



Homeland
Security

OCT - 5 2006

Mr. Jim Caldwell
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, Illinois 60542-4351

Dear Mr. Caldwell:

Enclosed is a copy of the Final Report for the June 27-28, 2006, plume and ingestion exposure pathway exercise of the offsite radiological emergency response plans site-specific to the Beaver Valley Power Station. The State of Ohio and Columbiana County fully participated in this exercise. The utility owner/operator, FirstEnergy Corporation, also participated in this exercise. The final exercise report was prepared by the U.S. Department of Homeland Security Radiological Emergency Preparedness Program (REPP) Chicago Field Office staff.

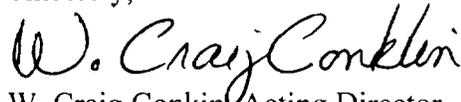
There were no Deficiencies identified during this exercise. There were five Areas Requiring Corrective Action (ARCAs) identified for Columbiana County. The final report contains the evaluation of the biennial exercise and a detailed discussion of these ARCAs. These issues can be found on Part IV of the final report.

Based on the results of the June 27-28, 2006, exercise, the offsite radiological emergency response plans and preparedness for the State of Ohio and affected local jurisdictions, 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, remain in effect.

www.dhs.gov
RECEIVED OCT 23 2006

If you should have any questions, please contact William King, Regional Assistance Committee Chair, REPP Chicago Field Office, at (312) 408-5575.

Sincerely,

A handwritten signature in black ink that reads "W. Craig Conkin". The signature is written in a cursive style with a large, prominent "W" and "C".

W. Craig Conkin, Acting Director
Chemical and Nuclear Preparedness
and Protection Division
Office of the Infrastructure Protection
Preparedness Directorate

Enclosure

cc: Mr. Anthony McMurtray, Chief
Inspection and Communications Section
U.S. Nuclear Regulatory Commission
Mail Stop O-6H2
Washington, DC 20555-0001

Beaver Valley Power Station

Exercise – June 27 and 28, 2006

Final Report – Radiological Emergency Preparedness Program

September 29, 2006



U.S. DEPARTMENT OF
HOMELAND SECURITY
FEDERAL BUREAU OF
INVESTIGATION

Chicago Field Office



Homeland Security

Final Exercise Report Beaver Valley Power Station

Licensee: **FirstEnergy Corporation**
Exercise Date: **June 27-28, 2006**
Report Date: **September 29, 2006**

**U.S. DEPARTMENT OF HOMELAND SECURITY
CHICAGO FIELD OFFICE**

**536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521**

TABLE OF CONTENTS

	Page
I. EXECUTIVE SUMMARY	1
II. INTRODUCTION.....	3
III. EXERCISE OVERVIEW.....	5
A. Plume Emergency and Ingestion Planning Zone Descriptions	5
B. Exercise Participants.....	5
C. Exercise Timeline	7
IV. EXERCISE EVALUATION AND RESULTS.....	9
A. Summary Results of Exercise Evaluation	9
B. Status of Jurisdictions Evaluated.....	13
1. STATE OF OHIO.....	15
1.1 Initial Notification Point	15
1.2 State Assessment Room.....	15
1.3 State Emergency Operations Center (EOC).....	15
1.4 State EOC Ingestion Phase - Day 2	16
1.5 State EOC IZRRAG - Day 2.....	16
1.6 Joint Information Center - Day 1 and 2	16
1.7 Emergency Operations Facility.....	17
1.8 State Communications Van - Day 1.....	17
1.9 State Sampling Screening Point - Day 1	17
1.10 State Field Monitoring Team Leader - Day 1	18
1.11 State Field Monitoring Team #1 - Day 1	18
1.12 State Field Monitoring Team #2 - Day 1	18
1.13 State Field Team Center - Day 2.....	19
1.14 State Field Sampling Screening Point - Day 2.....	19
1.15 State Field Sampling Team #1 (EPA) - Day 2.....	19
1.16 State Field Sampling Team #2 (EPA) - Day 2.....	20
1.17 State Field Sampling Team #3 (ODA) - Day 2.....	20
1.18 State Field Sampling Team #4 (ODA) - Day 2.....	20
1.19 State Field Sampling Team #5 (ODNR) - Day 2	21

