with whom you wish to speak.

Speak when you take an action. This procedure will ensure that evaluators are aware of critical actions as they occur.

Maintain a log of your activities. Many times, this log may include documentation of activities that were missed by a controller or evaluator.

21 After the Exercise

Participate in the Hot Wash at your venue with controllers and evaluators.

Complete the Participant Feedback Form. This form allows you to comment candidly on emergency response activities and exercise effectiveness. Provide the completed form to a controller or evaluator.

Provide any notes or materials generated from the exercise to your controller or evaluator for review and inclusion in the AAR.

Simulation Guidelines

Because the exercise is of limited duration and scope, certain details will be simulated. The physical description of what would fully occur at the incident sites and surrounding areas will be relayed to players by controllers.

APPENDIX A: EXERCISE SCHEDULE

BROOKE COUNTY EMS

8:00 AM	Exercise begins.
8:00 AM	Ambulance Company is notified that Beaver Valley Power Station has declared a Site Area Emergency.
8:10 AM	Ambulance Company is notified that Beaver Valley Power Station has escalated to a General Emergency.
8:25 AM	An ambulance is requested to report to the accident staging area to pick up an injured and potentially contaminated individual.
8:40 AM	Ambulance leaves for Weirton Medical Center. AMBULANCE WILL RESPOND WITHOUT SIRENS AND LIGHTS.
9:00 AM	Ambulance arrives at the hospital and the patient is removed from the ambulance. The ambulance is sent (simulated) to the Emergency Worker Decontamination Center.

WEIRTON MEDICAL CENTER

8:00 AM	Exercise begins.
8:00 AM	The hospital is notified that Beaver Valley Power Station has declared a Site Area Emergency.
8:10 AM	The hospital is notified that the emergency at the Beaver Valley Power Station has escalated to a General Emergency.
8:25 AM	The hospital is notified that a person has been injured who is potentially contaminated.
8:40 AM	The hospital is notified that the ambulance is enroute with an ETA of 20 minutes.
9:00 AM	The patient arrives at the hospital.
10:00 AM	Exercise Ends.
10:00 AM	Critique.

Times may vary. Starting time is subject to change.

APPENDIX B: EXERCISE PARTICIPANTS

Participating Organizations
Federal
Federal Emergency Management Agency
State
West Virginia Division of Homeland Security & Emergency Management
Hancock County, WV
Hancock County Office of Emergency Management
FirstEnergy Nuclear Operating Company
Brooke County, WV
Brooke County Emergency Management Agency
Weirton Medical Center
Brooke County EMS

APPENDIX C: CONTAMINATED PATIENT INFO

Situation: A member of the General Public with a vehicle being decontaminated trips over a parking stop, twisting their right knee, but catches themselves before falling on the potentially contaminated vehicle with their forearms.

Injuries: The victim has an injured right knee (not immediately known without X-rays) and is complaining of great pain in the area. The victim's right forearm area is also abraded and bruised.

Blood Pressure:	118/72
Pulse:	100
Breathing:	22
Temperature:	Normal
Skin:	Pale
No Nausea	
Vision:	Clear, eyes equal and reactive

Patient may give own answer on all other queries.

Contamination:

A. Contamination readings of 1600 cpm on right upper arm. Removal of shirt sleeve eliminates reading.

B. Injured right knee.

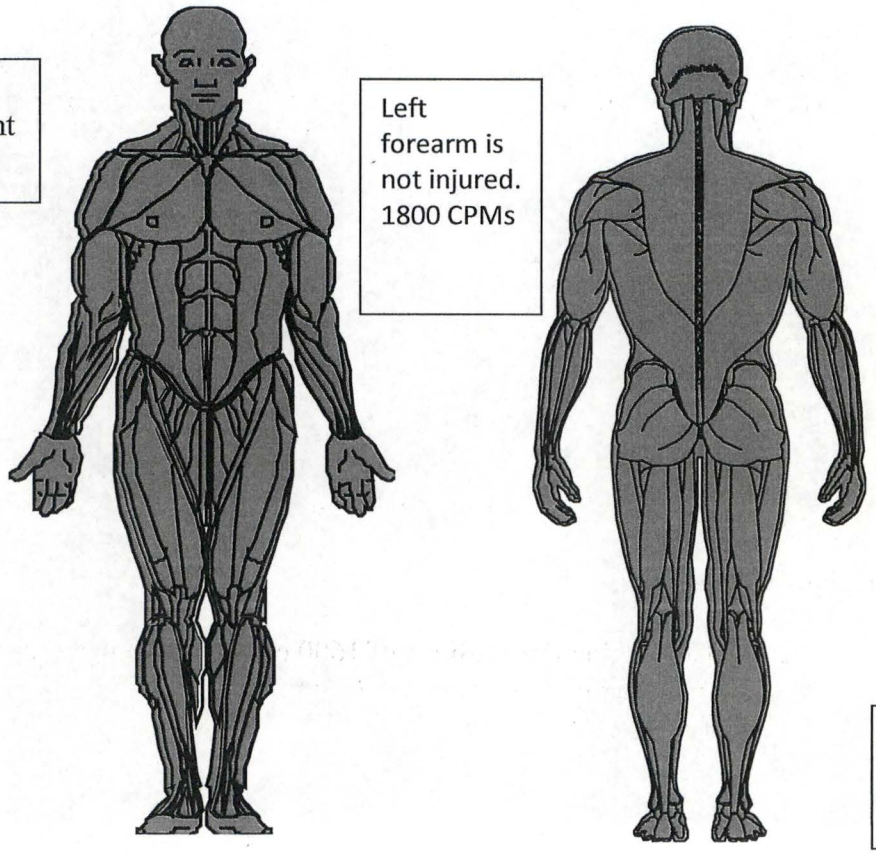
C. Right forearm bruised and abraded. Contamination of 1800 cpm. First decon attempt decreases readings to 800 cpm. Second attempt results in less than 100 cpm.

D. Left forearm contaminated no injury. Contamination 1600 cpm. First decon attempt decreases readings to 800 cpm. Second attempt results in less than 100 cpm.

INDICATES AREAS OF CONTAMINATION/INJURY

1600 CPMs on upper right arm sleeve

Left forearm is not injured. 1800 CPMs



Right forearm is bruised and abraded. 1800 CPMs

Right knee is injured. NO contamination

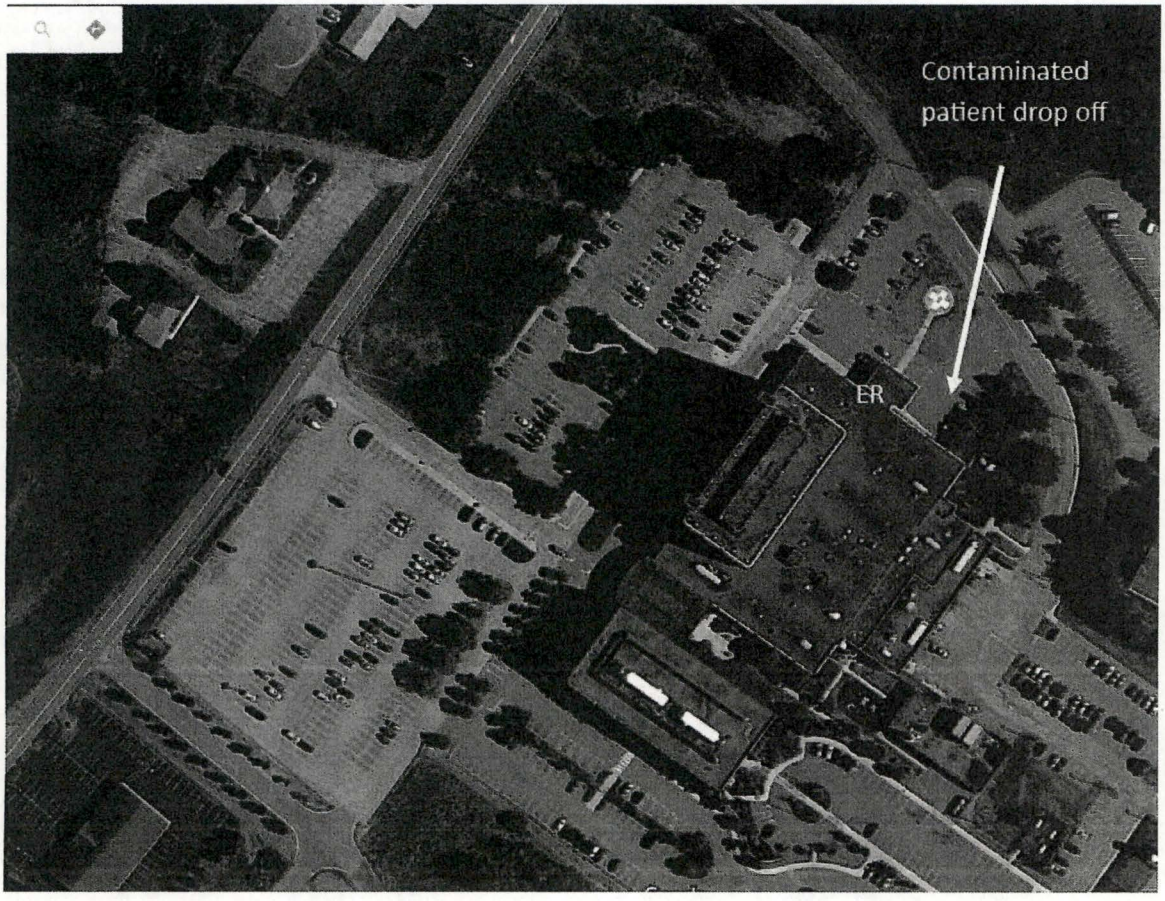
Removal of outer garments eliminates contamination on right upper arm.

