U.S. Department of Homeland Security Region V 536 South Clark Street, Floor 6 Chicago, IL 60605



NRC Headquarters Document Control Desk U.S. Nuclear Regulatory Commission Washington, DC 20555-0001

To Whom It May Concern:

Enclosed is one copy of the Final Report for the June 19, 2012, Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise for the Beaver Valley Power Station. The State of Ohio and Columbiana County, and the utility owner/operator, FirstEnergy Corporation, participated in this exercise.

There were no Deficiencies for any jurisdiction during this exercise. There were no Areas Requiring Corrective Actions (ARCAs) for the State of Ohio or Columbiana County during this exercise.

There was one previous ARCA from the April 20, 2010, Beaver Valley Exercise that was resolved for Columbiana County.

The previous issue resolved for Columbiana County was identified under ARCA # 03-10-5.a.1-A-03. This ARCA was corrected as a result of procedures being changed to include "Ensure that protective and precautionary actions described in the County's Protective Action Decisions (PADs) are reflected in the Emergency Alert System (EAS) messages and the Supplementary News Bulletin." This was verified by the evaluator during this exercise. The Emergency Management Director ensured that both messages were consistent. The EAS message and the Supplementary News Bulletin had the proper notification information for schools and the general public.

Additional information can be found in Section 3 of this report, entitled "Analysis of Capabilities."



Document Control Desk Page 2

· .2

Based on the results of the June 19, 2012, exercise, the offsite radiological emergency response plans and preparedness for the State of Ohio and the affected local jurisdiction, site-specific to the Beaver Valley Power Station, can be implemented and are adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at the site.

Therefore, the Title 44 CFR, Part 350, approval of the offsite radiological emergency response plans and preparedness for the State of Ohio site specific to the Beaver Valley Power Station, granted on June 15, 1987, remains in effect.

Copies of this Report were transmitted to the DHS/FEMA National Office, NRC Region III and the State of Ohio.

If you should have any questions, please contact William E. King, Chairman, Regional Assistance Committee, DHS/FEMA Region V, at (312) 408-5575.

Sincerely,

uex Ch. Odesmo

Andrew Velasquez Regional Administrator

Enclosure (1)



# Beaver Valley Power Station After Action Report/ Improvement Plan

Exercise Date - June 19, 2012 Radiological Emergency Preparedness (REP) Program



Published September 19, 2012

Unclassified Radiological Emergency Preparedness Program (REP)

Beaver Valley Power Station

# Beaver Valley Power Station After Action Report/Improvement Plan

### Published September 14, 2012

Contents	
Executive Summary	5
Section 1: Exercise Overview	11
1.1 Exercise Details	11
1.2 Exercise Planning Team Leadership	11
1.3 Participating Organizations	13
Section 2: Exercise Design Summary	15
2.1 Exercise Purpose and Design	15
2.2 Exercise Objectives, Capabilities and Activities	15
2.3 Scenario Summary	16
Section 3: Analysis of Capabilities	17
3.1 Exercise Evaluation and Results	17
3.2 Summary Results of Exercise Evaluation	18
3.3 Criteria Evaluation Summaries	24
3.3.1 Ohio Jurisdictions	24
3.3.1.1 State of Ohio - Initial Notification Point	24
3.3.1.2 State of Ohio - Emergency Operations Center - Executive Room	24
3.3.1.3 State of Ohio - Emergency Operations Center - Assessment Room	• 25
3.3.1.4 State of Ohio - Emergency Operations Center - Join Information Center	it 26
3.3.1.5 State of Ohio - Emergency Operations Facility	26
3.3.1.6 State of Ohio - Columbiana County Emergency Operations Center - State Analyst	27
3.3.2 Risk Jurisdictions	28
3.3.2.1 Columbiana County - Initial Notification Point	28
3.3.2.2 Columbiana County - Emergency Operations Cente	r 28

#### Unclassified Radiological Emergency Preparedness Program (REP)

Beaver Valley Power Station

	3.3.2.3	Columbiana County - East Liverpool School District - Evacuation School	29
	3.3.2.4	Columbiana County - Sheriffs Road Patrol & Dosimetry Coordinator - Traffic Control Point/Access Control Point - Dosimetry Control Officer Briefing	30
. ·	3.3.2.5	Columbiana County Sheriff's Department - TCP/ACP	31
	3.3.2.6	Columbiana County - Negley Fire Department Reception Center - Dosimetry Control Officer Briefing	32
	3.3.2.7	Columbiana County - Reception Center - DCO Briefing Interview	32
	3.3.2.8	Columbiana County - Backup Route Alerting - Negley FD	33
	3.3.2.9	Columbiana County - Route Verfication - Negley Fire Department	34
	3.3.2.10	Columbiana County - Negley Fire Department Reception Center	35
	3.3.2.11	Columbiana County - Negley Fire Department Reception Center - Registration - KI Distribution to the Public	36
	3.3.2,12	Columbiana County - Negley Fire Department Reception Center - Evacuee Monitoring and Decontamination	37
	3.3.2.13	Columbiana County - Negley Fire Department Reception Center - Evacuee Monitoring and Decontamination of Vehicles	38
a a	3.3.2.14	Columbiana County - Beaver Local School Complex - West Point Fire Department - Dosimetry Control Officer Briefing	38
	3.3.2.15	Columbiana County- Monitoring/Decontamination/EWs DCO Briefing Interview	39
	3.3.2.16	Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Mon/Decon Station	40
.:	3.3.2.17	Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Monitoring and Decontamination	41
	3.3.2.18	Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Monitoring and Decontamination of Vehicles	42 .

Beaver Valley Power Station

3.3.2.19 Columbiana County - United Local School Complex - Congregate Care Center	43
3.3.3 Pennsylvania Jurisdictions	43
3.3.3.1 State of Ohio - Joint Information Center - Beaver Valley Power Station	43
Section 4: Conclusion	45
Appendix A: Exercise Timeline	46
Appendix B: Exercise Evaluators and Team Leaders	47
Appendix C: Acronyms and Abbreviations	49
Appendix D: Exercise Plan	51
Appendix E: Scenario Timeline	93

#### After Action Report/Improvement Plan

ovement Plan Beaver Valley Power Station

and a sub-state of the second sec Second second

### This page is intentionally blank.

Beaver Valley Power Station

# **EXECUTIVE SUMMARY**

On June 19, 2012, a Radiological Emergency Preparedness (REP) Partial Participation Exposure Pathway exercise was conducted in the 10-mile Emergency Planning Zone (EPZ) around the Beaver Valley Power Station (BVPS) by the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA), Region V. The purpose of the exercise was to assess the level of preparedness of State and local jurisdictions in responding to a radiological emergency. This exercise was held in accordance with DHS/FEMA policies and guidance concerning the exercise of State and local Radiological Emergency Response Plans (RERPs) and procedures.

The most recent exercise at this site was conducted on April 20, 2010. The qualifying emergency preparedness exercise was conducted on November 28, 1984.

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

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

This Final After Action Report/Improvement Plan contains the evaluation of the biennial exercise and the evaluation of the following out of sequence activities:

Columbiana County:

Negley Fire Department - DCO Briefing Negley Fire Department - Dosimetry Interview Backup Route Alerting Demonstration - Negley Fire Department Route Verification - Negley Fire Department Emergency Worker Monitoring & Decontamination - DCO Briefing - Westpoint Fire Department Dosimetry Interview - West Point Fire Department

Beaver Valley Power Station

Emergency Worker Monitoring/Decontamination - West Point Fire Department Emergency Worker Monitoring & Decontamination Station - West Point Fire Department Monitoring & Decontamination of Emergency Worker Vehicle & Equipment - West Point Fire Department

School Interview (EV-2) - East Liverpool School District

Traffic and Access Control Point (TACP) - DCO Briefing - Columbiana County Sheriff's Department

Traffic and Access Control Point (TACP) - Columbiana County Sheriff's Department

Evacuee Monitoring/Decontamination - DCO Briefing - Negley Fire Department

Dosimetry Interview - Negley Fire Department

Evacuee Monitoring/Decontamination - Negley Fire Department

Reception Center - Negley Fire Department

Evacuee Registration - American Red Cross

Evacuee Vehicle Monitoring/Decontamination - Negley Fire Department

Distribution of KI to General Public - Columbiana County Health Department

Temporary Care of Evacuees/Congregate Care Center - American Red Cross

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them.

There were no Deficiencies or Areas Requiring Corrective Action (ARCAs) for the State of Ohio or Columbiana County. There was one previous ARCA issued to Columbiana County from a past exercise that was corrected.

The previous ARCA that was corrected during the exercise for Columbiana County was issued under issue # 03-10-5.a.1-A-03. This ARCA was corrected as a result of Procedures being corrected to include "Ensure the protective and precautionary actions described in the county PAD were reflected in the EAS and the Supplementary news bulletin" This was verified by the evaluator during this exercise. The EMD ensured that both messages were concurrent. The EAS message and the Supplementary News Bulletin had the proper notification information for schools and the general public.

Section 3 and 4 of this report, provides detailed information regarding any Deficiencies, ARCAs, Planning Issues and Schedule of Corrective Actions.

#### **INTRODUCTION - EXERCISE BASIS**

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

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

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

-Taking the lead in offsite emergency planning and in the review and evaluation of 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 Agriculture;

- U.S. Department of Commerce;

- U.S. Department of Energy;

#### Beaver Valley Power Station

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

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

Formal submission of the RERPs for the Beaver Valley Power Station to FEMA Region V by the State of Ohio and involved local jurisdictions occurred on January 23, 1986. Formal approval of these RERPs was granted by FEMA on June 15, 1987, under 44 CFR 350.

A REP Partial Participation Plume Exposure Pathway Exercise was conducted on June 19, 2012, and evaluated by DHS/FEMA to assess the capabilities of State and local offsite emergency preparedness organizations in implementing their RERPs and procedures to protect the public's health and safety during a radiological emergency involving the Beaver Valley Power Station. The purpose of this exercise report is to present the exercise results and findings on the performance of the Offsite Response Organizations (ORO) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the Federal evaluation team, with final determinations made by the DHS/FEMA Region V RAC Chairperson, and approved by the DHS/FEMA Headquarters.

the state of the s

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 REP Program Manual, dated April 2012

Section 1 of this report, entitled "Exercise Overview", presents information pertaining to the

team that planned and coordinated the exercise. This section also provides a listing of all participating jurisdictions and functional entities that were evaluated.

Section 2 of this report, entitled "Exercise Design Summary", contains the purpose and design of the exercise, a description of the plume pathway EPZ and presents basic information and data relevant to the exercise scenario.

Section 3 of this report, entitled "Analysis of Capabilities," presents detailed information on the demonstration of applicable exercise criteria at each jurisdiction or functional entity evaluated in a jurisdiction-based, issues-only format. This section also contains: (1) descriptions of all Deficiencies and ARCAs (if any) assessed during this exercise, recommended corrective actions, and the State and local government's schedule of corrective actions, if applicable, for each identified exercise issue; and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs efforts to resolve them.

Section 4 of this report, entitled "Conclusion" presents the DHS/FEMA summary of overall exercise conduct and results as evaluated against the requirements of 44 CFR 350.

EMERGENCY PLANNING ZONE (EPZ) DESCRIPTION

The Beaver Valley Power Station (BVPS) is located 22 miles northwest of Pittsburgh, Pennsylvania. The BVPS was constructed by Stone and Webster along the Ohio River at Shippingport, Pennsylvania and is separate from but adjacent to the Shippingport Atomic Power Station.

The 10-mile radius of the plume Emergency Planning Zone (EPZ) of the Beaver Valley Power Station incorporates the planning for all or part of the following Counties: Columbiana County, Ohio; Beaver County, Pennsylvania and Hancock County, West Virginia. The major topographic features are the Ohio River, the Beaver River and numerous steep ridges and small valleys. The 2010 census approximates the total population to be 20,922. There are no parks or recreational areas within this area. Large industries work three shifts per day and a majority of the employees live relatively close to their jobs. The following Sub-Areas are included within the 10-mile EPZ: Sub-Areas 1, 2, 3, and 4.

The 50-mile radius of the Ingestion Planning Zone (IPZ) has a 2000 census population of 1,404,631. The area includes the following States and their Counties: Ohio, (Belmont, Carroll, Columbiana, Harrison, Jefferson, Mahoning, Portage, Stark, and Trumbull), Pennsylvania, (Allegheny, Armstrong, Beaver, Benango, Butler, Clarion, Fayette, Green, Lawrence, Mucer, Washington, and Westmoreland), West Virginia, (Brooke, Hancock, Marshall, and Ohio).

1

1. . . <u>.</u>

1.5

a ferrar and

الرفاك المراجع وبالإحدار فالحوا حملا

Beaver Valley Power Station

# SECTION 1: EXERCISE OVERVIEW 1.1 Exercise Details

Exercise Name Beaver Valley Power Station

**Type of Exercise** Plume

**Exercise Date** 

June 19, 2012

#### Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

# Scenario Type

Radiological Emergency

### **1.2 Exercise Planning Team Leadership**

William King Regional Assistance Committee Chairman DHS/FEMA Technical Hazards Branch, Chief 536 S. Clark St. Chicago, Illinois, 60605 312-408-5575 william.king5@fema.dhs.gov

Stephen Tulley Exercise Director DHS/FEMA Supervisory REP Team Leader 536 S. Clark Street

Chicago, Illinois, 60605 312-408-4425 stephen.tulley@fema.dhs.gov

Carolyn Sturghill Site Specialist DHS/FEMA Site Specialist 536 S. Clark St. Chicago, Illinois, 60605 312-408-5379 carolyn.sturghill@fema.dhs.gov

Gary Naskrent Assistant Exercise Director DHS/FEMA Supervisory Team Leader 536 South Clark Street Chicago, Illinois, 60605 312-408-4214 gary.naskrent@fema.dhs.gov

Michael Bear Radiological Branch Chief Ohio Emergency Management Agency Radiological Branch Chief 2855 West Dublin-Granville Road Columbus, Ohio, 43235 614-799-3867 mlbear@dps.state.oh.us

Rudy Sacchet Radiological Analyst

Ohio Emergency Management Agency State Resident Radiological Analyst 215 South Market Street Lisbon, Ohio, 44432 330-424-9675 resacchet@dps.state.oh.us

Darren Dodson EMA Director Columbiana County Emergency Management Agency EMA Director 215 South Market Street Lisbon, Ohio, 44432 330-424-9725 ccema@sbcglobal.net

### **1.3 Participating Organizations**

Agencies and organizations of the following jurisdictions participated in the Beaver Valley Power Station exercise:

State Jurisdictions

Ohio State Highway Patrol

Ohio Emergency Management Agency

Ohio Environmental Protection Agency

Ohio Department of Health

Ohio Department of Public Safety

Ohio State Radiological Analyst

**Risk Jurisdictions** 

Columbiana County Commissioners

Columbiana County Emergency Management Agency

Columbiana County Sheriff's Department

Columbiana County Health Department

Columbiana County Medical Services

Ohio Department of Agriculture

Columbiana County Department of Transportation

Ohio State Highway Patrol

Columbiana County Superintendent of Schools

Negley Fire Department

West Point Fire Department

East Liverpool School District

Ohio State University (OSU) Extension

Department of Job and Family Services

Columbiana County Mental Health and Recovery

Westgate Middle School

East Liverpool Fire Department

**Private Organizations** 

American Red Cross

Radio Amateur Civil Emergency Services (RACES)

Amateur Radio Emergency Services (ARES)

FirstEnergy Corporation

Federal Jurisdictions

Federal Emergency Management Agency IMAT Liaison

Federal Emergency Management Agency Federal Coordinating Officers (FCO)

Federal Emergency Management Agency, Region V, WATCH

Federal Emergency Management Agency, Region V State Liaison

Federal Emrgency Management Agency Regional Response Coordination Center (RRCC)

# SECTION 2: EXERCISE DESIGN SUMMARY 2.1 Exercise Purpose and Design

The DHS/FEMA Region V Office evaluated the Beaver Valley Power Station Radiological Emergency Preparedness (REP) Partial Participation Plume Exposure Pathway Exercise conducted on June 19, 2012, to assess the capabilities of local emergency preparedness organizations in implementing their Radiological Emergency Response Plans (RERP) and procedures to protect the public's health and safety during a radiological emergency involving the Beaver Valley Power Station. The purpose of this report is to present the results and findings on the performance of the Offsite Response Organizations (OROs) during a simulated radiological emergency.