	Page
2. RISK COUNTY	21
2.1 COLUMBIANA COUNTY	21
2.1.1 Initial Notification Point.....	21
2.1.2 Emergency Operations Center.....	22
2.1.3 Traffic and Access Control Point (Ohio State Patrol)	23
2.1.4 Implementation of Protective Actions for Schools (EV-2) School Interview - Beaver Local School District..	23
2.1.5 Backup Route Alerting - Dixonville/LaCroft Fire Department	23
2.1.6 Route Verification (Interview) - Dixonville/LaCroft Fire Department	24
2.1.7 Registration of Evacuees - Beaver Local High School Reception Center, West Point Fire Department	24
2.1.8 Monitoring/Decontamination of Evacuees - Beaver Local High School Reception Center, West Point Fire Department.....	24
2.1.9 Monitoring/Decontamination of Evacuee Vehicles - Beaver Local High School Reception Center, West Point Fire Department	25
2.1.10 Monitoring/Decontamination of Emergency Workers - Negley Fire Department	27
2.1.11 Monitoring/Decontamination of Emergency Worker Equipment and Vehicles - Negley Fire Department.....	28
2.1.12 Temporary Care of Evacuees - Congregate Care Center, United Local School Complex	28
2.1.13 Temporary Care of Evacuees - Congregate Care Center, (Interview) East Palestine School Complex	29

List of Appendices

APPENDIX 1 - ACRONYMS AND ABBREVIATIONS.....	30
APPENDIX 2 - EXERCISE EVALUATORS AND TEAM LEADERS	32
APPENDIX 3 - EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT	36
APPENDIX 4 - EXERCISE SCENARIO	63

List of Tables

Table 1 - Exercise Timeline.....	8
Table 2 - Summary Results of Exercise Evaluation.....	10

I. EXECUTIVE SUMMARY

On June 27 and 28, 2006, a Radiological Emergency Preparedness (REP) Full Participation Ingestion Exposure Pathway exercise was conducted for the 10-mile Emergency Planning Zone (EPZ) and the 50-mile Ingestion Planning Zone (IPZ) around the Beaver Valley Power Station by the U.S. Department of Homeland Security (DHS), Chicago Field Office (CFO). 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' 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 May 11, 2004. The qualifying emergency preparedness exercise was conducted on November 28, 1984.

DHS wishes to acknowledge the efforts of the many individuals in the State of Ohio and Columbiana County, who participated in this exercise along with the State government.

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 Report contains the evaluation of the biennial exercise and the evaluation of the following out of sequence activities:

State of Ohio	Communications Van Sampling Screening Point (Columbiana County Site) Field Monitoring Team Leader Field Monitoring Teams #1 and #2 Field Team Center Field Sampling Screening Point (Mahoning County Site) Field Sampling Team #s 1, 2, 3, 4, and 5
Columbiana County	Traffic and Access Control Point Beaver Local School District School Interview (EV-2) Backup Route Alerting Route Verification (Interview) Evacuee Registration Evacuee Monitoring/Decontamination Evacuee Vehicle Monitoring/Decontamination Emergency Worker Equipment Monitoring/Decontamination Emergency Worker Monitoring/Decontamination/Registration Temporary Care of Evacuees

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

No Deficiencies were identified for the State of Ohio or for Columbiana County. There were no Areas Requiring Corrective Action (ARCAs) identified during this exercise for the State of Ohio. There were no ARCAs from previous exercises for the State of Ohio or Columbiana County that were required to be demonstrated during this exercise.

There were five ARCAs identified during this exercise for Columbiana County. Three of the five ARCAs were successfully re-demonstrated. Two ARCAs remain as open issues.

The first ARCA for Columbiana County was identified under Criterion 6.a.1 - Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees, whereby a member of the West Point Fire Department performing the operational check, using the appropriate check source, failed to ensure the instrument responded with the appropriate reading (as indicated on the calibration label), and as directed by Suggested Operational Guidance (SOG) -3C, Attachment Three. This ARCA was successfully re-demonstrated during the exercise.

The second ARCA for Columbiana County was identified under Criterion 6.a.1 - Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees, whereby the Negley Fire Department staff member monitoring a contaminated emergency worker rapidly moved the CD V-700 survey meter pancake probe when attempting to identify the location and magnitude of the contamination. This ARCA was successfully re-demonstrated during the exercise.