Right and left forearm is reading 1800 cpms on initial reading. First decon attempt decreases reading to 800 cpm. Second decon attempt results in reading of less than 100 cpm.

Right knee is injured. No contamination identified.

APPENDIX D: EXERCISE SITE MAPS

Figure D.1: Weirton Medical Center



APPENDIX E: ACRONYMS

Acronym	Term
DHS	U.S. Department of Homeland Security
ExPlan	Exercise Plan
HSEEP	Homeland Security Exercise and Evaluation Program
SME	Subject Matter Expert
WMC	Weirton Medical Center
REP	Radiological Emergency Preparedness
MS-1	Medical Services One

U.S. Department of Homeland Security
Region III
One Independence Mall, 6th Floor
615 Chestnut Street
Philadelphia, PA 19106-4404

FEMA

APR 26 2017

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

To Whom It May Concern:

Enclosed is the final After Action Report/Improvement Plan for the Beaver Valley Power Station (BVPS) Medical Services (MS-1) Drill that was held on March 30, 2017. The Washington Hospital and Washington Ambulance and Chair participated in the drill.

There were no Level 1 Findings, Level 2 Findings, or Planning Issues identified during the drill.

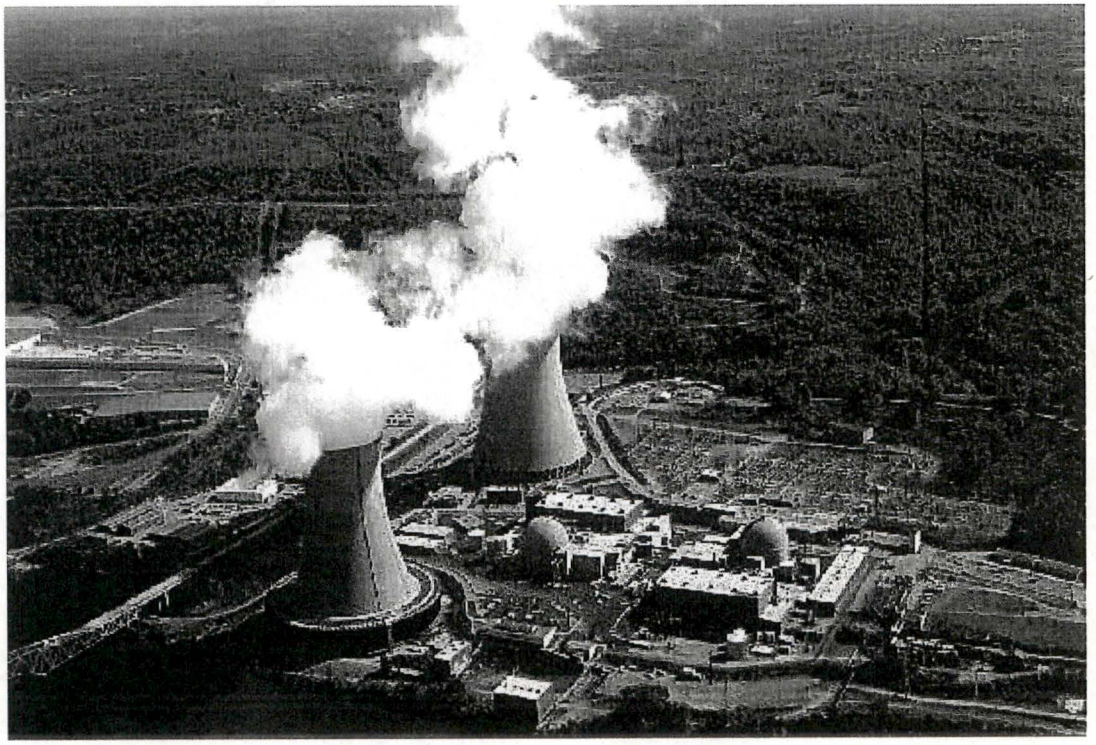
Based on the results of the exercise and a review of the offsite radiological emergency response plans and procedures submitted, FEMA Region III has determined they are adequate (meet the planning and preparedness standards of NUREG-0654/FEMA-REP-1, Revision 1, November 1980, as referenced in 44 CFR 350.5) and there is reasonable assurance they can be implemented, as demonstrated during this exercise.