### 2.2 Exercise Objectives, Capabilities and Activities

Exercise objectives and identified Capabilities/REP Criteria selected to be demonstrated are discussed in Appendix D "Exercise Plan."

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

• ORO demonstration of effective Emergency Operations Management;

• ORO demonstration of effective Protective Action Decision Making;

• ORO demonstration of effective Protective Action Implementation;

• ORO demonstration of effective Emergency Notification and Public Information; and

• ORO demonstration of effective Support Operations and Facilities."

### 2.3 Scenario Summary

Appendix E "Scenario Timline," contains a summary of the Exercise Scenario, a simulated sequence of events that was used as the basis for invoking emergency response actions by Offsite Response Organizations (OROs) in the Beaver Valley Power Station REP Partial Participation Plume Exposure Pathway exercise conducted on June 19, 2012.

Results of a technical review of the scenario, submitted by the State of Ohio and FirstEnergy Corporation on February 10, 2012, indicated that the scenario was adequate to support demonstration of DHS/FEMA requirements, as well as criteria selected by the OROs provided by the State's February 23, 2012, extent-of-play submission. The DHS/FEMA Region V accepted this exercise scenario on May 30, 2012.

During the exercise, in addition to information and data provided through the Beaver Valley Power Station onsite scenario, controllers from the State of Ohio provided "inject messages" containing scenario events and/or relevant data to those persons or locations who would normally receive notification of such events. These inject messages were the method used for invoking additional specific response actions by OROs.

16

The details of the scenario are included in Appendix E "Scenario Timeline."

# **SECTION 3: ANALYSIS OF CAPABILITIES** 3.1 Exercise Evaluation and Results

Contained in this section are results and findings of the evaluation of all jurisdictions and functional entities that participated in the June 19, 2012, Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway exercise to test the offsite emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Beaver Valley Power Station.

Each jurisdiction and functional entity was evaluated based on its demonstration of exercise criteria delineated in the Federal REP Program Manual, dated April 2012. Detailed information on the exercise criteria and the extent-of-play agreement used in this exercise are found in Appendix D "Exercise Plan" of this report.

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

• M – Met: The status of a REP exercise Evaluation Area Criterion indicating that the participating ORO demonstrated all demonstration criteria for the Evaluation Area Criterion to the level required in the extent-of-play agreement with no Deficiencies, ARCAs or Plan Issues assessed in the current exercise and no unresolved prior ARCAs.

• D – Deficiency: An observed or identified inadequacy of organizational performance in an exercise that could cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant.

• A – Area Requiring Corrective Action – An observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety. Listing of the demonstrated exercise criteria under which one or more ARCAs was/were assessed during the current exercise or ARCAs assessed during prior exercises remain unresolved. Included is a description of any ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.

• P – Plan Issue – An observed or identified inadequacy in the ORO's emergency plan or implementing procedures, rather than in the ORO's performance.

• N – Not Demonstrated – Exercise criteria that were not demonstrated as scheduled during this exercise and the reason(s) they were not demonstrated.

• Prior ARCAs - Resolved – Descriptions of ARCAs assessed during previous exercises that were resolved and the corrective actions demonstrated, in this exercise.

• Prior ARCAs - Unresolved – Descriptions of ARCAs assessed during prior exercises that were not resolved in this exercise. Included is the reason the ARCA remains unresolved and recommended corrective actions to be demonstrated before or during the next exercise.

### **3.2 Summary Results of Exercise Evaluation**

The matrix presented in Table 3.1, on the following page(s), presents the status of all exercise criteria from the FEMA REP Program Manual, dated April 2012, which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. The Exercise criterion status box is blank if it was not scheduled for demonstration.

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

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

The identifying number of Deficiencies, ARCAs, and Plan Issues includes the following elements, with each element separated by a hyphen (-).

• Plant Site Identifier – A two-digit number, corresponding to the Utility Billable Plant Site Code (3 for Beaver Valley Power Station).

• Exercise Year – The last two digits of the year the exercise was conducted.

Beaver Valley Power Station

• Demonstration Criterion – The letters and number corresponding to the Demontration Criterion in the six Exercise Evaluation Areas described in the FEMA REP Program Manual, dated April 2012, which supercedes the Federal Register Notice, Vol. 67, No. 80, dated April 25, 2002.

• Issue Classification Identifier -(D = Deficiency, A = ARCA, P = Plan Issue).

• Exercise Issue Identification Number – A separate two or three-digit indexing number assigned to

each issue identified in the exercise.

After Action Report/Improvement Plan

Beaver Valley Power Station

Table 3.1 - Summary of Exercise	Eva	lua	tior	n (2	2 pa	ige	s)							: [
		*								· .		VACP-DCO B		
DATE: 2012-06-19 SITE: Beaver Valley Power Station, OH							·	nalvst	-,i		D-EV-2	Sord-TCI		DCO B-
M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated								SRA			verpool S	P&DosiC	CP	P-RCI
	,	IP	OC-ER-	DC-AR-	DC-JIC-	C-BVPS	DF	00 00	NP	EOC	East Liv	Shrif RJ	-TCP/A	Vegley I
	2 1070240	UI-HO	OH-E(	OH-E(	OH-E(	OH-JI	OH-E(	OH-E(	COL-I	COL-I	COL	COL-	ccsD	COL-1
Emergency Operations Management			12.2	283 1			And Providence		<u>UČĽ</u>	2.982	K.	. Sig	機關	0ø
Mobilization	<u> 1a1</u>	M		M	M	M	M	M	M	M				
Facilities	161										<u> </u>			
Direction and Control	1c1	<u> -</u>	М	M		M		M		M	<u> </u>	<u> </u>	·	
Communications Equipment	1d1	M		M	M	M	M		M	M	M		M	· ·
Equipment and Supplies to Support Operations	1e1	u series	3689W	M	M	M	M	and the second	ંજોઈને	M	M		M	an.
Protective Action Decision Making			潮趣	2898 2898				<b>後</b> 載	6.022	凝點	20%	識習	383	S.W.
EW Exposure Control Decisions	2a1		M	M	, -:					M		<u> </u>		
PARs	2b1		M	M	·									
PADs	262		M	M						M				
PADs for Disabled/Functional Needs	2c1			M						м				
Ingestion PADs	2d1,	-								- · ·	-	·	·	
RRR Decisions	2e1	( 46.2 e	8369 <del>8</del>	wars.	R.R.E		\$60.50a		JCPP X	Altai	Xiiiiu	1.6.34	1998 1998	96 E
Protective Action Implementation			鐵鐵		<b>\$</b> 22		编辑	24 <b>1</b> 8	题冠			影響	编辑	發展
EW Exposure Control Implementation	<u>3a1</u>	<u> </u>	·	M			M			M	M	M	M	M
KI Public/Institutionalized	361			M	<u> </u>				·	M	•		- 1	
PAD Implementation Disabled/Functional Needs	3c1	ŀ						· · · ·		M				<u> </u>
PAD Implementation Schools	3c2	<u> .</u>			<u> </u>			· · ·		M	Μ			
TACP Establishment	<u>3d1</u>		M	<u>M</u>	<u></u>					Μ			M	
Impediments	3d2		<u> </u>							M				
Implement Ingestion PADs	3e1													
Coordination of RRR Decisions	<u>3e2</u>					<u> </u>								
Coordination of RRR Decisions	3f1	1,214742,7	erse.	53.256 2	linion, i	annin .	85/2	2104	1.2M2.20	''-1222	යාගේම	1.343454	243.60	
Field Measurement and Analysis	MAL S	and the second				8年1	-16 	語题	1.2			RO.		
RESERVED	4à1	$\left  - \right $	<u> </u>			_								
Field Team Management	<u>4a2</u>			-		_							-	
Field Team Operations	<u>4a3</u>		-+											$\neg$
Field Team Sampling	461	┝╍┦	$\dashv$	_+		<u>.</u>							-	·
Laboratory Operations	4c1	266 S	9576 F	<u> </u>	3.5% I	95.	3.36	1996 -	感光	100	00%	Sec.	92%	Leizer
Emergency Notification and Public Info				RE (			1965   1		1949) 1949	(藏)	資源	15 A 8 3 A 9 3	新藩	
Initial Alert & Notification	Sal	Ĥ	M	+			+	M		M	-	-+	-+	
RESERVED	5a2	-	$\rightarrow$	+	-+	-+		+			·			4
Backup Alert & Notification	5a3		+	_		_		-			-	-+		
Exception Area Alerting	5a4	$\vdash$		+	-	+		$\dashv$			$\dashv$	_+	$\rightarrow$	
Subsequent Information & Instructions	561	1			M [ ]	ML				ΜL	- 1			

Beaver Valley Power Station

Support Operations/Facilities				1.0	al est	2.7	i.		皺	いた	3.4
Reception Center Operations	6a1										
EW Monitoring & Decontamination	6b1										
Congregate Care	6c1										
Contaminated Injured Transport & Care	6d1										ŀ
······································											

After Action Report/Improvement Plan

After Action Report/Improvement Plan

Beaver Valley Power Station

Table 3.1 - Summary of Exercise Evaluation	atior	ı (C	on	tin	uec	l. p	ag	e 2	/2)				· .	Ţ
DATE: 2012-06-19 SITE: Beaver Valley Power Station, OH M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		CC-RC-DCO Briefing Interview	CC-Backup Rte Alert-Negley FD	CC-Rte Verif-Negley FD	COL- Negley FD Reception Ctr	COL-Negley FD-RC-Reg-KI Dist	COL-Negley FD/RCEvMD-	COL-Negley FD-RCEvMDV-	COL-Beaver LSC-West Point FD-DCO B-	CC-Mon/Decon/EWs/DCO Briefing Interview	CC-BLSC-West Point FD-EWMD Station	COL-Beaver LSC-West Point FD-EWMD-	COL-Beaver LSC-West Point FD-EWMDV-	COL-United LSCCCC-
Emergency Operations Management		ι.				1997) 1997)	4					100		100
Mobilization	1a1							Ĺ						
Facilities	161													
Direction and Control	1c1				М		<u> </u>			-	<u>M</u>	<u> </u>		
Communications Equipment	1d1	<u> </u>			Μ			ļ		ļ	M	ļ		М
Equipment and Supplies to Support Operations	1e1	10.078	و مغیق ۲۰	9-52-6	M		£ 14	1	1.96%	- 5434	M	1.450	29.5	125
Protective Action Decision Making		- BB		Ē	Sec.	1	2.9	4,99%	لتلرا	18. B	192	1922		70-94 
EW Exposure Control Decisions	2a1							<u> </u>		<u> </u>				$\left  - \right $
PARs	261													
PADs	262													
PADs for Disabled/Functional Needs	2 <u>c1</u>	<b> </b>	•									<u> </u>		
Ingestion PADs	2d1													$\vdash$
RRR Decisions Protective Action Implementation	2e1	E.S.		R	10 - 20 - 20 - 20		N-11		S.		翻	穀效	99. 	েজ মন্দ্র
EW Exposure Control Implementation	3a1	M				·		<u> </u>	Μ	M				
KI Public/Institutionalized	361					M								
PAD Implementation Disabled/Functional Needs	3c1			·								<u> .</u>		
PAD Implementation Schools	3c2													
TACP Establishment	3d1			_										$\vdash$
Impediments	3d2							· .						i
Implement Ingestion PADs	3e1		_	_			_							
Coordination of RRR Decisions	3e2	$\left  - \right $	_									Ĺ		
Coordination of RRR Decisions	3f1	1050	(23-3X	<u></u>	1.50	1.1		19124	973 H	7. G	·	<u>3</u> 4.3	35.1	ک
Field Measurement and Analysis	1226	影響			2 . 3.42	4	1.74	1		1993 1993		10.94 1.13	\$?(y)	<b>R</b> . j.
RESERVED	4a1		-											-
Field Team Management	4a2						_			_				-
Field Team Operations	4a3						_			_				
Field Team Sampling	461		-		-	$\rightarrow$					_	$\square$	-	
Laboratory Operations	4cl	Fot			- 51			<u>.</u>	3.34	Maria	<u>इड</u> ्ड	(- <b>#</b> , <sup>%</sup> )	3-	857
Emergency: Notification and Public Info	5.1	74 CS	3-10	M		· * '	977	13 7	7.33	355	iestre,	Sak	<u>95</u>	<u>.</u>
	521	┝─╋	+	111	-+	+		-	$\neg$	-	-			
	5.2			+	+	+							$\neg$	
Dackup Alen & Nonneation Exponetion Area Alerting	501		1V1		-+						-			$\neg$
Exception Alea Metulig	544 51			$\neg$	-+		-				-			$\neg$
Subsequent information & Histrictions	1001	. 1	1	1		1	(	1	) í	1	(	- 1	1	1

After Action Report/Improvement Plan

Beaver Valley Power Station

Support Operations/Facilities	部部	3	4	10.5	6.37 433			111		15.5	27 A	-547 1.65	1.0
Reception Center Operations	6a1					M	М	М					
EW Monitoring & Decontamination	6b1										М	М	·
Congregate Care	6c1												M
Contaminated Injured Transport & Care	6d1					•	•						

Beaver Valley Power Station

### **3.3 Criteria Evaluation Summaries**

#### **3.3.1 Ohio Jurisdictions**

#### 3.3.1.1 State of Ohio - Initial Notification Point

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the State of Ohio Initial Notification Point (INP) successfully demonstrated the Target Capability to use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. For the BVPS, the State of Ohio INP is the Ohio State Highway Patrol (OSHP) District 6 Dispatch and Communications Center located in the Ohio Emergency Management Agency, a secured facility located in Columbus Ohio. The INP is staffed 24 hours a day, seven days a week. A variety of primary and back-up communications systems were successfully demonstrated during the exercise.

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

- a. MET: 1.a.1, 1.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DÉFICIENCY: None

#### d. PLAN ISSUES: None

- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### 3.3.1.2 State of Ohio - Emergency Operations Center - Executive Room

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the Executive Group in the State Emergency Operations Center successfully demonstrated the Target Capability for key personnel with leadership roles to provide direction and control to that part of the overall response effort for which they are responsible, including the use of effective procedures to alert, notify and mobilize emergency personnel and activate facilities in a timely manner, sufficient multi-agency coordination to respond to an incident at the BVPS through timely activation, effective management of the EOC, and staffing to an operational level. The Emergency Management Agency Executive Director provided effective management, direction and control throughout the exercise, coordinated

decision-making with Columbiana County and ensured that clear and consistent information was communicated to the public.