The third ARCA for Columbiana County was identified under Criterion 6.a.1 - Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees, whereby the West Point Fire Department staff member monitoring a contaminated evacuee was using the CD V-700 RP survey meter in the x10 scale and did not identify the correct magnitude of the evacuee's contamination. The staff member also failed to monitor the evacuee's backside. This ARCA was successfully re-demonstrated during the exercise.

The fourth ARCA for Columbiana County was identified under Criterion 5.b.1 - Emergency Information and Instructions for the Public and the Media, whereby press releases contained inaccurate and/or conflicting or incomplete information for dissemination to the public.

The fifth ARCA for Columbiana County is based on the culmination of ARCA Numbers 1, 2, and 3 which were identified under Criterion 6.a.1 - Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees. In so much as these ARCAs were each successfully re-demonstrated, the number of problems experienced by monitoring staff indicates a systemic need for additional training in the proper use of monitoring equipment.

A detailed discussion of these issues can be found in Part IV of this report.

II. INTRODUCTION

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

The FEMA Title 44 CFR 350 establishes the policies and procedures for DHS' 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' 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. Nuclear Regulatory Commission,
 - U.S. Environmental Protection Agency,
 - U.S. Department of Energy,
 - U.S. Department of Health and Human Services,
 - U.S. Department of Transportation,
 - U.S. Department of Agriculture,
 - U.S. Department of the Interior, and
 - U.S. Food and Drug Administration.

Representatives of these agencies serve on the DHS Radiological Preparedness Coordinating Committee (RPCC), which is chaired by DHS.

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 Full Participation Ingestion Exposure Pathway exercise was conducted on June 27 and 28, 2006, by DHS to assess the capabilities of State and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving the 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 evaluator team, with final determinations made by the DHS Chicago Field Office RPCC Chairman, and approved by DHS Headquarters.

The criteria utilized in the DHS 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-14, "Radiological Emergency Preparedness Exercise Manual," September 1991; and
- FEMA "Radiological Emergency Preparedness: Exercise Evaluation Methodology," as published in the Federal Register Notice/Vol. 67, No. 80, dated April 25, 2002.

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," 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 assessed during this exercise, recommended corrective actions, and (2) descriptions of resolved ARCAs assessed during previous exercises and the status of the OROs' efforts to resolve them.

III. EXERCISE OVERVIEW

Contained in this section are data and basic information relevant to the June 27 and 28, 2006, Full Participation Ingestion Exposure Pathway exercise to test the offsite response organizations emergency capabilities in the area surrounding the Beaver Valley Power Station. This section of the exercise report includes a description of the REP Full Participation Ingestion Exposure Pathway 10-mile plume Emergency Planning Zone, the 50-mile radius of the Ingestion Planning Zone, and a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of the actual occurrence of key exercise events and activities.

A. Plume Emergency and Ingestion Planning Zone Descriptions

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 the numerous steep ridges and small valleys. The 2000 census approximates the total population to be 21,250. 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 protective action areas are included within the 10-mile EPZ: 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).

B. Exercise Participants

The following agencies, organizations, and units of government participated in the Beaver Valley Power Station REP Full Participation Ingestion Exposure Pathway exercise on June 27 and 28, 2006.

STATE OF OHIO

Ohio Emergency Management Agency (OEMA)
Ohio Department of Health (ODH)
Ohio Department of Mental Health

Ohio Department of Insurance
Ohio Department of Job and Family Services
Ohio State University Extension
Public Utilities Commission of Ohio
Ohio Department of Public Safety/State Highway Patrol (OSHP)
Ohio Department of Agriculture (ODA)
Ohio National Guard (ONG)
Ohio Department of Natural Resources (ODNR)
Ohio Department of Transportation (ODOT)
Ohio Governor's Office
Attorney General's Office
Federal Aviation Administration
American Red Cross
Department of Administrative Services
Ohio Environmental Protection Agency

RISK JURISDICTIONS

COLUMBIANA COUNTY

Columbiana County Commissioners
Columbiana County Emergency Management Agency
Columbiana County Sheriff's Department
Columbiana County Health Department
Columbiana County Engineer
Ohio State Patrol
Ohio National Guard
Ohio Department of Public Safety
Columbiana County Education Service Center
Ohio Environmental Protection Agency
Ohio Department of Health