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

Sincerely,

Robert P. Welch
Acting Regional Administrator

Enclosure



Beaver Valley Power Station Medical Services Drill

After Action Report/Improvement Plan

Drill Date – March 30, 2017

Radiological Emergency Preparedness (REP) Program

FEMA

Published April 21, 2017

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Beaver Valley Power Station
Medical Services Drill
After Action Report/Improvement Plan
Published Date: March 30, 2017

Contents

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EXECUTIVE SUMMARY

On March 30, 2017 a Medical Services (MS-1) Drill was conducted for the 10-mile Plume Exposure Pathway, Emergency Planning Zone (EPZ) around the Beaver Valley Power Station by the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA) Region III. The most recent prior MS-1 Drill for this site was conducted on March 13, 2015.

The purpose of the Beaver Valley Power Station (BVPS) MS-1 Drill was to assess the State and local offsite response organizations preparedness in responding to a radiological medical emergency. The Drill was held in accordance with FEMA's policies and guidance concerning the evaluation of State and local Radiological Emergency Response Plans (RERP) and procedures.

FEMA wishes to acknowledge the efforts of the many individuals in the Commonwealth of Pennsylvania, Washington County Department of Public Safety Office, Washington Hospital (WH), Washington Ambulance and Chair and Washington County Hazmat, who participated during this Drill.

Protecting the public health and safety is the full-time job of some of the Drill participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility as volunteers providing vital emergency services twenty-four (24) hours a day to the communities in which they live. Cooperation and teamwork of all the participants was observed during this Drill.

This report contains the final evaluation of the MS-1 Drill. The Commonwealth of Pennsylvania and local organizations demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Level 1 or Level 2 Findings or Plan Issues as a result of this Drill.

SECTION 1: EXERCISE OVERVIEW

1.1 Drill Details

Drill Name
Washington Hospital 2017 Medical Services Drill

Type of Drill
Medical Services

Drill Date
March 30, 2017

Program
Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type
Radioactive Contaminated/Injured Person

1.2 Planning Team Leadership

Chris Nemcheck
Technological Hazards Program Specialist
Federal Emergency Management Agency
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Dave Linkimer
Sr. Nuclear Specialist
Emergency Preparedness - Offsite Liaison
FirstEnergy-Beaver Valley Power Station
(412) 720-2940
dlinkimer@firstenergycorp.com

1.3 Participating Organizations

Agencies and organizations of the following jurisdictions participated in the BVPS 2017 Medical Services Drill:

County Jurisdictions
Washington County Department of Public Safety Office
Washington County HAZMAT

Private Sector Organizations
Washington Hospital
Washington Ambulance and Chair

SECTION 2: DESIGN SUMMARY

2.1 Purpose and Design

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

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

A. Taking the lead in offsite emergency planning and in the review and evaluation of radiological emergency response plans and procedures developed by State and local governments;

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

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

D. Coordinating the activities of the following Federal agencies with responsibilities in the radiological emergency planning process:

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

Representatives of these agencies serve on the Region III Regional Assistance Committee (RAC), which is chaired by FEMA. A Radiological Emergency Preparedness MS-1 Drill was conducted on March 30, 2017, to assess the capabilities of State and local emergency preparedness organizations in implementing their radiological emergency response plans and procedures to protect the public health and safety during a radiological emergency involving BVPS.

The purpose of this After Action Report is to present the Drill results, and findings on the performance of the Off-site Response Organizations (OROs) during a simulated radiological emergency involving a contaminated injured individual.

The Drill was designed to demonstrate and evaluate the responder's knowledge of patient and responder personal protective measures, equipment preparation and employment, and decontamination procedures. All activities were demonstrated in accordance with the participants' plans and procedures as they would be performed in an actual emergency, except as agreed to in the Exercise Plan and Extent-of-Play Agreement.

The findings presented in this report are based on the evaluations of the Federal evaluator team, with final determinations made by the FEMA Region III Regional Assistance Committee (RAC) Chairperson and approved by FEMA Headquarters. These reports are provided to the NRC and participating States. State and local governments utilize the findings contained in these reports for the purposes of planning, training, and improving emergency response capabilities.