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

- a. MET: 1.c.1, 2.a.1, 2.b.1, 2.b.2, 3.d.1, 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### **3.3.1.3 State of Ohio - Emergency Operations Center - Assessment Room**

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the State of Ohio Emergency Operations Center Assessment Room staff implemented a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of Potassium Iodide (KI), was in place for emergency workers, including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. The Dose Assessment Group Supervisor issued emergency worker dose limits and potassium iodide ingestion recommendations. The Dose Assessment Systems Operator used Controller-injected information from simulated Field Monitoring Team air samples to calculate a dose conversion factor, and the Dose Assessment Group Supervisor provided a Protective Action Recommendation (PAR) to the State Executive Group recommending the Emergency Worker Exposure Limits, and the Radiological Assessment Branch Director issued a recommendation for Field Teams and Emergency Workers in designated Sub-Areas to ingest KI.

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

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

- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None

#### g. PRIOR ISSUES - UNRESOLVED: None

#### 3.3.1.4 State of Ohio - Emergency Operations Center - Joint Information Center

During the Beaver Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday June 19, 2012, the State of Ohio Emergency Operations Center (EOC) successfully demonstrated the Target Capability to provided accurate information to the public and news media in a timely manner and with a sense of urgency via the Public Information Officer (PIO) located in the EOC in Columbus, Ohio. The State EOC JIC was primarily tasked with the coordination and preparation of State of Ohio news releases, which included all required information. News briefings were conducted at the offsite JIC rather than the State EOC. State Information Packets on the DBNPS were available and included contact information and information about responsibilities of the State of Ohio, the four ECLs, actions taken after a State of Emergency is declared by the Governor, siren activation and appropriate individual response, sheltering-in-place, evacuation, and the State of Ohio plan for distribution and use of potassium iodide (KI).

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

- a. MET: 1.a.1, 1.d.1, 1.e.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### 3.3.1.5 State of Ohio - Emergency Operations Facility

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday June 19, 2012, the Ohio Department of Health (ODH) and the Ohio Emergency Management Agency (EMA) Emergency Operations Facility (EOF) Liaisons successfully demonstrated the Target Capability to issue appropriate dosimetry and procedures and manage radiological exposure to emergency workers in accordance with plans and procedures, and read and record dosimetry readings on a periodic basis. This demonstration was conducted at the Emergency Operations Facility located ajacent to the Beaver Valley Power Station, Shippingport, Pennsylvania. The EOF Liaisons had sufficient potassium iodide (KI) and

appropriate KI instructions, and demonstrated appropriate record keeping for the administrative of KI for emergency workers should a decision be made to ingest KI.

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

- a. MET: 1.a.1, 1.d.1, 1.e.1, 3.a.1.
- AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### 3.3.1.6 State of Ohio - Columbiana County Emergency Operations Center - State Analyst

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the State Radiological Analyst in the Columbiana County Emergency Operations Center successfully demonstrated the Target Capability to support the County's decision-making process for ensuring that relevant factors were considered and appropriate coordination between the State and County occurred, an exposure control system, including the use of potassium iodide (KI), was in place for emergency workers, and that provisions were in place to authorize radiation exposure in excess of administrative limits or protective action guides. He also ensured that appropriate protective action recommendations were based on available information on plant conditions, field monitoring data, licensee and offsite response organization dose projections, and knowledge of onsite and offsite environmental conditions.

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

a. MET: 1.a.1, 1.c.1, 5.a.1.

b. AREAS REQUIRING CORRECTIVE ACTION: None

- c.--DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### **3.3.2 Risk Jurisdictions**

#### 3.3.2.1 Columbiana County - Initial Notification Point

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the Columbiana County Initial Notification Point (INP), located in the Columbiana County Sheriff's Dispatch Center, demonstrated the Target Capability of Emergency Operations Center Management. The Columbiana County INP used effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. Dispatchers were familiar with their nuclear incident notification procedures. There are redundant communication systems available at the Dispatch Center, and both primary and backup systems were used effectively during this exercise.

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

- a. MET: 1.a.1, 1.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### 3.3.2.2 Columbiana County - Emergency Operations Center

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday June 19, 2012, the Columbiana County Emergency Operations Center (EOC) demonstrated the Target Capability of Emergency Operations Center Management by activities including the use of effective procedures to mobilize emergency personnel and activate facilities in a timely manner. During the exercise, the focus always remained on the primary objective, which is protecting the public health and safety of those who live and work in local communities. The Columbiana County Emergency Management Agency Director fully demonstrated the decision-making process involving appropriate factors and necessary coordination when making Protective Action Decisions. Direction and control for the overall response effort of the Columbiana County EOC was successfully demonstrated by the President of the Board of Commissioners and the Emergency Management Agency Coordinator. In summary, the status of DHS/FEMA criteria for this location is as follows:

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: 5.a.1.
  - ISSUE NO.: 03-10-5a1-A-03

ISSUE: The precautionary actions decided upon at 1815 hours, included a restriction of after hour school activities within the 10-mile EPZ and for residents within the 10-mile EPZ to go indoors to monitor the EAS. However, the precautionary action for residents within the 10-mile EPZ to go indoors and and to monitor the EAS stations was not included in the EAS message that was broadcast to the Public.

CORRECTIVE ACTION DEMONSTRATED: Procedures were corrected to include "Ensure the protective and precautionary actions described in the county PAD were reflected in the EAS and the Supplementary news bulletin" This was verified by the evaluator during this exercise. The EMD ensured that both messages were concurrent. The EAS message and the Supplementary News Bulletin had the proper notification information for schools and the general public.

g. PRIOR ISSUES - UNRESOLVED: None

#### 3.3.2.3 Columbiana County - East Liverpool School District - Evacuation School

During the Beaver Valley Power Station Radiological Emergency Preparedness (REP) exercise conducted on Tuesday, June 19, 2012, the East Liverpool School District demonstrated the Target Capability of evacuation for school children.

The East Liverpool School District is located within the 10-mile Emergency Planning Zone (EPZ). The Westgate Middle School was located jointly with the East Liverpool School District Administrative Offices at 810 West 8th Street, East Liverpool, Ohio. The school has a capacity

for 350 students and 60 staff serving grades Kindergarten through 4th grade. The school district representative described plans and procedures to safely evacuate students within the ten mile Emergency Planning Zone and reunite them with their families. The school district demonstrated sufficient personnel, current contact information, emrgency worker dosimetry, and communications capabilities to notify families and guardians regarding how to reunite with evacuated students.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.c.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

# 3.3.2.4 Columbiana County - Sheriffs Road Patrol & Dosimetry Coordinator - Traffic Control Point/Access Control Point - Dosimetry Control Officer Briefing

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness (REP) exercise conducted on Tuesday, June 19, 2012, Columbiana County Traffic and Access Control Point (TACP) Dosimetry Control Officer Briefing demonstrated the Target Capability to provide sufficient equipment, displays, dosimetry, potassium iodide (KI) and other supplies to support emergency operations. The Dosimetry Coordinator ensured that officers were issued appropriate dosimetry and adequately managed radiological exposure control in accordance with plans and procedures. Briefings and interviews were conducted in the Columbiana County Emergency Operations Center Executive Room and participants included a Lieutenant acting as the Dosimetry Coordinator and Traffic / Access Control Supervisor and a Detective acting as the Sheriff's Deputy.

30

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

- a. MET: 3.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None

After Action Report/Improvement Plan

- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### 3.3.2.5 Columbiana County Sheriff's Department - TCP/ACP

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise on Tuesday, June 19, 2012, the Columbiana County Sheriff's Department (CCSD) demonstrated the Target Capability to implement appropriate traffic and access control and provide accurate instructions to traffic and access control personnel stationed within the 10-mile Emergency Planning Zone (EPZ). A briefing and interview was conducted in the Columbiana County Emergency Operations Center Executive Room. During the interview, the deputy described his TCP assignment would be to direct traffic and assist evacuees leaving the BVPS Emergency Planning Zone (EPZ). His responses demonstrated appropriate knowledge and understanding regarding how and where to establish the assigned post, specific responsibilities, to report unusual events to CCSD dispatch and/or request additional guidance or resources in the event of any circumstance not addressed by standing or post orders.

A discussion of normal signaling devices, communications and safety equipment was conducted. The interview concluded with the deputy explaining end of shift monitoring, decontamination and equipment turn-in procedures.

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

- a. MET: 1.d.1, 1.e.1, 3.a.1, 3.d.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

**3.3.2.6** Columbiana County - Negley Fire Department Reception Center - Dosimetry Control Officer Briefing

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness (REP) exercise conducted on Tuesday, June 19, 2012, Columbiana County demonstrated at the Negley Fire Station, the Target Capability of conducting Dosimetry Briefings and ensured that equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies were sufficient to support management of radiological exposure to emergency workers.

The Dosimetry Coordinator demonstrated the capability to brief and issue appropriate dosimetry and procedures, and manage radiological exposure to Emergency Workers (EWs) in accordance with the plans and procedures. During the briefing, the Emergency workers were instructed and at the end of each mission to read their dosimeters and record the readings on the appropriate exposure record or chart. The briefing was conducted during an out-of-sequence activity on Monday, June 18, 2012.

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

a. MET: 3.a.1.

b. AREAS REQUIRING CORRECTIVE ACTION: None

c. DEFICIENCY: None

d. PLAN ISSUES: None

e. NOT DEMONSTRATED: None

f. PRIOR ISSUES - RESOLVED: None

g. PRIOR ISSUES - UNRESOLVED: None

#### 3.3.2.7 Columbiana County - Reception Center - DCO Briefing Interview

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, Columbiana County demonstrated the Target Capability to implement emergency worker exposure control for an evacuee reception center and an evacuee monitoring and decontamination facility. A radiological briefing was performed by the Negley Fire Department Dosimetry Coordinator during which the dosimetry packets were given to 16 emergency workers. The briefing included information regarding how to re-zero the DRDs, how and where to place their dosimeters on their clothing, the applicable radiation exposure limits and turn-back values, and where to turn in their dosimeters at the end of their assignments. The briefing was performed using a prepared written lesson plan. The briefing

also included a discussion of taking KI, including the reasons for taking KI, health restrictions and side effects associated with KI such as allergic reactions, the applicable KI dosage, and the conditions under which KI ingestion will be directed. Workers were instructed to not exceed their radiation exposure limits and to contact the Dosimetry Coordinator in the event of any questions.

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

- a. MET: 3.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

#### 3.3.2.8 Columbiana County - Backup Route Alerting - Negley FD

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the Negley Fire Department demonstrated the Target Capability to perform backup route alerting within the prescribed time constraints and in accordance with local procedures.

Two members of the Negley Fire Department were dispatched by the Emergency Coordinator (EC) at the Negley Fire Station to conduct backup route alerting in Sector A due to the (simulated) "out of service" status of the Siren #514. Prior to departure from the fire station parking lot, the team demonstrated the functionality of the public address system on the ambulance by reading the actual message they would broadcast (simulated) throughout the duration of the route.

The team departed the fire station parking lot at 2003 hours, to the beginning waypoint of the route and immediately began its progress through the route that covers Sector A. As one team member concentrated on driving, the other team member explained the special considerations that would be taken for alerting and/or transporting special needs residents. At this point the emergency responders demonstrated proper reading of dosimeters and reported the results of their readings in accordance with standard operating procedures. They continued progress on the backup route and reported complete route termination at 2040 hours. The route portion was
completed by expeditious travel at legal and safe speeds through mostly rural and sometimes single-lane improved road surfaces.

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

- a. MET: 5.a.3.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

# **3.3.2.9** Columbiana County - Route Verfication - Negley Fire Department

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, Columbiana County demonstrated the Target Capability to perform route verification within the prescribed time constraints and in accordance with local procedures. The Columbiana County Negley Fire Department complied by ensuring that all persons within the designated verification route were alerted and notified of the ongoing emergency at the utility. the Route Verification/Backup Route Alerting Team Leader was prepared with route verification assignments for the teams. Following the briefings, the teams were given a Route Verification book with the specific map for their Sub-Area section, a special needs list of known individuals in that section, and a transportation needs worksheet to be completed by one of the team members for anyone requesting transportation assistance.

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

- a. MET: 5.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

# 3.3.2.10 Columbiana County - Negley Fire Department Reception Center

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness (REP) exercise conducted on Tuesday, June 19, 2012, Columbiana County demonstrated at the Negley Fire Station, the Target Capability of direction and control, communications and ensured that equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies were sufficient to support management of radiological exposure to emergency workers.

The Columbiana County Reception Center was under the direction of the Assistant Chief of the Negley Volunteer Fire Department. The Reception Center was collocated with an Evacuee Monitoring and Decontamination Facility in the Negley Fire Station and the assistant chief of the fire department was in charge of both functional areas.

A plan of the facility was available for observation. Sufficient signs, arrows, rope and tape boundaries, and traffic cones were provided to alert evacuees how to pass through the facility and to designate clean and contaminated areas. Copies of the Suggested Operational Guidance documents from Columbiana County Radiological Emergency Response Plan were available to emergency workers and were in use. Sufficient barricades, signs, and traffic cones were provided to designate the vehicle monitoring area.

The communications equipment for the Columbiana County Reception Center and Evacuee Monitoring and Decontamination Center was contained in an emergency communication trailer located at the Negley Fire Station. The primary communications method used was amateur radio equipment and it was used to communicate with the Communications Officer in the Columbiana County Emergency Operations Center (EOC). Backup communications were maintained with the EOC through use of radio equipment connected to the Columbiana County Fire and Emergency Medical frequency. Additional radio communications systems were also used throughout the exercise. Cellular telephones and commercial telephones were also available inside the Reception Center.

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

- a. MET: 1.c.1, 1.d.1, 1.e.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None

Beaver Valley Power Station

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

3.3.2.11 Columbiana County - Negley Fire Department Reception Center - Registration - KI Distribution to the Public

During the Beaver Valley Power Station Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the Negley Fire Department Reception Center demonstrated the Target Capability to provide appropriate space, adequate resources, and trained personnel for the registration of evacuees. American Red Cross volunteers organized and conducted evacuee registration. Each evacuee was instructed where to go if he/she desired to utilize a shelter and all were instructed that they must have the pink copy of the registration form to enter a shelter. the Red Cross volunteers were knowledgeable of the shelter locations, registration information required, and of services available.

The Columbiana County Health District provided KI issue and counseling to evacuees. Workers utilized a three-copy form titled Registration Reception/Decontamination Center, American Red Cross Family Welfare Information to guide the KI issue and interview process. The Health Department representatives were knowledgeable of usage, dosage, and precautions associated with KI. They issued up to four 65 mg tablets of KI to each evacuee and advised them appropriately according to each individual circumstance.

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

- a. MET: 3.b.1, 6.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

# **3.3.2.12** Columbiana County - Negley Fire Department Reception Center - Evacuee Monitoring and Decontamination

During the Beaver Valley Power Station Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, Columbiana County successfully demonstrated the Target Capability for monitoring and decontamination of emergency workers. The Negley Fire Department had the capability to establish adequate facilities, resources, and trained personnel to provide monitoring and decontamination of evacuees.

The reception center at the Negley Volunteer Fire Department (NVFD) Fire Station had appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees. Six evacuees were expected to be monitored, and one of these six would be contaminated. Uncontaminated evacuees were directed to the registration area after they walked through the portal monitor. Evacuees who tripped the portal monitor alarm were directed to the monitoring area. Decontamination and monitoring personnel wore gloves, and aprons or surgical gowns. Decontamination supplies were collected in metal drums after use for disposal.