PRIVATE/VOLUNTEER ORGANIZATIONS

Beaver Local School District
Columbiana (OH) North Chapter of the American Red Cross
Salvation Army
Radio Amateur Civil Emergency Services (RACES)
Beaver Valley Power Station/First Energy
Negley Fire Department and EMS
East Palestine Fire Department
Dixonville/LaCroft Fire Department
West Point Fire Department
EAS Radio Station WKBN

C. Exercise Timeline

Table 1 on the following page, presents the time at which key events and activities occurred during the Beaver Valley Power Station REP Full Participation Ingestion Exposure Pathway exercise on June 27 and 28, 2006. Also included are times notifications were made to the participating jurisdictions/functional entities.

Table 1. Exercise Timeline

DATE AND SITE: June 27-28, 2006, Beaver Valley Power Station

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken		
		STATE OF OHIO EMERGENCY OPERATIONS CENTER	ASSESSMENT ROOM	COLUMBIANA COUNTY EMERGENCY OPERATIONS CENTER
Unusual Event	NA	NA	NA	NA
Alert	1640	NA	1654	1654
Site Area Emergency	1809	NA	1820	1820
General Emergency	1932	1942	1942	1942
Simulated Release of Radioactive Materials Started	1940	2010	1955	2010
Simulated Release of Radioactive Materials Terminated	NA	NA	NA	NA
Facility Declared Operational		1900	1757	1703
Declaration of State of Emergency		1909	N/A	1859
Exercise Terminated		2147	2147	2138
Instructional Message to the Public		NA	NA	1841
1 st Siren Activation		NA	NA	1850
1 st EAS Message		NA	NA	1853
Early Precautionary Actions: All livestock and poultry within a 10-mile radius of the BVPS be taken off pasture, sheltered (kept under roof) and placed on stored feed and ground water supplies, wherever possible		1835	N/A	NA
1 st Protective Action Decision: Evacuate: sub-area 1 Shelter sub-areas 2, 3, and 4		1947	1942	1954
2 nd Siren Activation		NA	NA	2004
2 nd EAS Message		NA	NA	2007
2 nd Protective Action Decision: Evacuate: sub-areas 1, 2, 3, and 4		2113	2112	2124
3 rd Siren Activation		NA	NA	2132
3 rd EAS Message		NA	NA	2135
KI - For the General Public, Emergency Workers, and Institutionalized Persons in sub-area 1		1947	NA	1957
KI - For the General Public, Emergency Workers, and Institutionalized Persons in sub-areas 1, 2, 3, and 4		2113	NA	2123

8

IV. 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 27 and 28, 2006, REP Full Participation Ingestion 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 Federal Register Notice/Vol. 67, No. 80, dated April 25, 2002. Detailed information on the exercise criteria and the extent-of-play agreement used in this exercise are found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation

The matrix presented in Table 2, on the following page(s), presents the status of all exercise criteria from Federal Register Notice Vol. 67, No. 80, dated April 25, 2002, which were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status of those criteria is indicated by the use of the following letters:

- M – Met (No Deficiency or ARCAs)
- D – Deficiency assessed
- A – ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)
- N – Not Demonstrated (Reason explained in Subsection B)
- Blank – Not scheduled for demonstration