- Section 1 of this report, entitled Overview, presents the Exercise Planning Team and the Participating Organizations.
- Section 2 of this report, entitled Design Summary, and includes the Purpose and Design, Objectives, Capabilities, and Activities, and the Scenario Summary.
- Section 3 of this report entitled Analysis of Capabilities contains detailed Evaluation and Results; a Summary Results of Evaluation; and Criteria Evaluation Summary. Information on the demonstration for each jurisdiction or functional entity evaluated is presented in a jurisdiction-based, issue-only format.
- Section 4 of this report entitled Conclusion, is a description of FEMA's overall assessment of the capabilities of the participating organizations.

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

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

2.2 Objectives, Capabilities and Activities

The BVPS MS-1 Drill evaluated by FEMA, was designed to demonstrate that the ORO can transport, transfer, monitor, decontaminate and treat a contaminated/injured person while minimizing any cross contamination during a radiological emergency.

The demonstration included the ability to:

A. Respond to a radiation medical emergency following Washington County Department of

Public Safety Office, Washington Hospital and Washington Ambulance and Chair organization procedures.

B. Monitor for radiation contamination and uptake, and to validate persons providing these services are adequately prepared to handle contaminated individuals.

C. Conduct timely and accurate communications between the hospital and offsite response agencies.

D. Exhibit correct priorities and appropriate techniques in Emergency Medical Services (EMS); transportation of patients; and pre-hospital and hospital emergency care of radioactively contaminated patients.

E. Demonstrate inter-agency cooperation between the Ambulance Service/EMS and the hospital.

2.3 Scenario Summary

The scenario for this Medical Services Drill consisted of simulated notifications of escalating emergency classification levels at the BVPS from Site Area Emergency to General Emergency. Subsequent to a release of radiological material the plant declared a General Emergency.

During an evacuation of the BVPS Emergency Planning Zone, EMS personnel arrived at an emergency worker monitoring and decontamination station. A worker assigned to vehicle decontamination is hit by an opening door and knocked down. The victim has a possible fractured nose, bruised and swollen (not immediately known without X-rays) and is complaining of pain in the right wrist area.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Evaluation and Results

Contained in this section are the results and findings of the evaluations of all jurisdictions and locations that participated in the March 30, 2017 BVPS MS-1 Drill. The Drill was conducted to demonstrate the ability of the OROs to respond to a potentially contaminated injured person associated with BVPS.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of the appropriate Demonstration Criteria contained in the REP Program Manual. Detailed information on the Demonstration Criteria and the Extent-of-Play Agreement are found in Appendix C.

The Drill was conducted and evaluated in accordance with the Radiological Emergency Preparedness Program Manual (January 2016) and NUREG-0654/FEMA-REP-1, Rev. 1. The Demonstration Criteria included:

1.e.1- Equipment, maps, displays, monitoring instruments, dosimetry, potassium iodide (KI) and other supplies are sufficient to support emergency operations.

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.

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.

3.2 Summary Results of Evaluation

The matrix presented in Table 3.1, on the following pages, presents the status of the Demonstration Criteria from the REP Program Manual that were scheduled for demonstration during this Drill by all participating jurisdictions and functional entities. Drill Demonstration Criteria are listed by number and the demonstration status of the criteria is indicated by the use of the following letters:

(L1) Level 1 Finding: An observed or identified inadequacy of organizational performance in an exercise that could cause a determination that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in event of a radiological emergency to protect the health and safety of the public living in the vicinity of a Nuclear Power Plant (NPP).

(L2) Level 2 Finding: An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety.

(P) Plan Issue: An observed or identified inadequacy in the off-site response organizations' emergency plan/implementing procedures, rather than that of the ORO's performance.

(N) Not Demonstrated: The term applied to the status of a REP Evaluation Area Criterion indicating that the ORO, for a justifiable reason, did not demonstrate the Evaluation Area Criterion, as required in the Extent-of-Play Agreement or at the two-year or eight-year interval required in the FEMA REP Program Manual.

(M) Met: The status of a REP Evaluation Area Criterion indicating that the participating ORO demonstrated all demonstration criteria for the Evaluation Area Criterion to the level required in the Extent-of-Play Agreement with no findings assessed in the current exercise and no unresolved prior findings.