The procedures were adequate and appropriate for the area that was contaminated. After decontamination, the evacuee was monitored again, with the results recorded on the Personnel Monitoring Form 4. After being registered by name, the evacuee was offered KI and issued a yellow wrist band, the same as the uncontaminated evacuees.

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

- a. MET: 6.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
  - g. PRIOR ISSUES UNRESOLVED: None

Beaver Valley Power Station

# **3.3.2.13** Columbiana County - Negley Fire Department Reception Center - Evacuee Monitoring and Decontamination of Vehicles

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the Negley Fire Department demonstrated the Target Capability of monitoring and decontamination of Equipment and Evacuee vehicles at the Negley Fire Department Reception Center. The Negley Volunteer Fire Department had adequate procedures and resources for accomplishment of monitoring and decontamination of emergency worker equipment including vehicles. Emergency workers laid out the evacuee vehicle monitoring operation in accordance with printed instructions and diagrams. The Transportable Portal Monitor (TPM)-903B Portal Monitor was correctly put into operation according to the procedure. Preoperational checks, response checks, and calibration for the equipment were performed by assigned teams. The monitoring team demonstrated correct use of the equipment and ability to determine that it continued to operate reliably. The vehicle monitoring and decontamination procedures met the requirements of the REP Program Manual.

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

- a. MET: 6.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

# 3.3.2.14 Columbiana County - Beaver Local School Complex - West Point Fire Department - Dosimetry Control Officer Briefing

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday June 19, 2012, the West Point Fire Department (WPFD) and Lisbon Fire Department (LFD) adequately demonstrated the Target Capability to conduct a exposure control briefing and issue appropriate dosimetry and manage radiological exposure to emergency workers in accordance with the plans and procedures.

Prior to the briefing, Dosimetry packets were distributed to the fire department emergency

workers. The briefing included maximum dose and turn-back exposure limits; use of directreading and permanent record dosimetry; use of potassium iodide (KI), and precautions and side effects; the use of the Dosimetry Report (Columbiana County Form 1); the information on the KI package insert Form (Columbiana County Form 2); and the requirement to read and record direct reading dosimetry every 30 minutes. Emergency workers were instructed to verify that their DRDs were zeroed. They were also instructed that they were not to take KI unless directed by the Dosimetry Coordinator. Each KI package contained seven 130 mg tablets of iOSAT KI, lot PO 3-9, with a shelf life expiration date of February 2014.

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

- a. MET: 3.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
  - d. PLAN ISSUES: None
  - e. NOT DEMONSTRATED: None
  - f. PRIOR ISSUES RESOLVED: None
  - g. PRIOR ISSUES UNRESOLVED: None

# 3.3.2.15 Columbiana County-Monitoring/Decontamination/EWs DCO Briefing Interview

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the West Point Fire Department staff successfully demonstrated the Target Capability for key personnel with leadership roles to provide a dosimetry briefing to the emergency workers assigned to the West Point Monitoring and Decontamination center. The Dosimetry Control Officer (DCO) issued appropriate dosimetry and procedures, and managed radiological exposure to emergency workers in accordance with the plans and procedures. The demonstration was conducted at the Beaver Local High School Monitoring and Decontamination Center.

Understanding and compliance with dosimetry and dose control procedures was demonstrated via interview with two West Point Fire Department emergency workers. During the Evaluation, emergency workers correctly explained the turn-back exposure limit and maximum dose limit prescribed for this mission. Emergency workers also demonstrated reading their dosimetry every 30 minutes. Each emergency worker accurately described and/or demonstrated the purpose, use, and precautions associated with each item used.

A briefing was provided to all the participants by a member of the West Point Fire Department regarding expectations during the demonstration.

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

- a. MET: 3.a.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

**3.3.2.16** Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Mon/Decon Station

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday June 19, 2012, the West Point Fire Department (WPFD) adequately demonstrated the Target Capability of direction and control, communications, equipment, maps, displays, dosimetry, KI, and other supplies sufficient to support emergency operations.

The individual in charge was the West Point Fire Department (WPFD) Chief. The Chief carried out the essential functions of the Emergency Worker Monitoring and Decontamination center by assigning appropriate fire and EMS personnel to their designated stations, and organizing the flow of evacuees and vehicles through the monitoring and registration areas.

The fire department vehicle monitoring station was set up using barriers tape, traffic cones, and signs. There was an adequate supply of these and other necessary materiel such as gloves, gowns, duct tape, Kraft paper, scrub brushes and buckets, etc. Survey meters were calibrated by the State of Ohio and up to date. The Dosimetry Coordinator issued packets to each emergency worker that contained the required dosimetry. The dosimetry and KI were calibrated and up to date.

The primary communications used was land line telephones and two-way radios. This system functioned properly throughout the exercise. The WPFD also issued personnel a cellular telephone as backup. A second backup communications system was available through the Triangle Amateur Radio Club (TARC) mobile communications trailer, which had High

Beaver Valley Power Station

Frequency (HF) Very-high Frequency (VHF) and Ultra-high Frequency (UHF) two-way radio capabilities, including digital modes.

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

- a. MET: 1.c.1, 1.d.1, 1.e.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

# 3.3.2.17 Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Monitoring and Decontamination

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the West Point Fire Department demonstrated the Target Capability of monitoring and decontamination of emergency workers at the Beaver Local School Complex Reception Center. The emergency worker and evacuee monitoring operation were setup in accordance with printed instructions and diagrams. Cones, preprinted signs, paper floor covering, a portal monitor, and a hand held monitor were used during the setup.

Preoperational checks and response checks were performed correctly by a setup team. The monitoring team demonstrated correct use of instruments and the ability to determine the instruments reliably. Procedures were demonstrated for emergency workers who did not alarm at the portal monitor, i.e. non-contaminated and for those who did alarm at the portal monitor, i.e. contaminated. Non-contaminated emergency workers were sent to dosimetry control and exit interview. Contaminated emergency workers were sent for additional monitoring and decontamination. One monitoring and decontamination area (shower) was set up. A floor plan was available for inspection that included the second area.

Monitoring procedures were read and performed to assure that procedures were correctly followed. Results were recorded on Form 4, Personnel Monitoring Record. Contaminated clothing procedures was simulated and correctly described. An contaminated emergency worker demonstrated hand washing, according to procedures.

#### After Action Report/Improvement Plan

Beaver Valley Power Station

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

- a. MET: 6.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None

c. DEFICIENCY: None

d. PLAN ISSUES: None

e. NOT DEMONSTRATED: None

f. PRIOR ISSUES - RESOLVED: None

g. PRIOR ISSUES - UNRESOLVED: None

# **3.3.2.18** Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Monitoring and Decontamination of Vehicles

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday, June 19, 2012, the West Point Fire Department adequately demonstrated the Target Capability of monitoring and decontamination of Emergency Worker Vehicles at the Beaver Local High School. Emergency workers laid out the vehicle monitoring operation in accordance with printed instructions and diagrams. They used cones, preprinted signs, a vehicle portal monitor, and a hand held monitor.

The extent-of-play required one contaminated vehicle to be monitored. An interview was conducted with the driver of each vehicle to assure that the vehicle had gone through gross decontamination and that passengers dismounted before monitoring. The vehicle was successfully decontaminated and released into the clean parking area. Through interview the monitoring team correctly responded that if a vehicle would pass through the portal monitor without alarming, but had contained a contaminated passenger, it would also be monitored and decontaminated in the same way.

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

a. MET: 6.b.1.

b. AREAS REQUIRING CORRECTIVE ACTION: None

c. DEFICIENCY: None

d. PLAN ISSUES: None

e. NOT DEMONSTRATED: None

f. PRIOR ISSUES - RESOLVED: None

# g. PRIOR ISSUES - UNRESOLVED: None

# 3.3.2.19 Columbiana County - United Local School Complex - Congregate Care Center

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise, Columbiana County and the American Red Cross (ARC) successfully demonstrated the Target Capability to establish and set up a Congregate Care Center (CCC) at the United Local School Complex. The American Red Cross (ARC) successfully demonstrated that they had the resources to provide services and accommodations consistent with American Red Cross planning guidelines, and had procedures to assure that evacuees had been monitored for contamination, and had been decontaminated as appropriate prior to entering the congregate care facility.

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

# a. MET: 1.d.1, 6.c.1.

- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

3.3.3 Pennsylvania Jurisdictions

# 3.3.3.1 State of Ohio - Joint Information Center - Beaver Valley Power Station

During the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness Exercise conducted on Tuesday June 19, 2012, the Joint Information Center (JIC) successfully demonstrated the Target Capability to provided accurate, timely, and useful information to the news media and public through the Joint Information Center. The State of Ohio and Columbiana County Public Information Officers (PIOs) provided emergency public information to the public and media, used effective procedures to alert, notify, and mobilize personnel and activate the facility in a timely manner. Key personnel with leadership roles provided direction and control and ensured that emergency information and instructions were presented to the public and the news media in a timely manner. The Joint Information Center Media Briefing Team conducted pre-briefings to prepare for each media briefing. Several mock media representatives (Licensee employees) provided a realistic barrage of increasingly penetrating questions, all of which were

# After Action Report/Improvement Plan

appropriately handled and answered by the respective agency participants. Rumor control and media monitoring functions were conducted, and calls were logged, trends were identified, and the JIC Manager addressed them as appropriate in the media briefings. Media packets were available to the media in the Media Briefing Area.

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

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. PLAN ISSUES: None
- e. NOT DEMONSTRATED: None
- f. PRIOR ISSUES RESOLVED: None
- g. PRIOR ISSUES UNRESOLVED: None

- A

Beaver Valley Power Station

# **SECTION 4: CONCLUSION**

There were no Deficiencies or Areas Requiring Corrective Action (ARCAs) for the State of Ohio or Columbiana County. There was one previous ARCA issued to Columbiana County from a past exercise that was corrected.

The previous ARCA that was corrected during the exercise for Columbiana County was issued under issue # 03-10-5.a.1-A-03. This ARCA was corrected as a result of Procedures being corrected to include "Ensure the protective and precautionary actions described in the county PAD were reflected in the EAS and the Supplementary news bulletin" This was verified by the evaluator during this exercise. The EMD ensured that both messages were concurrent. The EAS message and the Supplementary News Bulletin had the proper notification information for schools and the general public.

Unclassified Radiological Emergency Preparedness Program (REP)

Beaver Valley Power Station

# **APPENDIX A: EXERCISE TIMELINE**

Table 1, below, presents the times at which key events and activities occurred during the BVPS Partial Participation Plume Exposure Pathway Exercise conducted on June 19, 2012.

# Table 1 - Exercise Timeline

# DATE: 2012-06-19, SITE: Beaver Valley Power Station, OH

	larec					
	D S S			S		
Emergency Classification Level or			-VI	BVI	<b>建</b> 花法	
	5.			No al State	OF.	EO
	ime	LHG L	HH	EHC.	OH-HO	OI
Linux I Front	1442	NA	1452	NA	1500	1452
Onusual Event	1443	NA NA	152	1602	1531	1432
Site Area Emergency	1726	1726	1732	1800	···· 1770	1330 1737
General Emergency	1952	1010	1003	10/10	-1855	1907
Simulated Rad Release Started	1852	1910	1905	1750	1852	1903
Simulated Rad. Release Terminated	NA	NA	NA	NA	NA	NA
Facility Declared Operational		1612	1707	1625	1612	1551
Declaration of State of Emergency		1830	NA	NA	NA	1743
Exercise Terminated		2051	2051	2045	2045	2050
Early Precautionary Action Recommendation:			<u>.</u>	4		
1. Relocate School Childen:		NA	· ' NA	NA .	NA	NA
2. Restrict Boating Traffic:		NA	NA	1809	NA	NA
3. Restrict Air and Rail Traffic:		1739/1740	1739/1740	1809	NA	NA
4. Close Parks:		1610	NA	1809	ŇA	NA
5. Livestock Advisory:		1736	1736	1809	NA	1740
General Informational Message: Message B - Limited Precautionary Action:		1743	NA	NA	NA	1743
1st Siren Activation		NA	NA	. NA	NA	1753
1st EAS Message		NA	NA	NA	NA	1756
1st Protective Action Recommendation: Evacuate the public living within Sub-Area 1 and Shelter remaining EPZ.		1925	1925	NA	NA	NA 
1st Protective Action Decision:		NA	NA	NA	NA	1928
2nd Siren Activation		NA	NA	NA	NA	1938
2nd EAS or EBS Message - D & C Evacuation and Sheltering required: Evacuate Sub-Area 1 and Shelter Sub-Area 2, 3, and 4.		NĂ	NA	NA	NA	1941
KI Administration Decision: All EWs and residence in Sub-Area 1 are instructed to take their KI.		1925	1920	NA	NA	NA

# APPENDIX B: EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel that evaluated the Beaver Valley Power Station REP Partial Participation Plume Exposure Pathway Exercise on June 19, 2012. The list includes the evaluation team leadership and all evaluators. The organization each evaluator represents is indicated by the following abbreviations:

DHS/FEMA	Department of Homeland Sec	urity/Federal I	Emergency	Management Agency

Title	Name	Organization
Radiological Assistance Committee, Chairman	William E. King	DHS/FEMA
Exercise Director	Stephen Tulley	DHS/FEMA
Senior Specialist	Gary Naskrent	DHS/FEMA
Site Specialist	Carolyn Sturghill	DHS/FEMA
Team Leader - State of Ohio	Carl Bebrich	DHS/FEMA
Team Leader - Columbiana County	Dan Kanakares	DHS/FEMA

After Action Report/Improvement Plan

Beaver Valley Power Station

DATE: 2012-06-19, SITE: Beaver Valle	y Power Station, OH	
LOCATION	EVALUATOR	AGENCY
State of Ohio - Initial Notification Point	David Ortman	FEMA RV
State of Ohio - Emergency Operations Center - Executive Room	Bruce Swiren	ICFI
State of Ohio - Emergency Operations Center - Assessment Room	Michael Henry Carol D. Shepard	ICFI ICF
State of Ohio - Emergency Operations Center - Joint Information Center	David Ortman	FEMA RV
State of Ohio - Joint Information Center - Beaver Valley Power Station	John Simpson	FEMA RV
State of Ohio - Emergency Operations Facility	Jill Leatherman	ICFI
State of Ohio - Columbiana County Emergency Operations Center - State Analyst	Daniel Kanakares	FEMA RV
Columbiana County - Initial Notification Point	James King	FEMA RV
Columbiana County - Emergency Operations Center	James King Earl Shollenberger Carolyn Sturghill William Vocke	FEMA RV ICFI FEMA RV ICFI
Columbiana County - East Liverpool School District - Evacuation School	Delwyn Kinsley	FEMA RV
Columbiana County - Sheriffs Road Patrol & Dosimetry Coordinator - Traffic Control Point/Access Control Point - Dosimetry Control Officer Briefing	Karl Rabenhorst	FEMA Reg V
Columbiana County Sheriff's Department - TCP/ACP.	Karl Rabenhorst	FEMA Reg V
Columbiana County - Negley Fire Department Reception Center - Dosimetry Control Officer Briefing	Michael Howe	FEMA HQ
Columbiana County - Reception Center - DCO Briefing Interview	Earl Shollenberger	ICFI
Columbiana County - Backup Route Alerting - Negley FD	John Simpson	FEMA RV
Columbiana County - Route Verfication - Negley Fire Department	James King	FEMA RV
Columbiana County - Negley Fire Department Reception Center	Earl Shollenberger	ICFI
Columbiana County - Negley Fire Department Reception Center - Registration - KI Distribution to the Public	Michael Howe	FEMA HQ
Columbiana County - Negley Fire Department Reception Center - Evacuee Monitoring and Decontamination	Paul Ward	FEMA HQ
Columbiana County - Negley Fire Department Reception Center - Evacuee Monitoring and Decontamination of Vehicles	Michael Howe	FEMA HQ
Columbiana County - Beaver Local School Complex - West Point Fire Department - Dosimetry Control Officer Briefing	Paul Ward	FEMA HQ
Columbiana County-Monitoring/Decontamination/EWs DCO Briefing Interview	Michael Howe	FEMA HQ
Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Mon/Decon Station	Paul Ward	FEMA HQ
Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Monitoring and Decontamination	Michael Howe	FEMA HQ
Columbiana County - Beaver Local School Complex - West Point Fire Department - Emergency Worker Monitoring and Decontamination of Vehicles	Paul Ward	FEMA HQ
Columbiana County - United Local School Complex - Congregate Care Center	Delwyn Kinsley	FEMA RV
* Team Leader-		