TABLE 2. SUMMARY RESULTS OF EXERCISE EVALUATION

DATE AND SITE: June 27 and 28, 2006 – Beaver Valley Power Station

JURISDICTIONS/LOCATION	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	3.	4.	4.	4.	4.	4.	5.	5.	5.	5.	6.	6.	6.	6.
	a.	b.	c.	d.	e.	a.	b.	b.	c.	d.	e.	a.	b.	c.	c.	d.	d.	e.	e.	f.	a.	a.	a.	b.	c.	a.	a.	a.	b.	a.	b.	c.
	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	2	1	2	1	1	2	3	1	1	1	2	3	1	1	1	1
RISK COUNTY																																
COLUMBIANA COUNTY																																
Initial Notification Point	M			M																												
Emergency Operations Center	M	M	M	M	M	M		M	M			M	M	M	M	M	M									M	M	A				
Traffic and Access Control Point (Ohio State Patrol)				M	M							M	M			M																
Implementation of Protection Actions for Schools (EV-2) School Interview - Beaver Local School District				M	M							M	M		M																	
Backup Route Alerting - Dixonville/LaCroft Fire Department				M	M							M	M														M					
Route Verification - (Interview) - Dixonville/LaCroft Fire Department				M	M							M	M														M					
Registration of Evacuees - Beaver Local High School Reception Center, West Point Fire Department					M							M																		M		
Monitoring/Decontamination of Evacuees - Beaver Local High School Reception Center, West Point Fire Department					M							M																		M		
Monitoring/Decontamination of Evacuee Vehicles - Beaver Local High School Reception Center, West Point Fire Department					M							M																		A		
Monitoring/Decontamination of Emergency Workers - Negley Fire Department					M							M																		A		
Monitoring/Decontamination of Emergency Worker Equipment and Vehicles - Negley Fire Department					M							M																		M		

11

LEGEND: M = Met (No Deficiency or ARCA(s) assessed) A = ARCA(s) assessed (Not affecting health and safety of public) Blank = Not scheduled for demonstration
 D = Deficiency assessed U = Unresolved ARCA(s) from prior exercises N = Not demonstrated as scheduled (Reason explained in Section IV.B.)

B. Status of Jurisdictions Evaluated

This subsection provides information on the evaluation of each participating jurisdiction and functional entity in a jurisdiction-based, issues-only format. Presented below are the definitions of the terms used in this subsection relative to criteria demonstration status.

- **Met** – Listing of the demonstrated exercise criteria under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.
- **Deficiency** – Listing of the demonstrated exercise criteria under which one or more Deficiencies was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.
- **Areas Requiring Corrective Action** – Listing of the demonstrated exercise criteria under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises that remain unresolved. Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.
- **Not Demonstrated** – Listing of the exercise criteria which 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 in this exercise and the corrective actions demonstrated.
- **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 biennial exercise.

The following are definitions of the two types of exercise issues that maybe discussed in this report.

- A **Deficiency** is defined in FEMA-REP-14 as "...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."

- An **ARCA** is defined in FEMA-REP-14 as "...an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

DHS has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among DHS Field Offices and site-specific exercise reports within each Field Office. It also expedites tracking of exercise issues on a nationwide basis.

The identifying number of Deficiencies and ARCAs 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 Codes.
- **Exercise Year** – The last two digits of the year the exercise was conducted.
- **Criterion Number** – An alpha and two-digit number corresponding to the criteria numbers in the six Exercise Evaluation Areas described in Federal Register Notice/Vol. 67, No. 80, April 25, 2002, which amends FEMA- REP 14, Radiological Emergency Preparedness Exercise Manual.
- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports. Plan issues are reported to the State(s) via letter from the RPCC Chairman. Therefore, standardized issue numbers are not assigned to Plan Issues.
- **Exercise Issue Identification Number** – A separate two (or three) digit indexing number, assigned to each issue identified in the exercise.

1. STATE OF OHIO

1.1 Initial Notification Point

- a. MET: Criteria 1.a.1 and 1.d.1**
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. NOT DEMONSTRATED: NONE**
- e. PRIOR ARCAs - RESOLVED: NONE**
- f. PRIOR ARCAs - UNRESOLVED: NONE**

1.2 State Assessment Room

- a. MET: Criteria 1.a.1; 1.c.1; 1.d.1; 1.e.1; 2.a.1; 2.b.1; 2.b.2; 3.d.1 and 4.a.2**
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. NOT DEMONSTRATED: NONE**
- e. PRIOR ARCAs - RESOLVED: NONE**
- f. PRIOR ARCAs - UNRESOLVED: NONE**

1.3 State Emergency Operations Center (EOC)

- a. MET: Criteria 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; 5.a.1 and 5.b.1**
- b. DEFICIENCY: NONE**
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. NOT DEMONSTRATED: NONE**
- e. PRIOR ARCAs - RESOLVED: NONE**
- f. PRIOR ARCAs - UNRESOLVED: NONE**

1.4 State EOC Ingestion Phase - Day 2

- a. **MET:** Criteria 2.d.1; 2.e.1; 3.e.2 and 3.f.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.5 State EOC IZRRAG - Day 2

- a. **MET:** Criteria 2.d.1; 2.e.1; 3.e.1; 3.e.2 and 3.f.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.6 Joint Information Center - Day 1 and 2

- a. **MET:** NONE
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** Criteria 1.a.1; 1.c.1; 1.d.1 and 5.b.1

Due to flooding during the time of this exercise, the State of Ohio did not activate their Joint Information Center. Staff was reassigned to deal with real life events. This criterion will be re-demonstrated during the October 24, 2006, Perry REP exercise.