Table 3.1 – Summary of Drill Evaluation

Date: 2017-March-30 Site: Beaver Valley Power Station (M) Met, (1) Level 1 Finding, (2) Level 2 Finding, (P) Planning Issue		WH	WAC
Emergency Operations Management			
Mobilization	1a1		
Facilities	1b1		
Direction and Control	1c1		
Communications	1d1		
Equipment and Supplies to Support Operations	1e1	M	M
Protective Action Decision Making			
Emergency Worker Exposure Control	2a1		
Accident Assessment and Pars for the Emergency Event	2b1		
PAD decision-making process and coordination for the General Public	2b2		
PADs for disabilities & access/functional needs people	2c1		
Radiological Assessment & Decision making for the Ingestion Pathway	2e1		
Radiological Assessment & Decision making for Relocation/Reentry/Return	2d1		
Protective Action Implementation			
Implementation of Emergency Worker Exposure Control	3a1	M	M
Implementation of KI PAD for Institutionalized Individuals/Public	3b2		
Implementation of PADs for disabilities & access/functional needs people	3c1		
Implementation of PADS for Schools	3c2		
Implementation of Traffic and Access Control	3d1		
Impediments to Evacuation	3d2		
Implementation of Relocation/Reentry/Return Decisions	3f1		
Field Measurements and Analysis			
RESERVED	4a1		
Field Team Management	4a2		
Plume Phase Field Measurement, Handling, & Analyses	4a3		
Post Plume Phase Field Measurements & Sampling	4b1		
Emergency Notification and Public Information			
Activation of the Prompt Alert & Notification System (ANS)	5a1		
RESERVED	5a2		
Activation of the Back-up ANS	5a3		
Activation of the Exception Area ANS	5a4		
Emergency Information & Instructions to the Public/Media	5b1		
Support Operations/Facilities			
Monitoring, Decontamination, & Registration of Evacuees	6a1		
Monitoring/Decontamination of Emergency Workers and Equipment	6b1		
Temporary Care of Evacuees	6c1		
Transportation/Treatment of Contaminated Injured Individuals	6d1	M	M

3.3 Criteria Evaluation Summaries

3.3.1 Private Organizations

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

3.3.1.1 Washington County, Washington Hospital

a. MET: 1.e.1; 3.a.1; 6.d.1
b. LEVEL 1 FINDINGS: NONE
c. LEVEL 2 FINDINGS: NONE
d. PLAN ISSUES: NONE
e. PRIOR ISSUES – RESOLVED: NONE
f. PRIOR ISSUES – UNRESOLVED: NONE

3.3.1.2 Washington County, Washington Ambulance and Chair

a. MET: 1.e.1; 3.a.1; 6.d.1
b. LEVEL 1 FINDINGS: NONE
c. LEVEL 2 FINDINGS: NONE
d. PLAN ISSUES: NONE
e. PRIOR ISSUES – RESOLVED: NONE
f. PRIOR ISSUES – UNRESOLVED: NONE

SECTION 4: CONCLUSION

The Commonwealth of Pennsylvania and private sector organizations, except where noted in this report, demonstrated knowledge of their radiological emergency response plans and procedures and they were successfully implemented during the BVPS MS-1 Drill evaluated on March 30, 2017.

Three FEMA evaluators provided analyses of six evaluation criteria. These analyses resulted in a determination of no Findings, no new Plan Issues, and no unresolved Plan Issues.

The Washington Ambulance and Chair (WAC) successfully demonstrated that necessary equipment and supplies were available to support the treatment of an injured/contaminated patient. EMS personnel prioritized life-saving medical practices over contamination concerns, implemented protective measures through the use of Personal Protective Equipment, regular glove changes, and control of cross contamination. Appropriate patient assessments were demonstrated as well as regular and ongoing communications with Washington Hospital.

The Washington Hospital successfully demonstrated the mobilization of staff, staffing assignments, issue of dosimetry and monitoring equipment, and effective use of Personal Protective Equipment during the exercise. The hospital staff effectively responded to communications from the WAC, initiated the set-up and management of a Radiation Emergency Area, and accepted and successfully treated an injured/contaminated patient while administering life-saving medical attention over contamination concerns. In addition, the medical facility provided security control of the facility including the drop off bay for the patient and overall protective measures for contamination control and prevention of cross contamination.

Based on the results of the Drill and a review of the offsite radiological emergency response plans and procedures submitted, FEMA Region III has determined they are adequate (meet the planning and preparedness standards of NUREG-0654/FEMA-REP-1, Revision 1, November 1980, as referenced in 44 CFR 350.5) and there is reasonable assurance they can be implemented, as demonstrated during this Drill.

An Improvement Plan (IP) will not be developed as part of this report.