Beaver Valley Power Station

# APPENDIX C: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ARC	American Red Cross
ARES	Amateur Radio Emergency Services
BLHS	Beaver Local High School
BVPS	Beaver Valley Power Station
CA'S	Crisis Action System
CCHD	Columbiana County Health District
CDE	Committed Dose Equivalent
DCF	Dosimeter Correction Factor
DCO	Dosimerty Control Officer
EAL	Emergency Action Level
EAS	Emergency Alert System
EC	Emergency Coordinator
ECL ·	Emergency Classification Level
ED	Executive Director
EDI	Employment Development Incorporated
ELFD	East Liverpool Fire Department
EMA	Emergency Management Agency
EMD	Emergency Management Director
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
FAA	Federal Aviation Administration
FCO	Federal Coordinating Officer
FMT	Field Monitoring Team
GAR	Governor's Authgorized Representative
GEC	Gold Executive Conference
HF	High Frequency
INP	Initial Notification Point
IPZ	Ingestion Planning Zone
JIC	Joint Information Center
JPIC	Joint Public Information Center
MARS	Military Auxiliary Radio System
NRC	Nuclear Regulatory Commission

. 49

Beaver Valley Power Station

·····	en and the second descent and the second
NTS	National Traffic System
NVFD	Negley Volunteer Fire Department
OEMA	Ohio Emergency Management Agency
OEPA	Ohio Environmental Protection Agency
ORO	Offsite Response Organizations
OSHP	Ohio State Highway Patrol
OSLD	Optically Stimulated Luminescence Dosimeter
PAD	Protective Action Decision
PAR	Protective Action Recommendation
PEMA	Pennsylvania Emergency Management Agency
PIO	Public Information Officer
PRD _	Permanent Record Dosimeter
RAB	Radiological Assessment Branch
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
RBC	Radiological Branch Chief
REP	Radiological Emergency Preparedness
RMS	Radio Mail Server
RO	Radiological Officer
SAE	Site Area Emergency
SEOC	State Emergency Operation Center
SOG	Standard Operating Guideline
SR	State Route
TARC	Triangle Amateur Radio Club
ТСР	Traffic Control Point
TEDE	Total Effective Dose Equivalent
TPM	Transportable Portal Monitor
WPFD	West Point Fire Department

# **APPENDIX D: EXERCISE PLAN**

This appendix lists the exercise criteria, which were scheduled for demonstration in the Beaver Valley Power Station Radiological Emergency Preparedness Partial Participation Plume Exposure Pathway Exercise on June 19, 2012, and the offsite extent-of-play agreement accepted by DHS/FEMA Region V on February 23, 2012. The exercise criteria, contained in the DHS/FEMA REP Program Mamual, dated April 2012, represent a functional translation of the planning standards and evaluation criteria of 0654/FEMA-REP-1, Rev. 1, "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980. Because the exercise criteria are intended for use at all nuclear power plant sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and accepted by DHS/FEMA to provide evaluators with guidance on expected actual demonstration of the criteria.

# Exercise Criteria

Listed on the following pages are the specific radiological emergency preparedness criteria that were scheduled for demonstration during this exercise.

After Action Report/Improvement Plan

Beaver Valley Power Station

# EXTENT-OF-PLAY AGREEMENTS

# **BEAVER VALLEY POWER STATION**

# **Radiological Emergency Preparedness Partial Participation Exercise** 2012



After Action Report/Improvement Plan

Spieller Maister 1

Beaver Valley Power Station

This page intentionally left blank.

# .

#### After Action Report/Improvement Plan

Beaver Valley Power Station

# RADIOLOGICAL EMERGENCY PREPAREDNESS PARTIAL PARTICIPATION EXERCISE

# **BEAVER VALLEY POWER STATION**

# JUNE 19, 2012

# **EXTENT OF PLAY AGREEMENT:**

# STATE OF OHIO

Criteria that can be re-demonstrated immediately for credit, at the decision of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairman of the Radiological Preparedness Coordinating Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1.

# **EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

## Sub-element 1.a – Mobilization

# Intent

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

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

# Assessment/Extent of Play

The State Emergency Operations Center (SEOC) and the Ohio Highway Patrol Dispatch Center will receive initial notification over the BVPS Initial Notification Conference Line. Once the SEOC Assessment Room is activated all phone communications will be received there. The State will mobilize all the agencies that have responsibilities in the SEOC, primarily the Executive Group, Dose Assessment Group, State Joint Information Center (JIC); the County Emergency Operations Center (EOC); and the BVPS JIC, and Emergency Operations Facility (EOF). The state representatives assigned to the BVPS EOF, BVPS JIC, and the County EOC will be prepositioned in the area and arrive shortly after the exercise begins to simulate travel time.

# Sub-element 1.b – Facilities

#### Intent

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

المراجع المراجع

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

### Assessment/Extent of Play

The baseline exercise for demonstration of this criterion was conducted in April 2002.

# Sub-element 1.c – Direction and Control

#### After Action Report/Improvement Plan

Beaver Valley Power Station

# Intent

Sub-element **1.c** 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

Direction and control of State activities will be demonstrated at the SEOC. The Executive Director of Ohio EMA will coordinate decisions on behalf of the Governor's office from the SEOC Executive Room. The Ohio Department of Health (ODH) is responsible for the determining the State Protective Action Recommendation (PAR) in the SEOC Assessment Room and will provide periodic briefings to the SEOC Executive Group.

## Sub-element 1.d – Communications Equipment

### Intent 🗆

Sub-element 1.d 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

The primary means of communications between the SEOC, the Columbiana County EOC, BVPS JIC, and EOF is by commercial and/or dedicated telephone. Backup communications (radio and/or cellular phones) will be demonstrated.

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

## Intent

Sub-element **1.e** 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

The State will demonstrate the use of equipment, maps and displays to support emergency operations. The maps traditionally used in the SEOC will be available and used for exercise evaluation purposes.

# **EVALUATION AREA: PROTECTIVE ACTION DECISION MAKING**

# Sub-element 2.a – Emergency Worker Exposure Control

#### Intent

Sub-element **2.a** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans/procedures, to authorize emergency worker exposure limits to be exceeded for specific missions.

Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration TEDE or organ-specific limits) identified in the ORO's plans/procedures.

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

# Assessment/Extent of Play

The SEOC Dose Assessment Group will consider PAGs and Administrative Limits to develop recommendations, including KI, based on their technical evaluation of the available data. Recommendations will be forwarded to the SEOC Executive Group and subsequently to the Columbiana County EOC. The County will disseminate recommendations to their emergency workers. Field monitoring data will be provided to the SEOC Dose Assessment Group via Controller injects.

Sub-element 2.b. – Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

# Intent

Sub-element **2.b** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to independently project integrated dose from projected or actual dose rates and compare these estimates to the PAGs. OROs must have the capability to choose, among a range

of protective actions, those most appropriate in a given emergency. OROs base these choices on PAGs from their plans/procedures or EPA's *Manual of Protective Action Guides and Protective Actions* for Nuclear Incidents and other criteria, such as plant conditions, licensee PARs, coordination of PADs with other political jurisdictions (e.g., other affected OROs and incident command), availability of in-place shelter, weather conditions, and situations, to include HAB incidents, the threat posed by the specific hostile action, the affiliated response, and the effect of an evacuation on the threat response effort, that create higher than normal risk from general population evacuation.

Criterion 2.b.1: Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654/FEMA-REP-1, I.10 and Supplement 3)

# Assessment/Extent of Play "

The SEOC Dose Assessment Group will evaluate the licensee information and complete independent dose projections based on that information and simulated field monitoring data. Assessment Room staff will evaluate the data and forward PARs to the SEOC Executive Room. Approved PARs will then be forwarded to the Columbiana County EOC via a conference line established in the Assessment Room.

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

#### Assessment/Extent of Play

The Governor, or designee, will demonstrate the ability to make appropriate PARs based on technical information from the SEOC Dose Assessment Group. Recommendations concerning the use of KI for the general public, institutionalized individuals, and emergency workers are the responsibility of the ODH. They are made in the SEOC Dose Assessment Room in accordance with the ODH KI policy and will accompany the PAR.

Coordination will take place in the SEOC Executive Room with the States of Pennsylvania and West Virginia, and Columbiana County to ensure consideration of local needs. After the decision is made, the County will disseminate protective actions to the general public.

Ohio Protective Action Decisions (PADs) are not necessarily the same as those for Pennsylvania or West Virginia.

At least one (1) PAD will be demonstrated.

# Sub-element 2.c – PAD Consideration for the Protection of Persons with Disabilities and Access/Functional Needs

# Intent

Sub-element **2.c** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to determine PADs, including evacuation, sheltering, and use of KI, if applicable, for groups of persons with disabilities and access/functional needs (e.g., hospitals, nursing homes, correctional facilities, schools, licensed daycare centers, mobility-impaired individuals, and transportation-dependent individuals). The focus is on those groups of persons with disabilities and access/functional needs that are, or potentially will be, affected by a radiological release from an NPP.

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

Assessment/Extent of Play

The recommendation to take KI is issued by the ODH in the SEOC Assessment Room and accompanies the PAR. Upon being briefed to and approved by the Executive Group, it is then forwarded to Columbiana County for implementation.

Sub-element 2.d. – Radiological Assessment and Decision Making for the Ingestion Exposure Pathway

#### Intent

Sub-element **2.d** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate PAGs, and make timely, appropriate PADs to mitigate exposure from the pathway.

During an incident at an NPP, a release of radioactive material may contaminate water supplies and agricultural products in the surrounding areas. Any such contamination would likely occur during the plume phase of the incident and, depending on the nature of the release, could impact the ingestion pathway for weeks or years.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria. (NUREG-0654/FEMA-REP-1, A.3; C.1, 4; D.4; J.9,11)

# Assessment/Extent of Play

The State demonstrated this criterion at the June 2006 Beaver Valley exercise. It will be demonstrated again at the 2012 Perry exercise.

# Sub-element 2.e. – Radiological Assessment and Decision Making Concerning Post-Plume Phase Relocation, Reentry, and Return

# Intent

Sub-element **2.e** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to make decisions on post-plume phase relocation, reentry, and return of the general public. These decisions are essential for protection of the public from direct long-term exposure to deposited radioactive materials from a severe incident at an NPP.

**Criterion 2.e.1:** Timely post-plume phase relocation, reentry, and return decisions are made and *Criterion 2.e.1: Timely post-plume phase relocation, reentry, and return* decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654/FEMA-REP-1, I.10; J.9; K.3.a; M.1)

## Assessment/Extent of Play

The State demonstrated this criterion at the June 2006 Beaver Valley exercise. It will be demonstrated again at the 2012 Perry exercise.

# **EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

# Sub-element 3.a – Implementation of Emergency Worker Exposure Control

### Intent

Sub-element **3.a** 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, J.10.e; K.3.a, b; K.4)

# Assessment/Extent of Play

The State Field Monitoring Teams (FMT's), Communications Van, and Sample Screening Point will not be demonstrated this exercise. The State demonstrated this criterion at the April 2010 Beaver Valley Power Station exercise. It will be demonstrated

Beaver Valley Power Station

again at the October 2012 Perry Nuclear Power Plant exercise. Implementation will be demonstrated by county responders.

Implementation will be demonstrated for State personnel responding to the EOF.

Sub-element 3.b – Implementation of KI Decision for Institutionalized Individuals and the General Public

### Intent

Sub-element **3.b** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide KI for institutionalized individuals, and, if in the plans/procedures, to the general public for whom immediate evacuation may not be feasible, very difficult, or significantly delayed. While it is necessary for OROs to have the capability to provide KI to institutionalized individuals, providing KI to the general public is an ORO option and must be reflected as such in ORO plans/procedures. Provisions must include the availability of adequate quantities, storage, and means of distributing KI.

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

# Assessment/Extent of Play

The Ohio Department of Health Bureau of Radiation Protection obtains KI via the U.S. NRC for members of the general public. This KI is then distributed to the county health departments within the Emergency Planning Zone. County health departments make this KI available to the general public at reception centers during a nuclear emergency. The county health departments will maintain records of this distribution.

# Sub-element 3.c – Implementation of Protective Actions for Persons with Disabilities and Access/Functional Needs

#### Intent

Sub-element **3.c** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement PADs, including evacuation and/or sheltering, for all persons with disabilities and access/functional needs. The focus is on those persons with disabilities and access/functional needs that are (or potentially will be) affected by a radiological release from an NPP.

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

Assessment/Extent of Play

Beaver Valley Power Station

# N/A - This is a county function.

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

# Assessment/Extent of Play

N/A - This is a county function.

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

# Intent =

Sub-element **3.d** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective action plans/procedures, including relocation and restriction of access to evacuated/sheltered areas. This Sub-element focuses on selecting, establishing, and staffing of traffic and access control points, and removal of impediments to the flow of evacuation traffic.

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

# Article I. <u>Assessment/Extent of Play</u>

The State EOC Dose Assessment Group in coordination with the SEOC Executive Group will procedurally demonstrate restricting air, water and rail traffic within the Emergency Planning Zone (EPZ).

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654/FEMA-REP-1, J.10.k)

# Assessment/Extent of Play

N/A - This is a county function.

# Sub-element 3.e – Implementation of Ingestion Pathway Decisions

### Intent

Sub-element **3.e** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective actions, based on criteria recommended by current FDA guidance, for the ingestion exposure pathway EPZ (i.e., the area within an approximate 50-mile radius of the NPP). This Sub-element focuses on those actions required for implementation of protective actions.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural

production within the ingestion exposure pathway emergency planning zone for implementation of protective actions. NUREG-0654/FEMA-REP-1, A.3; C.1, 4; J.11)

# Assessment/Extent of Play

The State demonstrated this criterion at the June 2006 Beaver Valley exercise. It will be demonstrated again at the 2012 Perry exercise.

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG-0654/FEMA-REP-1, G.1, J.9, 11)

# Assessment/Extent of Play

The State demonstrated this criterion at the June 2006 Beaver Valley exercise. It will be demonstrated again at the 2012 Perry exercise.

# Sub-element 3.f – Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions

### Intent

Sub-element **3.f** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement plans, procedures, and decisions for post-plume phase *relocation*, *re*-*entry*, and *return*. Implementation of these decisions is essential for protecting the public from direct long-term exposure to deposited radioactive materials from a severe incident at a commercial NPP.