- e. **PRIOR ARCAs - RESOLVED:** NONE

f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.7 Emergency Operations Facility

a. **MET: Criteria 1.a.1; 1.d.1; 3.a.1 and 3.b.1**

b. **DEFICIENCY: NONE**

c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**

d. **NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED: NONE**

f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.8 State Communications Van - Day 1

a. **MET: Criteria 1.a.1; 1.c.1; 1.d.1; 3.a.1 and 3.b.1**

b. **DEFICIENCY: NONE**

c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**

d. **NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED: NONE**

f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.9 State Sampling Screening Point - Day 1

a. **MET: Criteria 1.d.1; 3.a.1 and 3.b.1**

b. **DEFICIENCY: NONE**

c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**

d. **NOT DEMONSTRATED: NONE**

e. **PRIOR ARCAs - RESOLVED: NONE**

f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.10 State Field Monitoring Team Leader - Day 1

- a. MET: Criteria 1.d.1; 1.e.1 and 4.a.2
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

1.11 State Field Monitoring Team #1 - Day 1

- a. MET: Criteria 1.d.1; 3.a.1; 3.b.1; 4.a.1 and 4.a.3
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

1.12 State Field Monitoring Team #2 - Day 1

- a. MET: Criteria 1.d.1; 3.a.1; 3.b.1; 4.a.1 and 4.a.3
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

1.13 State Field Team Center - Day 2

- a. MET: Criteria 1.d.1; 2.d.1 and 4.b.1
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

1.14 State Field Sampling Screening Point - Day 2

- a. MET: Criteria 1.d.1 and 4.b.1
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

1.15 State Field Sampling Team #1 (EPA) - Day 2

- a. MET: Criteria 1.a.1; 1.d.1; 1.e.1 and 4.b.1
- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE
- f. PRIOR ARCAs - UNRESOLVED: NONE

1.16 State Field Sampling Team #2 (EPA) - Day 2

- a. **MET: Criteria 1.a.1; 1.d.1; 1.e.1 and 4.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.17 State Field Sampling Team #3 (ODA) - Day 2

- a. **MET: Criteria 1.a.1; 1.d.1; 1.e.1 and 4.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.18 State Field Sampling Team #4 (ODA) - Day 2

- a. **MET: Criteria 1.a.1; 1.d.1; 1.e.1 and 4.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

1.19 State Field Sampling Team #5 (ODNR) - Day 2

- a. **MET: Criteria 1.a.1; 1.d.1; 1.e.1 and 4.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2. RISK COUNTY

2.1 COLUMBIANA COUNTY

2.1.1 Initial Notification Point

- a. **MET: Criteria 1.a.1 and 1.d.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.2 Emergency Operations Center

- a. **MET:** Criteria 1.a.1; 1.b.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 and 5.a.3
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** Criterion 5.b.1

ISSUE NUMBER: 03-06-5.b.1-A-01

CONDITION: Press Releases 6, 7, 8 and 9 contained inaccurate and/or conflicting or incomplete information for dissemination to the public. Press Release 6 contained inaccurate information on the time of the GE ECL declaration; advice to the public for evacuation transportation pickup sites for sub-areas 2 and 3 that were instructed to shelter-in-place; EAS broadcast stations were not identified; and the EAS Message-D (for KI only), was issued. Press Release 8 contained inaccurate information. Sub-areas 2, 3, and 4 were under a recommendation to shelter-in-place and instructed to take KI. Press Release 9 contained inaccurate information regarding a designated evacuation route with an impending impediment.

POSSIBLE CAUSE: The public information process for information dissemination lacks sufficient controls and checks and balances to ensure accurate, complete and consistent information is provided for public consumption.

REFERENCE: NUREG-0654/REP-1, Section E.5, 7; G.3.a, G.4.c.