APPENDIX A: EVALUATORS AND TEAM LEADERS

The following is the list of Evaluators and Team Leader for the Beaver Valley Power Station 2017 MS-1 Drill evaluated on March 30, 2017. The following constitutes the managing staff for the Evaluation:

- Thomas Scardino, DHS/FEMA, Regional Assistance Committee Chairman
- Christopher Nemcheck, DHS/FEMA, Technological Hazards Program Specialist/Site Specialist

DATE: March 30, 2017

SITE: Beaver Valley Power Station

LOCATION	EVALUATOR	AGENCY
Washington Hospital	Nick Buls	FEMA RIII
Washington Hospital	Chris Nemcheck	FEMA RIII
Washington Ambulance and Chair	Lee Torres	FEMA RIII

APPENDIX B: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
BVPS	Beaver Valley Power Station
DHS	Department of Homeland Security
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EPZ	Emergency Planning Zone
FEMA	Federal Emergency Management Agency
ER	Emergency Room
IP	Improvement Plan
MS-1	Medical Services
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
ORO	Offsite Response Organization
PEMA	Pennsylvania Emergency Management Agency
RAC	Regional Assistance Committee
REP	Radiological Emergency Preparedness
WAC	Washington Ambulance and Chair
WCDPS	Washington County Department of Public Safety Office
WH	Washington Hospital

APPENDIX C: EXTENT-OF-PLAY AGREEMENT

The Extent-of-Play Agreement was extracted from the Exercise Plan, which was drafted by the Pennsylvania Emergency Management Agency and is included in this Report as an Appendix. The Extent-of-Play was negotiated and agreed upon by FEMA Region III, and the Pennsylvania Emergency Management Agency.

The Exercise Plan was created as an overall tool for facilitation and implementation of the BVPS MS-1 Drill and to integrate the concepts and policies of the Homeland Security Exercise Evaluation Program with the Radiological Emergency Preparedness Program Exercise Methodology.

APPENDIX B: EXTENT OF PLAY INFORMATION

BEAVER VALLEY POWER STATION
WASHINGTON HOSPITAL MEDICAL SERVICES DRILL
March 30, 2017

Method of Operation

1. The power station and its personnel will not play as active role in the facilitation of this drill. The plant's simulated events, radiation releases, and emergency classifications will be injected by off-site controllers. A pre-approved scenario will be used.

2. The Pennsylvania Emergency Management Agency (PEMA), Area Offices (Harrisburg Central Area and Indiana Western Area) will not be activated as part of this drill. The Exercise Coordinator will provide pre-drill coordination and observe drill activities.

3. First Energy Nuclear will participate as a Controller in this drill.

4. Washington County Department of Public Safety Office will participate in this drill.

5. Controllers will be supplied by PEMA. Controllers are not players and will provide injects and information to initiate and stimulate drill play by providing radiological readings during the monitoring of personnel. Live radioactive sources will only be used to perform operational checks of radiological monitoring instruments.

6. PEMA staff and qualified county emergency management personnel will be assigned to key locations for the purpose of observing, noting response actions and conditions, and recording observations for future use. Observers will not take an active part in the proceedings, but will interact with staff members to the extent necessary to fulfill their observer responsibilities. Coaching of players is not permitted, except as appropriate to provide training to participants awaiting a re-demonstration.

7. Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), Radiological Emergency Preparedness Program (REPP) Evaluators: FEMA Evaluators will be present at designated demonstration locations.

8. Drill activities are scheduled to commence on or about 0800, March 30, 2017 and continue until the participants have completed the drill objectives and demonstrated the Exercise Evaluation Criteria.

9. Participants and agencies will Stand Down when the Controllers have confirmed with the evaluators that all evaluation criteria have been demonstrated and when the State and County Observers are satisfied that the Objectives have been met.

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

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

Objectives

A. Demonstrate the ability to respond to a radiation medical emergency following the procedures of Washington County Department of Public Safety, Washington Ambulance & Chair / EMS and Washington Hospital.

B. Demonstrate timely and accurate communications between the hospital and offsite response agencies. (Telephones will be used in lieu of radios whenever possible to limit the potential misinterpretation of the drill as an actual event.)

C. Demonstrate correct priorities and appropriate techniques in EMS, transportation of patients and pre-hospital and hospital emergency care of radioactively contaminated patients.

D. Demonstrate inter-agency cooperation between the Ambulance Company / EMS and the Hospital.

Extent of Play

Evaluation Area 1—Emergency Operations Management

Sub-Element 1.e—Equipment and Supplies to Support Operations

Intent

This sub-element is derived from NUREG–0654 / FEMA-REP-1, which requires that Offsite Response Organizations (ORO) 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).