Criterion 3.f.1: Decisions regarding controlled reentry of emergency workers and relocation and return of the public during the post-plume phase are coordinated with appropriate organizations and implemented. (NUREG-0654/FEMA-REP-1, E.7; J.10.j; J.12; K.5.b; M.1, 3)

# Assessment/Extent of Play

The State demonstrated this criterion at the June 2006 Beaver Valley exercise. It will be demonstrated again at the 2012 Perry exercise.

# **ASSESSMENT AREA 4: FIELD MEASUREMENTS AND ANALYSIS**

### Sub-element 4.a – Plume Phase Field Measurements and Analyses

# Intent

Sub-element **4.a** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to deploy FMTs with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654/FEMA-REP-1 indicates that OROs must have the

capability to use FMTs within the plume exposure pathway EPZ to detect airborne radioiodine in the presence of noble gases and radioactive particulate material in the airborne plume. In an incident at an NPP, the possible release of radioactive material may pose a risk to the nearby population and environment. Although incident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an incident, it is important to collect field radiological data to help characterize any radiological release. Adequate equipment and procedures are essential to such field measurement efforts.

# Criterion 4.a.1: [RESERVED]

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

# Assessment/Extent of Play

The State FMTs, Communications Van and Sample Screening Point will not be demonstrated in this exercise. The State demonstrated this criterion at the April 2010 Beaver Valley Power Station exercise. It will be demonstrated again at the October 2012 Perry Nuclear Power Plant exercise.

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

# Assessment/Extent of Play

The State FMTs, Communications Van and Sample Screening Point will not be demonstrated in this exercise. The State demonstrated this criterion at the April 2010 Beaver Valley Power Station exercise. It will be demonstrated again at the October 2012 Perry Nuclear Power Plant exercise.

# Sub-element 4.b – Post-Plume Phase Field Measurements and Sampling

### Intent

Sub-element **4.b** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to assess the actual or potential magnitude and locations of radiological hazards to determine the ingestion exposure pathway EPZ and to support relocation, reentry, and return decisions. This Sub-element focuses on collecting environmental samples for laboratory analyses that are essential for decisions on protecting the public from contaminated food and water and direct radiation from deposited materials.

Criterion 4.b.1: The field teams (2 or more) demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision making. (NUREG-0654/FEMA-REP-1, C.1; I.8; J.11)

## Assessment/Extent of Play

The State demonstrated this criterion at the June 2006 Beaver Valley exercise. It will be demonstrated again at the 2012 Perry exercise.

#### Sub-element 4.c – Laboratory Operations

# Intent

Sub-element **4.c** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to perform laboratory analyses of radioactivity in air, liquid, and environmental samples to support protective action decision making.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654/FEMA-REP-1, C.1, 3; J.11)

#### Assessment/Extent of Play

The ODH lab demonstrated this criterion during the October 2006 Perry exercise. It will be demonstrated again at the 2012 Perry exercise.

# **EVALUATION AREA 5: Emergency Notification and Public Information**

# Sub-element 5.a – Activation of the Prompt Alert and Notification System

## Intent

Sub-element **5.a** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide prompt instructions to the public within the plume exposure pathway EPZ. Specific provisions addressed in this Sub-element are derived from the *Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants*, FEMA-REP-10 (November 1985).

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

1. Identification of the state or local government organization and the official with the authority for providing the alert signal and instructional message

- 2. Identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant
- 3. Reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency
- 4. A closing statement asking the affected and potentially affected population to stay tuned for additional information.

# Assessment/Extent of Play

The State will consult with Columbiana County EOC, and coordinate with the States of Pennsylvania and West Virginia to determine the best immediate protective action for the populace. Once a decision is reached that requires the activation of the alert and notification system, Columbiana County will simulate the initiation of the sirens. EAS messages will be prepared by Columbiana County EMA who will simulate providing them to the EAS Station (WKBN). (See Columbiana County Extent of Play Agreement for further details.) The State also notifies members of the public on Lake Erie, but this function is not applicable to the BVPS area.

• County Director or designee. (See Columbiana County Extent of Play Agreement for further details.)

# Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654/FEMA-REP-1, E.6, Appendix 3.B.2.c)

Article II.Assessment/Extent of PlayN/A - This is a county function.

Criterion 5.a.4: Activities associated with FEMA-approved exception areas (where applicable) are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. (NUREG-0654/FEMA-REP-1, E.6; Appendix 3.B.2.c)

### Assessment/Extent of Play.

N/A – The State of Ohio has no FEMA approved Exception Areas at this time.

Sub-element 5.b – Subsequent Emergency Information and Instructions for the Public and the Media

### Intent

Sub-element **5.b** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to disseminate appropriate emergency information and instructions, including any recommended protective actions, to the public. In addition, NUREG-0654/FEMA-REP-1

Beaver Valley Power Station

requires OROs to ensure that the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG-0654/FEMA-REP-1 also provides that a system must be available for dealing with rumors. This system will hereafter be known as the – "public inquiry hotline."

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

# Assessment/Extent of Play

The State PIO and a representative from ODH will be present at the BVPS JIC to address protective actions being implemented and the activities taking place at the State and County level. Public information representatives from Ohio EMA will be present in the SEOC (State JIC) to communicate with the BVPS JIC.

A Public Inquiry telephone will be established and demonstrated in the SEOC (State JIC). Public Inquiry will address an average of 3 calls per hour once Site Area Emergency is declared for a duration of two hours. Trends in rumors will be identified and responded to as needed. Public Inquiry will be driven by Controller injects.

# **EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES**

Sub-element 6.a – Monitoring, Decontamination, and Registration of Evacuees

# Intent

Sub-element **6.a** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement radiological monitoring and decontamination of evacuees, while minimizing contamination of the facility. OROs must also have the capability to identify and register evacuees at reception centers.

Criterion 6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees. (NUREG-0654/FEMA-REP-1, A.3; C.4; J.10.h; J.12)

Sub-element 6.b – Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles

## Intent

Sub-element **6.b** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement radiological monitoring and decontamination of emergency workers and their equipment, inclusive of vehicles.

Unclassified Radiological Emergency Preparedness Program (REP)

Beaver Valley Power Station

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

Assessment/Extent of Play

N/A - This is a county function.

Sub-element 6.c – Temporary Care of Evacuees

# Intent

Sub-element **6.c** is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement radiological monitoring and decontamination of emergency workers and their equipment, inclusive of vehicles.

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

<u>Assessment/Extent of Play</u> N/A - This is a county function.

Sub-element 6.d - Transportation and Treatment of Contaminated Injured Individuals

### Intent

Sub-element 6.d is derived from NUREG-0654/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.

68

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

# Assessment/Extent of Play

N/A - This is a county function.

Beaver Valley Power Station

# RADIOLOGICAL EMERGENCY PREPAREDNESS PARTIAL PARTICIPATION EXERCISE

# **BEAVER VALLEY POWER STATION**

# JUNE 19, 2012

# **EXTENT OF PLAY AGREEMENT:**

COLUMBIANA COUNTY, OHIO
#### 1. Beaver Valley Power Station

The facility normally uses off-watch section personnel to participate in the exercise. The plant's simulated events, radiation readings, and emergency classifications will trigger offsite exercise actions.

#### 2. Offsite Response Functions:

#### County:

Columbiana County Emergency Operations Center

- Accident Assessment
- Direction & Control
- Public Information
- Alert & Notification
- Communications

#### Field Play:

(See #5 below: Demonstration Windows)

#### 3. Controllers

First Energy Nuclear Operating Company (FENOC) will provide controllers at the Columbiana County locations. Controllers will not take an active part in the proceedings, but will interact with staff members to the extent necessary to fulfill their observer responsibilities. Coaching of players by Controllers is not permitted except to provide training to participants awaiting a re-demonstration. Re-demonstration can only occur with FEMA approval.

#### 4. **FEMA Evaluators**

Federal evaluators will be present at the Columbiana County EOC, and at field locations to evaluate player response to the actual and simulated events in the exercise scenario.

#### 5. Demonstration Windows

The demonstration windows are those periods of time designated in the exercise during which specified demonstrations will be accomplished. The purpose of the window is to provide for more effective demonstrations as well as permitting the release of volunteers from the exercise play at a reasonable hour.

- Out of Sequence Demonstrations will be managed by the Lead Controller at each field location, and will be run independently of each other.
- All demonstrations will commence promptly and, barring any complications, not continue past the end of the windows.

- MS-1 Hospital Exercise: Conducted and evaluated at Salem Hospital on September 28, 2011.
- The County EOC Operations: 3:00 p.m. 10:00 p.m. Tuesday June 19, 2012.
- School Administration / Transportation demonstration: 10:00 a.m. 12:00 p.m., Tuesday June 19, 2012 at the East Liverpool School Administration Office.
- Reception Center: 7:00 p.m. 9:00 p.m. Monday June 18, 2012 at the Negley Fire Station
- Initial Notification: 3:00 p.m. 5:00 p.m. Tuesday June 19, 2012 at the County Sheriff's Office Dispatch Center.
- Congregate Care Center: 7:00 p.m. 9:00 p.m. Wednesday June 20, 2012 at United Local High School.
- Emergency Worker Monitoring/Decontamination Center: 7:00 p.m. 9:00 p.m. Wednesday June 20, 2012 at Beaver Local High School.
- Traffic Control / Access Control: 9:00 a.m. 12:00 p.m., Tuesday June 19, 2012 at the Columbiana County Sheriff's Office dispatch in Lisbon.
- Backup Route Alerting / Route Verification: 7:00 p.m. 9:00 p.m., Monday June 18, 2012 at the Negley Fire Department.

#### 6. Termination

- The Lead Controller in the Columbiana County EOC will coordinate the Exercise Termination with the Ohio EOC, the BVPS EOF, and the EOCs in Beaver and Hancock County.
- Field Locations / Out of Sequence Demonstrations will be terminated by the Lead Controller at each location. The termination will be based on the completion of the objectives. The termination can happen sooner than the identified end time.

#### 7. General Concepts

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

Beaver Valley Power Station

and safety, it should be noted so that the plan can be modified and the appropriate negative assessment applied.

- 8. Exercise / Plan modifications
  - To the extent possible, Protective Action Decisions will be discussed by the affected counties and states:
  - Individual Protective Action Decisions will be reached for the affected counties.
  - To the extent possible, EAS messages and siren soundings will be coordinated by the affected counties.

#### 9. Re-demonstrations

云云 白云

During the exercise play from June 18th<sup>-</sup>20th, 2012, the following criteria may be redemonstrated for credit.

- Criteria that can be re-demonstrated immediately for credit, at the decision of the Evaluator, include the following: 3.a.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 5.a.3, 6.a.1, 6.b.1, 6.c.1 and 6.d.1.
- Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.2, 5.a.1 and 5.b.1
- Re-demonstrations will be negotiated between the Players, Observers, Controllers, and Evaluators.
- Refresher training can be provided by the Players, Observers, and/or Controllers.
- It is permissible to extend the evaluation time to accommodate the re-demonstration.
- Activities corrected from a re-demonstration will be so noted.

#### **EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

#### Sub-element 1.a – Mobilization

#### Intent

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

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

#### Assessment/Extent of Play

- Demonstrate the capability to receive notification of an emergency situation from the licensee.
- Demonstrate the activation of facilities for immediate use by mobilized personnel when they arrive to begin emergency operations.
- Activation of facilities will be completed in accordance with the plan and/or procedures.
- Personnel will be pre-staged. This pre-staging will be for all locations, to include EOC, field locations and any out-of-sequence demonstrations. Activation of the position / facility will not begin until notification / inject.
- Twenty-four (24) Hour Staffing will be demonstrated by roster.

#### 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, H.3; G.3.a; J.10.h; J.12; K.5.b)

#### Assessment/Extent of Play

The baseline for the county EOC and OROs was established during the 2006 exercise.

#### 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

Leadership personnel should demonstrate the ability to carry out essential functions of the response effort, for example: keeping the staff informed through periodic briefings and/or other means, coordinating with other appropriate response organizations, and ensuring completion of requirements and requests.

#### Sub-element 1.d – Communications Equipment

#### Intent

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

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

#### Assessment/Extent of Play

- Demonstrate a primary and at least one backup system at the beginning of an exercise.
- Telephone and radio communications will be available for demonstration.
- Demonstrate the capability to manage the communication systems and ensure that all message traffic is handled without delays that might disrupt the conduct of emergency operations.

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

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

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

# operations (NUREG-0654/FEMA-REP-1, H.7, 10; I.7, 8, 9; J.10.a, b, e; J.11, 12; K.3.a; K.5.b)

#### Assessment/Extent of Play

Sufficient quantities of direct-reading and permanent record dosimetry and dosimeter chargers are available for issuance to emergency workers. Dosimetry and KI have been predistributed to ORO's.

- Available supplies of KI will be within the expiration date indicated on blister packs.
- Monitoring kits and Dosimetry are exchanged annually; the documentation is included in the 2011 annual letter of certification.
- The Ohio Department of Health (ODH) through local health departments makes KI available to the general public. KI for the General Public is also stockpiled at the County Health Department and transported to the Reception Center for distribution to the General Public as needed

#### **EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING**

#### Sub-element 2.a – Emergency Worker Exposure Control

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans/procedures, to authorize emergency worker exposure limits to be exceeded for specific missions.

Radiation exposure limits for emergency workers are the recommended accumulated dose limits or exposure rates that emergency workers may be permitted to incur during an emergency. These limits include any pre-established administrative reporting limits (that take into consideration TEDE or organ-specific limits) identified in the ORO's plans/procedures.

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

#### Assessment/Extent of Play

- The capability to make decisions concerning the authorization of Emergency Worker exposure levels in excess of pre-authorized levels will be procedurally discussed.
- KI is predistributed to emergency workers. 75

- The Ohio Department of Health will recommend the taking of KI.
- Should the scenario dictate a reduction factor for the emergency worker exposure limit, the reduction will be limited to emergency workers within the EPZ
- The decision to use KI will be driven by the scenario.

Sub-element 2.b. – Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to independently project integrated dose from projected or actual dose rates and compare these estimates to the PAGs. OROs must have the capability to choose, among a range of protective actions, those most appropriate in a given emergency. OROs base these choices on PAGs from their plans/procedures or EPA's *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents* and other criteria, such as plant conditions, licensee PARs, coordination of PADs with other political jurisdictions (e.g., other affected OROs and incident command), availability of in-place shelter, weather conditions, and situations, to include HAB incidents, the threat posed by the specific hostile action, the affiliated response, and the effect of an evacuation on the threat response effort, that create higher than normal risk from general population evacuation.

Criterion 2.b.1: Appropriate protective action recommendations (PARs) are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions. (NUREG-0654/FEMA-REP-1, I.10 and Supplement 3)

#### Assessment/Extent of Play

N/A – Columbiana County does not demonstrate this criterion; it relies on the State of Ohio and Beaver Valley Power Station.

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

#### Assessment/Extent of Play

• A decision-making process involving "consideration of appropriate factors and necessary coordination" is used to make Protective Action Decisions "as appropriate" for the general public (including the recommendation for the use of KI).

- The County will demonstrate the capability to communicate the contents of decisions to the affected jurisdictions.
  - a. Protective Action Recommendations will be received by the county/state.
  - b. To the extent possible, Protective Action Decisions will be discussed by the affected counties and states.
  - c. Individual Protective Action Decisions will be reached for the affected counties.
  - d. To the extent possible, EAS messages and siren soundings will be coordinated by the affected counties.
- The number of PARs / PADs will be based on recommendations /information received from OEMA and BVPS.
- The Ohio Department of Health (ODH) through local health departments makes KI available to the general public. KI for the General Public is also stockpiled at the County Health Department and transported to the Reception Center for distribution to the General Public as needed.
- The County will demonstrate the capability to implement a Protective Action Decision for the general public for KI. This action is scenario driven.