EFFECT: Incomplete, inaccurate, or conflicting information disseminated to the public can overload Public Inquiry systems, create undue question and answer situations for all emergency workers interacting with the public, and increase evacuation times or otherwise reduce the effectiveness of public protective measures.

RECOMMENDATION: Enhance training for the Public Information Officer and the Executive Group to ensure that information being provided to the public is first reviewed and concurred upon for accuracy, completeness, and consistency prior to being released to the public.

SCHEDULE OF CORRECTIVE ACTIONS: Enhanced training regarding the public information process will be completed by June of 2007. The ARCA is scheduled to be corrected during the 2008 Beaver Valley REPEX.

- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.3 Traffic and Access Control Point (Ohio State Patrol)

- a. **MET:** Criteria 1.d.1; 1.e.1; 3.a.1; 3.b.1 and 3.d.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.4 Implementation of Protective Actions for Schools (EV-2) School Interview - Beaver Local School District

- a. **MET:** Criteria 1.d.1; 1.e.1; 3.a.1; 3.b.1 and 3.c.2
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.5 Backup Route Alerting - Dixonville/LaCroft Fire Department

- a. **MET:** Criteria 1.d.1; 1.e.1; 3.a.1; 3.b.1 and 5.a.3
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.6 Route Verification (Interview) - Dixonville/LaCroft Fire Department

- a. **MET:** Criteria 1.d.1; 1.e.1; 3.a.1; 3.b.1 and 5.a.3
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.7 Registration of Evacuees - Beaver Local High School Reception Center, West Point Fire Department

- a. **MET:** Criterion 1.e.1; 3.a.1 and 6.a.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.8 Monitoring/Decontamination of Evacuees - Beaver Local High School Reception Center, West Point Fire Department

- a. **MET:** Criteria 1.e.1; 3.a.1 and 6.a.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** Criterion 6.a.1

ISSUE NUMBER: 03-06-6.a.1-A-02

CONDITION: The West Point FD staff member assigned to monitoring a contaminated evacuee was using the CD V-700 RP survey meter in the x10 scale and did not identify the correct magnitude of the evacuee's contamination. The staff member also failed to monitor the evacuee's backside.

POSSIBLE CAUSE: The West Point FD staff member had insufficient training on procedures for conducting a contamination survey using the CD V-700 RP survey meter.

REFERENCE: NUREG-0654/REP-1, Section II.K.5.a

EFFECT: An accurate characterization of the evacuee's contamination level may not be achieved and the individual may be released while still being contaminated.

CORRECTIVE ACTION DEMONSTRATED: The Controller discontinued the monitoring process and conducted training on the proper use of the CD V-700 RP survey meter with the West Point FD staff member conducting the monitoring in the Men's Locker Room. The Controller covered how the scale selector switch affects detector operation.

The Controller explained that the proper procedure to follow is to ensure the CD V-700 RP selector switch is set to the x1 scale after completing the source check to assure effective monitoring. The staff member was also trained that to obtain a complete monitoring survey, both sides of the evacuee must be properly monitored. Following the training, the West Point FD staff member successfully re-demonstrated correct use of the survey instrument and monitoring procedures. The survey techniques resulted in correct readings being obtained and recorded on the personnel monitoring record.

- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.9 Monitoring/Decontamination of Evacuee Vehicles - Beaver Local High School Reception Center, West Point Fire Department

- a. **MET:** Criteria 1.e.1 and 3.a.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** Criterion 6.a.1

ISSUE NUMBER: 03-06-6.a.1-A-03

CONDITION: The West Point FD person performing the operational check, using the appropriate check source, failed to ensure the instrument responded with

the appropriate reading as indicated on the calibration label and as directed by Suggested Operational Guidance (SOG) – 3C, Attachment three.

POSSIBLE CAUSE: The Fire Department staff member had insufficient training on procedures for conducting operational checks with the CD V-700 RP.

REFERENCE: NUREG-0654/REP-1, Section II.K.5.a

EFFECT: Failure to ensure radiation detection instrumentation is operating within the calibration parameters could result in a vehicle being released while still being contaminated.

CORRECTIVE ACTION DEMONSTRATED: The Controller provided training on the proper method to operationally check the CD V-700 RP survey meter using the required check source. The FD personnel correctly re-demonstrated using the source check following the training.