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.

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

State Negotiated Extent of Play:

Ambulance crews are not trained or equipped to operate or carry radiological monitoring equipment. In accordance with the PEMA SOP Annex E, Appendix 5 " Radiological Exposure Control" (March 2002), ambulance crews operating outside the 10 mile Emergency Planning Zone are considered "Category C" emergency workers; therefore, they are only required to implement protective measures consistent with protection against blood-borne pathogens; i.e., long sleeved garments, trousers, impermeable gloves, and surgical masks. "Category C" emergency worker dosimetry issue consists of one permanent reading dosimeter per worker. Ambulance crews are provided additional dosimetry if they are tasked with entering the 10-mile EPZ.

Hospital personnel are also considered "Category C" emergency workers and will conform to PEMA SOP protective measures at minimum. Direct Reading Dosimeters may be issued individually; however, an Area Kit will be established in the Radiation Emergency Area (REA). Individual PRDs will be issued by the hospital. Radiological Survey Instruments are calibrated per manufactures recommendations.

Outstanding Issues:

None

Evaluation Area 3—Protective Action Implementation

Sub-Element 3.a—Implementation of Emergency Worker Exposure Control

Intent

This Sub-element is derived from NUREG0654 / 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)

Extent of Play

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

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

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

During a plume phase exercise, emergency workers must demonstrate the procedures to be followed when administrative exposure limits and turn-back values are reached. The emergency worker must report accumulated exposures during the exercise as indicated in the plans / procedures. OROs must demonstrate the actions described in the plans / procedures by determining whether to replace the worker, authorize the worker to incur additional exposures, or

take other actions. If exercise play does not require emergency workers to seek authorizations for additional exposure, evaluators must interview at least two workers to determine their knowledge of whom to contact in case authorization is needed, and at what exposure levels. Workers may use any available resources (e.g., written procedures and/or co-workers) 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 re-enter 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.

State Negotiated Extent of Play:

- *Demonstrate appropriate procedures and equipment to manage radiological exposure to staff.*
- *Demonstrate the ability to transport contaminated / injured individuals while using ALARA principles.*
- *Demonstrate the ability to utilize dosimetry, equipment and procedures to manage radiological exposure to emergency workers as required by plans.*

Radiological briefings will be provided to address exposure limits and procedures to replace personnel approaching limits and how permission to exceed limits is obtained. At any time, players may ask other players or supervisors to clarify radiological information. In Pennsylvania,

emergency workers outside the EPZ do not have turn-back values. Standard issue of dosimetry and potassium iodide for each category of emergency worker is as follows:

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

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

Outstanding Issues:

None

Evaluation Area 6—Support Operation / Facilities
Sub-Element 6.d—Transportation and Treatment of Contaminated Injured Individuals

Intent

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

Criterion 6.d.1: The facility / ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.
(NUREG0654 / FEMA-REP-1, F.2; H.10; K.5.a, b; L.1, 4)

Extent of Play

Assessment of this Demonstration Criterion may be accomplished during a biennial exercise, an actual event, or drills. FEMA has determined that these capabilities have been enhanced and consistently demonstrated as adequate; therefore, offsite medical services drills need only be evaluated biennially. FEMA will, at the request of the involved ORO, continue to evaluate the drills on an annual basis. If more than two medical facilities and transportation providers are designated as primary or backup, they are also evaluated biennially.

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

OROs must demonstrate the capability to transport contaminated injured individuals to medical facilities.

An ambulance must be used for response to the victim. However, to avoid taking an ambulance out of service for an extended time, OROs may use any vehicle (e.g., car, truck, or van) to transport the victim to the medical facility. It is allowable for an ambulance to demonstrate up to the point of departure for the medical facility and then have a non-specialized vehicle transport the "victim(s)" to the medical facility. This option is used in areas where removing an ambulance from service to drive a great distance (over an hour) for a drill would not be in the best interests of the community.

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

Monitoring of the victim may be performed before transport or en route, or may be deferred to the medical facility. Contaminated injured individuals transported to medical facilities are monitored

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

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

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

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

State Negotiated Extent of Play:

Demonstrate that the facility has the appropriate space, adequate resources and trained personnel to provide monitoring, decontamination and medical services to contaminated/injured individuals.

Demonstrate the ability to transport contaminated / injured individuals while using ALARA principles.

The Washington Ambulance & Chair will pick-up a pre-staged simulated contaminated / injured victim.

Outstanding Issues:

None