Sub-element 2.c – PAD Consideration for the Protection of Persons with Disabilities and Access/Functional Needs

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to determine PADs, including evacuation, sheltering, and use of KI, if applicable, for groups of persons with disabilities and access/functional needs (e.g., hospitals, nursing homes, correctional facilities, schools, licensed daycare centers, mobility-impaired individuals, and transportation-dependent individuals). The focus is on those groups of persons with disabilities and access/functional needs that are, or potentially will be, affected by a radiological release from an NPP.

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

#### Assessment/Extent of Play

The County will demonstrate Protective Action Decisions involving considerations Protection of Special Populations this action is scenario driven.

Beaver Valley Power Station

Sub-element 2.d. – Radiological Assessment and Decision Making for the Ingestion Exposure Pathway

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the means to assess the radiological consequences for the ingestion exposure pathway, relate them to the appropriate PAGs, and make timely, appropriate PADs to mitigate exposure from the pathway.

During an incident at an NPP, a release of radioactive material may contaminate water supplies and agricultural products in the surrounding areas. Any such contamination would likely occur during the plume phase of the incident and, depending on the nature of the release, could impact the ingestion pathway for weeks or years.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO's planning criteria. (NUREG-0654/FEMA-REP-1, A.3; C.1, 4; D.4; J.9,11)

Assessment/Extent of Play

. .

N/A – Columbiana County relies on the State of Ohio.

Sub-element 2.e. – Radiological Assessment and Decision Making Concerning Post-Plume Phase Relocation, Reentry, and Return

Intent This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to make decisions on post-plume phase *relocation*, *reentry*, and *return* of the general public. These decisions are essential for protection of the public from direct long-term exposure to deposited radioactive materials from a severe incident at an NPP.

Criterion 2.e.1: Timely post-plume phase relocation, reentry, and return decisions are made and coordinated as appropriate, based on assessments of the radiological conditions and criteria in the ORO's plan and/or procedures. (NUREG-0654/FEMA-REP-1, I.10; J.9; K.3.a; M.1)

Assessment/Extent of Play

This criterion was demonstrated June 25, 2008.

#### **EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

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

Intent

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

Criterion 3.a.1: The OROs issue appropriate dosimetry, KI, and procedures, and manage radiological exposure to emergency workers in accordance with the plans/procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. OROs maintain appropriate record-keeping of the administration of KI to emergency workers. (NUREG-0654/FEMA-REP-1, J.10.e; K.3.a, b; K.4)

#### Assessment/Extent of Play

 In Columbiana County exposure control equipment is predistributed to: Reception Center (Negley FD), EWDC (West Point FD), Traffic / Access Control (Columbiana County Sheriff's Dept.), Route Verification (Negley FD), Bus Drivers (East Liverpool Schools).

Radiation exposure control equipment will be assigned to workers who may be exposed to radioactive material. Job briefings will be conducted at required locations and participants will be available for evaluator interview on their knowledge of radiation exposure control.

Emergency workers will explain the procedures to be followed when turn-back values are reached.

• By interview, the Supervisor/Exposure Coordinator will demonstrate the actions described in the procedures to determine whether to replace the worker, authorize the worker to incur additional exposures or to take other actions. Emergency workers may use any available resources (e.g., written procedures and/or co-workers) in providing responses.

- The Supervisor/Exposure Coordinator will describe the procedure to maintain a list of emergency workers who have ingested KI, including documentation of the date(s) and time(s) they were instructed to ingest KI, the actual ingestion of KI is not necessary.
- The County Radiological Officer will coordinate with Supervisor/Exposure Coordinators to monitor exposure of county emergency workers.

Beaver Valley Power Station

- Should the scenario dictate a reduction factor for the emergency worker exposure limit, the reduction will be limited to emergency workers within the EPZ
- Advisories from the EOC to field personnel may be simulated via a Controller inject.

Sub-element 3.b – Implementation of KI Decision for Institutionalized Individuals and the General Public

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide KI for institutionalized individuals, and, if in the plans/procedures, to the general public for whom immediate evacuation may not be feasible, very difficult, or significantly delayed. While it is necessary for OROs to have the capability to provide KI to institutionalized individuals, providing KI to the general public is an ORO option and must be reflected as such in ORO plans/procedures. Provisions must include the availability of adequate quantities, storage, and means of distributing KI.

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

#### Assessment/Extent of Play

• When KI is distributed, the package insert is included. These instructions list the recommended doses for KI.

• The Ohio Department of Health makes the recommendation to take KI.

• Institutionalized individuals are assisted in the taking of KI by their care givers, the date(s) and time(s) are documented as for other medications.

Sub-element 3.c – Implementation of Protective Actions for Persons with Disabilities and Access/Functional Needs

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement PADs, including evacuation and/or sheltering, for all persons with disabilities and access/functional needs. The focus is on those persons with disabilities and access/functional needs that are (or potentially will be) affected by a radiological release from an NPP.

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

#### Assessment/Extent of Play

- The County methodology for processing persons with disabilities and access/functional needs will be explained procedurally at the County EOC.
- A list of persons with disabilities and access/functional needs, hospitals, and nursing homes will be available at the EOC.
- Contact with Special Facilities, Reception Centers, & Transportation Providers will be simulated.
- Local disabilities and access/functional needs individuals will be demonstrated by the Route Verification Team at the Negley Fire Station in a time window of 7:00 p.m. -9:00 p.m. Monday June 18, 2012.

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

#### Assessment/Extent of Play

- The School Services Officer in the county EOC will be demonstrated on Tuesday June 19, 2012 3:00 p.m. 10 p.m.
- Since the school demonstration will be out of sequence with the EOC most of the demonstration will be conducted by interview, and communications with school district superintendents will be simulated.
- In accordance with the RERP the County School Service Officer will:
   Provide notification to local school districts.
  - Advise school district superintendents on plant status and recommended response actions.
  - Coordinate of protective actions for schools.
  - Coordinate the distribution of busses for the relocation of schools.
  - Coordinate with bus providers to provide for transportation for transportation dependent and the mobility impaired.

• The East Liverpool School District (EV-2) will demonstrate this criterion by interview in the Superintendents' office between the hours of 10:00 a.m. – 12:00 p.m. on Tuesday June 19, 2012.

0

Beaver Valley Power Station

- The Superintendent, Bus Driver Supervisor, Principal, and Bus driver will be available for interview.
- Officials of the East Liverpool School District will demonstrate the decisionmaking process regarding protective actions for the students.
- Officials of the District will describe the procedures that would be followed to implement canceling of the school day, dismissing early, or sheltering.
- If relocation is the implemented protective action, all activities to coordinate and complete the relocation of students to the host school will be accomplished through an interview.
- Officials of the school system will demonstrate the capability to develop and provide timely information to the general public and the media on the status of protective actions for schools.
- KI for school children will be procedurally demonstrated The distribution, documentation, and taking KI.
- Exposure control for bus drivers, including KI will be demonstrated via interview with the bus supervisor and bus driver.
- The transportation of school children will be simulated.
  - All activities will be driven by Controller injects.

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

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective action plans/procedures, including relocation and restriction of access to evacuated/sheltered areas. This Sub-element focuses on selecting, establishing, and staffing of traffic and access control points, and removal of impediments to the flow of evacuation traffic.

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

#### Assessment/Extent of Play

. . . . .

Members of the CCEOC will demonstrate the capability to identify appropriate traffic and access control points, consistent with protective actions.

- The capability to provide instructions to TCP/ACP providers will be demonstrated through an interview with the Law Enforcement Officer in the CCEOC.
- The TCP/ACP function will be demonstrated by interview at the Columbiana County Sheriff's Office located in Lisbon. This demonstration will be conducted out-of-sequence and in the time window of 9 a.m. 12:00 p.m. Tuesday June 19, 2012.
- The simulated TCP/ACP will be #5.
- Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654/FEMA-REP-1, J.10.k)

#### Assessment/Extent of Play

- The CCEOC will demonstrate the capability, as required by the scenario, to identify and take appropriate actions concerning impediments to evacuation. Actual dispatch of resources to deal with impediments will be simulated.
  - The Highway Services Officer will discuss the appropriate actions to be taken to the removal of impediments to the evacuation. Equipment will not actually be dispatched.
  - The Law Enforcement Officer will discuss the appropriate actions to reroute the evacuation traffic around the impediment. Officers will not actually be dispatched.
  - The Executive group will formulate a news release. This News release will suggest alternate evacuation routes around the impediment.
  - This news release will be processed as a Special News Bulletin.

#### Sub-element 3.e – Implementation of Ingestion Pathway Decisions

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement protective actions, based on criteria recommended by current FDA guidance, for the ingestion exposure pathway EPZ (i.e., the area within an approximate 50-mile radius of the NPP). This Sub-element focuses on those actions required for implementation of protective actions.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk, and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions. NUREG-0654/FEMA-REP-1, A.3; C.1, 4; J.11)

#### Assessment/Extent of Play

N/A This sub-element is a state function and will not be evaluated during this exercise.

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production. (NUREG-0654/FEMA-REP-1, G.1, J.9, 11)

#### Assessment/Extent of Play

N/A This sub-element is a state function and will not be evaluated during this exercise.

Sub-element 3.f – Implementation of Post-Plume Phase Relocation, Reentry, and Return Decisions

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to implement plans, procedures, and decisions for post-plume phase *relocation*, *reentry*, and *return*. Implementation of these decisions is essential for protecting the public from direct long-term exposure to deposited radioactive materials from a severe incident at a commercial NPP.

Criterion 3.f.1: Decisions regarding controlled reentry of emergency workers and relocation and return of the public during the post-plume phase are coordinated with appropriate organizations and implemented. (NUREG-0654/FEMA-REP-1, E.7; J.10.j; J.12; K.5.b; M.1, 3)

#### Assessment/Extent of Play

This criterion was demonstrated June 25<sup>th</sup>, 2008.

#### ASSESSMENT AREA 4: FIELD MEASUREMENTS AND ANALYSIS

#### Sub-element 4.a – Plume Phase Field Measurements and Analyses

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to deploy FMTs with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654/FEMA-REP-1 indicates that OROs must have the capability to use FMTs within the plume exposure pathway EPZ to detect airborne radioiodine in the presence of noble gases and radioactive particulate material in the airborne plume. In an incident at an NPP, the possible release of radioactive material may pose a risk to the nearby population and environment. Although incident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an incident, it is important to collect field radiological data to help characterize any radiological release. Adequate equipment and procedures are essential to such field measurement efforts.

#### Criterion 4.a.1: [RESERVED]

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

#### Assessment/Extent of Play

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

#### N/A This sub-element is a state function. Article III.

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

#### Assessment/Extent of Play

N/A This sub-element is a state function.

#### Sub-element 4.b -- Post-Plume Phase Field Measurements and Sampling Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to assess the actual or potential magnitude and locations of radiological hazards to determine the ingestion exposure pathway EPZ and to support relocation, reentry, and return decisions. This Sub-element focuses on collecting environmental samples for laboratory analyses that are essential for decisions on protecting the public from contaminated food and water and direct radiation from deposited materials. PART III: REP PROGRAM DEMONSTRATION GUIDANCE

REP Program Manual Page III-51 October 2011

Criterion 4.b.1: The field teams (2 or more) demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision making. (NUREG-0654/FEMA-REP-1, C.1; I.8; J.11)

#### Assessment/Extent of Play

N/A This sub-element is a state function.

#### Sub-element 4.c – Laboratory Operations

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to perform laboratory analyses of radioactivity in air, liquid, and environmental samples to support protective action decision making.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions. (NUREG-0654/FEMA-REP-1, C.1, 3; J.11)

#### Assessment/Extent of Play

N/A This sub-element is a state function.

#### **EVALUATION AREA 5: Emergency Notification and Public Information**

Sub-element 5.a – Activation of the Prompt Alert and Notification System

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to provide prompt instructions to the public within the plume exposure pathway EPZ. Specific provisions addressed in this Sub-element are derived from the *Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants*, FEMA-REP-10 (November 1985).

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

#### Assessment/Extent of Play

- The County will demonstrate the capability to sequentially provide an alert signal followed by an initial instructional message to populated areas throughout the 10-mile plume pathway EPZ.
- Following the decision to activate the alert and notification system (EAS), in accordance with the County plan and/or procedures, completion of system activation should be accomplished in a timely manner (will not be subject to specific time requirements).
- Siren activation will be simulated.

- Procedures to broadcast the message should be fully demonstrated as they would in an actual emergency up to the point of actual transmission. The actual broadcast of the message(s) or test messages will not be demonstrated.
- For this Exercise purpose, the EAS Radio Station will not be activated.
- The capability of the primary notification system to broadcast an instructional message on a 24-hour basis should be verified during an interview with the CCEMA Director or designee.

#### Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: Backup alert and notification of the public is completed within a reasonable time following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654/FEMA-REP-1, E.6, Appendix 3.B.2.c)

#### Assessment/Extent of Play

- Columbiana County has three (3) townships in which Back up Route Alerting is conducted, one will be demonstrated this exercise. The Negley Fire Department will be demonstrating this function Monday June 18, 2012, between 7:00 p.m. 9:00 p.m.
- By Controller inject the Route Verification Team will be notified of a failed siren. One Team will conduct Backup Route Alerting. The team will run one (1) assigned route, but will use no lights or sirens.
- All alert and notification activities along the route will be simulated. Actual testing of the mobile public address system will be conducted at the Fire Station.
- By interview the team will procedurally demonstrate the capability to alert and notify special populations and demonstrate the capability to provide for the needs of special populations in accordance with the ORO's plans and procedures. The route will not be run.

Criterion 5.a.4: Activities associated with FEMA-approved exception areas (where applicable) are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. (NUREG-0654/FEMA-REP-1, E.6; Appendix 3.B.2.c)

#### Assessment/Extent of Play

Exception Areas do not exist in Columbiana County. This Criterion is not demonstrated.

Beaver Valley Power Station

Sub-element 5.b – Subsequent Emergency Information and Instructions for the Public and the Media

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to disseminate appropriate emergency information and instructions, including any recommended protective actions, to the public. In addition, NUREG-0654/FEMA-REP-1 requires OROs to ensure that the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG-0654/FEMA-REP-1 also provides that a system must be available for dealing with rumors. This system will hereafter be known as the —public inquiry hotline.

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

Assessment/Extent of Play

- The County will ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information will contain necessary and applicable instructions to assist the public in carrying out protective action decisions provided to them. The County will also be prepared to disclose and explain the Emergency Classification Level (ECL) of the incident.
- Public Inquiry will address an average of 3 calls per hour once Site Area Emergency is declared. (Max of 2 hours)

• Trends in rumors will be identified and responded to as needed.

- Subsequent emergency information and instructions will be provided to the public and the media through the Joint Information Center. Columbiana County will not have a representative at the JIC.
- One news briefing will be conducted at the EOC.

#### **ASSESSMENT AREA 6: SUPPORT OPERATIONS/FACILITIES**

Sub-element 6.a – Monitoring, Decontamination, and Registration of Evacuees

#### Intent

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

Criterion 6.a.1: The reception center facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees. (NUREG-0654/FEMA-REP-1, A.3; C.4; J.10.h; J.12)

#### Assessment/Extent of Play

Columbiana County has two (2) **Reception Centers** identified in the County REP, one will be demonstrated this exercise. Monitoring and Decontamination of evacuees/auto is provided at the Reception Center. The demonstration will be conducted at the Negley Fire Station and demonstrated by the Negley Fire Dept. The demonstration will be from 7 p.m. - 9 p.m., Monday June 18, 2012.

• The Controller notifying the response organizations of the ALERT classification will begin the scenario. Subsequent escalations in ECLs will be driven by Controller injects.

• A total of six potentially contaminated individuals will pass through a portal monitor. The last individual will be contaminated, the indication of who is contaminated will be provided by Controller inject.

- Decontamination will be walked through and explained procedurally, but decontamination, if necessary, will be simulated.
- The decision to refer individuals who cannot be decontaminated to medical facilities will be procedurally explained via evaluator interview.
- Only one shower area will be setup. A floor plan will be available for inspection.
- Initial registration of evacuees will take place at this time.
- For evacuees arriving at the Reception, Center implementation of the KI decision will be demonstrated by a Health Department representative.
- By interview the process of gross vehicle decontamination will be demonstrated.
- One vehicle will be screened by portal monitor and found to be contaminated; this vehicle will then be impounded.
- Provisions for decontaminating vehicles after the accident will be addressed during the interview.
- Contamination control and record-keeping procedures will be demonstrated.

Unclassified Radiological Emergency Preparedness Program (REP)

#### After Action Report/Improvement Plan

Beaver Valley Power Station

## Sub-element 6.b – Monitoring and Decontamination of Emergency Workers and their Equipment and Vehicles

#### 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 emergency workers and their equipment, inclusive of vehicles.

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

#### Assessment/Extent of Play

Columbiana County has Two (2) Emergency Worker Decontamination Centers, one will be demonstrated this exercise.

- The Emergency Worker Decontamination Center at the Beaver Local High School will be demonstrated in a time window of (7 p.m. 9 p.m.) on Wednesday June 20, 2012.
- The Controller notifying the response organizations of the ALERT classification will begin the scenario. Subsequent escalations in ECLs will be driven by Controller injects.
- Two Emergency Workers will be monitored for contamination, one will be contaminated.
- Decisions on the need for decontamination will be made based on Controller injected radiation levels, as specified in the County REP Plan.
- Contamination control and record-keeping procedures will be demonstrated.

and a strategy of a fact the second strategy and a second strategy and the second s

- Decontamination efforts will be procedurally explained, but actual decontamination will be simulated.
- Only one shower area will be setup. A floor plan will be available for inspection.
- The decision to refer individuals who cannot be decontaminated to medical facilities will be procedurally explained via evaluator interview.
- By interview the process of gross vehicle decontamination will be demonstrated.
- One vehicle will be screened by portal monitor and found to be contaminated; this vehicle will then be surveyed / decontaminated and released.

- Decontamination efforts will be procedurally explained, but actual decontamination will be simulated.
- Provisions for vehicles that cannot be decontaminated will be addressed during the interview.

#### Sub-element 6.c – Temporary Care of Evacuees

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires OROs to have the capability to establish relocation centers in host/support jurisdictions. The American Red Cross normally provides congregate care in support of OROs under existing letters of agreement.

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

#### Assessment/Extent of Play

- Columbiana County has three (3) Care Centers, one will be demonstrated this exercise.
- The set-up demonstration will be conducted at the United Local School Complex, this Care Center will be demonstrated 7 p.m. 9 p.m., Wednesday June 20, 2012.
- The set-up and operations of the Care Center will be explained.
- A walk-through of the center will be conducted to determine, through observation and inquiries, that the services and accommodations are consistent with American Red Cross standards.
- Registration of evacuees will be demonstrated.
- Care Center staff will demonstrate the capability to ensure that evacuees have been monitored for contamination / decontaminated as appropriate. This capability will be determined through an interview process.
- If operations at the center are demonstrated, material that would be difficult or expensive to transport need not be physically available at the facility. However,

availability of such items must be verified by providing the evaluator a list of sources with locations and estimates of quantities.

#### Sub-element 6.d – Transportation and Treatment of Contaminated Injured Individuals

#### Intent

This Sub-element is derived from NUREG-0654/FEMA-REP-1, which requires that OROs have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

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

#### Assessment/Extent of Play

County demonstration of this Criterion was met at the Salem Community Hospital exercise on September 28, 2011.

	2012 SCE	Evaluated Exercise NARIO TIMELINE	
REAL <u>T</u> DRILL I		State Actions	County Actions
<u>1330</u> 60	<u>CAUTION</u> : The Drill will be conducted using an Operations crew in U1 Simulator providing "live" simulator data to Drill participants, exact event times provided in this Timeline may vary dependent on crew response.		
	<ul> <li>Initial Conditions: Unit 2 at 100%, EOL, Protected Train "B"</li> <li>Unit 1 at 100%, BOL, Protected Train "B"</li> <li>Boron Conc: is 1434 ppm.</li> <li>RCS Leak Rate Identified – .01gpm; Unidentified Leak Rate00 gpm</li> <li>RCS activity – .18 µCi/ml with a DEI-131 of 1.55E-4 µCi/gram.</li> <li>[1QS-P-1A] is OOS for mechanical maintenance as of 1230.</li> <li>'C' charging pump [1CH-P-1C] is OOS for relay testing. During clearance posting it was discovered that the shutter did not close in the AE bus cubicle.</li> </ul>		
<u>1430</u> 0	Emergency Preparedness Drill begins. Announcements are made to station personnel.		

Í

**APPENDIX E:** SCENARIO TIMELINE

93

Beaver Valley Power Station

.

After Action Report/Improvement Plan

Unclassified Radiological Emergency Preparedness Program (REP)

REAL TI DRILL T	IME EVENT	State Actions	County Actions
<u>1431</u> 0;01	A temporary spike in RCP 'A' vibration occurs and actuates the high vibration alarm. Foreign material from undetected damage in RCP 'A' causes impingement damage to several fuel assemblies. 'RCS activity begins' to rise.		
-	and the second		a summer and a second
<u>1435</u> 0:05	THIS IS THE UNUSUAL EVENT INDICATOR (EAL 2.5) A 20 gpm RCS leak into containment begins in an unidentified location		
			мати и разли и станции станции Примати и при станции ст
<u>1450</u> 0;20	A Notification of Unusual Event is declared based on EPP-I-1a, EAL 2.5, "Unidentified or pressure boundary RCS leakage >10 GPM."	Receive the Initial Notification Form by fax, with follow-up Initial Notification conference call,	Receive the Initial Notification Form by fax, with follow-up Initial Notification conference call:
<u>1510</u> 0.40	The shift chemist has completed drawing the		
<u>, ,0,,,0, ,</u>		and the second s	
<u>1518</u> 48	THIS IS THE ALERT INDICATOR (EAL 1.1.5)		
	RCS activity increases to approximately 4.0E5 cpm on [RM-CH-101A],		
1			

ŝ :

94

After Action Report/Improvement Plan

.

••••

.

٠.

•

, Beaver Valley Power Station

REAL <u>T</u> DRILL T	TIME EVENT	State Actions	County Actions	
<u>1533</u> 1:03	An ALERT is declared based on EPP-I-1a, EAL 1.1.5, "Letdown Monitor Indication – RM-CH-101 A or B reading greater than 3.5E5 cpm (300µCi/ml) with letdown unisolated"	Receive the Initial Notification State of Ohio activates their Assessment Room in the State EOC to monitor plant events. Selected emergency responders are alerted and placed on stand-by. State personnel (pre-positioned) may be dispatched to the EOF and JIC.	Receive the Initial Notification Columbiana County will begin the call down process to notify key staff. Establish communications with Beaver and Hancock Counties.	
		· · · ·		
<u>1627</u> 1:57	A' charging pump [1CH-P-1A] supply breaker trips open on over-current. 'B' charging pump [1CH-P-1B] is the only remaining charging pump. The crew will enter 10M-53C.4.1.7.1.			
·		· · ·		
<u>1645</u> 2:15	'A' RCP seals begin to exhibit problems. Some seal leakage begins: "REACTOR COOL PUMP 1A SEAL VENT POT LEVEL HIGH" and "REACTOR COOL PUMP SEAL LEAKOFF FLOW HIGH" alarms received.			
		·		
<u>1645</u> 2:15	The crew may decide to trip the reactor prior to the intended time of 1720.			
. ·		· · · · · · · · · · · · · · · · · · ·		
1720 2:50	A' RCP problems progress and the high vibration trip criteria and seal leakage trip criteria are met. The crew is expected to trip the reactor and then 'A' RCP.			
	[10] A. C. S. Sandar, and A. S. Sandar, "A strain of the strain strain strain strain strains," in the strain st			
	and the second start starting and			

δ.

95

÷ .

Beaver Valley Power Station

After Action Report/Improvement Plan

Unclassified Radiological Emergency Preparedness Program (REP)

REAL <u>TI</u> DRILÉ T	IME EVEN	Γ.		State A	ctions		· · · · ·	County	Actions	
<u>1720</u> 2;50	THIS IS THE SITE AREA EI INDICATOR (EAL 1.1.5 of 1 1.2.5)	AERGENCY .1.6 and 1.2.3 or	99 m. 1 1 Add - 1 mar 24 9 m	· · · · · · · · · · · · · · · · · · ·	р — н н г шенфол. 	1	90 m		44 44 4	
	Upon crew tripping A' RCP fails initiating a 325 gpm RC containment which requires Due to the small leak size is expected until the crew initia	the seal pack S leak Into Safety Injection ome delay is les Safety				مه در در م در در در در			- - -	•
<u>1723</u> 2:53.	Upon initiating Safety Injection fail to start.	on EDG:1-2 will			-	· · · · · · · · ·				· · · · ·

<u>9</u>6

# Unclassified Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

Beaver Valley Power Station

DRIEL TIME		State Actions	County Actions
1735       A SITE AREA EM         3:05       declared based or         Letdown Monitor Ir       1.1.6 Containment         (LOSS), and EAL       (Potential LOSS) or         radiation Monitors       1.1.6 Containment	ERGENCY should be h EPP-I-1a, EAL 1.1.5 ndication(LOSS), or EAL Radiation Monitors 1.2.3 RCS Leak Rate or 1.2.5 Containment (LOSS).	Receive the Initial Notification. State begins activation of the State EOC (simulated). State issues news statements once JIC is operational. State recommends livestock and	Receive the Initial Notification. Notify EOC staff and agencies. Review Initial notification and PAR. Formulate PAD with OEMA Limited precautionary action.
		State restricts air and rail traffic. State restricts air and rail traffic. State may request federal assistance. State develops PAR indicating public within 10 mile EPZ monitor EAS stations. Governor may declare state of	Coordinate with OEMA and adjacent states and countles for PAD / ANS. Activate Sirens and broadcast appropriate EAS message. Ensure Backup route alerting is initiated. School actions as necessary.

5

After Action Report/Improvement Plan

DRILLT	TME EVENT	State Actions	County Actions
		No.	Provide public periodic updates. (SNB's and press briefings).
			Prepared to activate EWDC , Reception Centers, TCP/ACP should situation Escalates.
			County State of Emergency
			Ensure notification of "special facilities / special populations.
<u>1749</u> 3:19	RCS leak increases in size to 480 gpm.		
· · · ·			
<u>1752</u> 3:22	RCS leak increases in size to 1000 gpm		
		A CARLEND AND A CARLEND AND A CARLEND	۰.
4:20	THIS IS THE GENERAL EMERGENCY INDICATOR (EAL 1.3.2 or 1.3.4. or 7.1) A test connection upstream of damper [1VS- D-5-5A] fails allowing containment atmosphere to be released into the purge air duct room and through adjacent spaces into SLCRS to the environment. [RM-1VS-105] begins to increase through the HIGH-HIGH alarm set point of 3.10E+4.		

1

1

86

# Beaver Valley Power Station

Unclassified Radiological Emergency Preparedness Program (REP)

After Action Report/Improvement Plan

REAL T	IME EVENT	• • • • • • • • • • •	State Actions	County Actions
	SPING Monitor VS-110 Ch 7 will cpm.	l reach 5000		
<u>1905</u> 4:35	A General Emergency is decla EPP/I-1a, EAL 1.1 5 Letdown M	i <b>red</b> based on onitor	Receive the Initial Notification	Receive the Initial Notification
	Indication (LOSS) or 1.1.6 Conta Radiation Monitors (LOSS), ANI Leak Rate (Potential LOSS) or 1	ainment D 1.2.3 RCS .2.5	State develops news statements based on state activities.	Review Initial notification and PAR.
	Containment Radiation Monitors AND 1.3.2 Containment Pressur	(LOSS), e / Hydrogen	State develops PAR based on plant conditions / release. Evacuation for	Formulate PAD with OEMA
	(Potential LOSS) or 1.3,4 Containin (Potential LOSS) or EAL 7,1 Gat Effluents.	seous	Ki will be recommended for	adjacent states and counties for PAD / ANS.
·	Based on either plant conditions projection results, a Protective A	or dose ction	emergency workers; institutionalized and public in the same sub area.	Evacuation for sub area -1 with KI, remainder of EPZ to monitor EAS.
	Recommendation is issued as "E miles 360° <u>AND</u> SHELTER the n the 10 mile EPZ <u>AND</u> advise the public to administer KI in accord	Evacuate 0-5 emainder of general ance with the	State also considers dose limits for emergency workers based on dose assessment.	Activate Sirens and broadcast appropriate EAS message.
	state plan.*		State continues to develop press releases regarding state activities.	Ensure Backup route alerting is initiated.
	PAGs will be exceeded at EAB a based on thyroid dose, but will n exceeded at EAB a	ale inat EPA and 2 miles ot be	State receives field data (controller inject.	Provide public periodic updates. (SNB's and press briefings).
				Ensure activation of EWDC , Reception Centers, TCP/ACP.

`Ť'

99

Beaver Valley Power Station

After Action Report/Improvement Plan

Radiological Emergency Preparedness Program (REP)

REAL TI		State Actions	County Actions
-			If evacuation is recommended: Relocate mobility, impaired to hospitals or care centers, depending on need. Provide transportation for special populations, non-auto- owning population, and health care facilities.
			Monitor local emergéncy worker's exposure limits.
<u>1915</u> 4:45	A' <u>GENERAL EMERGENCY</u> should be declared by now		
<u>2007</u> 5:37	A loss of the normal power supply to the meteorological tower occurs. The back-up diesel generator does not start. Meteorological data is no longer available to MIDAS / ARERAS.		
	Per 10M-45.4 AAO, an operator should be dispatched to investigate the loss of power to the met tower:		
	EA&DP personnel will be required to use the alternate source of met data per ½-EPP-IP- 2.6.5: A new dose projection should be completed, but results will not require a revision to the previous PAR.		

After Action Report/Improvement Plan

Unclassified Radiological Emergency Preparedness Program (REP)

Beaver Valley Power Station

 $\cdot \cdot \cdot$ 

REAL T DRILL T	IME EVENT	State Actions	County Actions
			· · · · · · · · · · · · · · · · · · ·
<u>2045</u> 6:15	If located at an appropriate time, the leak from containment will be repaired at this time which ends the release from containment.		
<u>2100</u> 6:30	Drill Termination.		

Q

The above listed actions for State and County are not complete or inclusive.

101

# Beaver Valley Power Station

After Action Report/Improvement Plan

Unclassified Radiological Emergency Preparedness Program (REP)

This page is intentionally blank.