ISSUE NUMBER: 03-06-6.a.1-A-04

CONDITION: Staff members of the Negley Volunteer Fire Department (VFD) and the West Point Fire Department (FD) using CD V-700 RP survey meters did not adequately conduct operability tests and employ the survey meter to effectively identify the location and magnitude of radioactive material contamination. A Negley VFD staff member moved the probe to fast (in excess of the recommended six-inches per second rate of speed) while monitoring an emergency worker.

A West Point FD staff member did not correctly test the survey meter with a check source before monitoring for vehicle contamination. Another West Point FD staff member monitored a contaminated evacuee using the CD V-700 RP survey meter while the meter had been left in x10 scale after the source check instead of being re-set to the x1 scale, and consequently did not identify the correct magnitude of the evacuee's contamination. The same individual also failed to monitor the evacuee's backside. While each individual situation was remedied and successfully re-demonstrated, the three situations together indicate an overall weakness in the use of the survey meters.

POSSIBLE CAUSE: Negley VFD and West Point FD staff members need additional training on procedures for conducting a contamination survey with the CD V-700 RP.

REFERENCE: NUREG-0654/REP-1, Section II.K.5.a

EFFECT: An accurate characterization of individual or vehicle contamination may not be achieved. The individual or vehicle may be released while still being contaminated.

RECOMMENDATION: Conduct additional training for individuals using CD V-700 RP survey meters to monitor for radioactive material contamination.

SCHEDULE OF CORRECTIVE ACTIONS: Additional training for the Emergency Workers of the Negley Volunteer Fire Department (VFD) and the West Point Fire Department (FD) responsible for using CD V-700 RP survey meters will be completed by June of 2007. The ARCA is scheduled to be corrected during the 2008 Beaver Valley REPEX.

- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

2.1.10 Monitoring/Decontamination of Emergency Workers - Negley Fire Department

- a. **MET:** Criteria 1.e.1 and 3.a.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** Criterion 6.a.1

ISSUE NUMBER: 03-06-6.a.1-A-05 (see Issue No.: 03-06-6.a.1-A-04)

CONDITION: The Negley FD staff member monitoring a contaminated emergency worker was moving the CD V-700 RP survey meter pancake probe too fast to effectively identify the location and magnitude of the contamination.

POSSIBLE CAUSE: The VFD staff member had insufficient training on procedures for conducting a contamination survey using the CD V-700RP survey meter.

REFERENCE: NUREG-0654/REP-1, Section II.K.5.a

EFFECT: An accurate characterization of the contamination level of the emergency worker may not be achieved allowing the individual to be released while still being contaminated.

CORRECTIVE ACTION DEMONSTRATED: One of the exercise Controllers stopped the monitoring process and provided training on the proper use of the CD V-700 RP survey meter and proper monitoring technique to the VFD staff member conducting the monitoring at Monitoring Station No. 1. The Controller reviewed the issue and incorrect technique, stating the individual was holding the probe correctly but that the rate of speed during the demonstration was too high. The Controller demonstrated the slower technique at which the probe should be moved to achieve the six inches-per-second rate required to assure effective monitoring. At the conclusion of the Controller training session, the VFD staff member successfully re-demonstrated correct monitoring procedures.

- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.11 Monitoring/Decontamination of Emergency Worker Equipment and Vehicles - Negley Fire Department

- a. **MET: Criteria 1.e.1; 3.a.1 and 6.b.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.12 Temporary Care of Evacuees - Congregate Care Center, United Local School Complex

- a. **MET: Criterion 6.c.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

**2.1.13 Temporary Care of Evacuees - Congregate Care Center (Interview)
East Palestine School Complex**

- a. **MET: Criterion 6.c.1**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION: NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

The following is a list of the acronyms and abbreviations that were used in this report.

ARES	Amateur Radio Emergency Services
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
CFM	Cubic Feet Per Minute
CFR	Code of Federal Regulations
CPM	Counts Per Minute
DHS	Department of Homeland Security
DOT	Department of Transportation
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
EBS	Emergency Broadcast System
EC	Exercise Controller
ECC	Emergency Control Center
ECL	Emergency Classification Level
ED	Executive Director
EEM	Exercise Evaluation Methodology
EMA	Emergency Management Agency/Emergency Management Administrator
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPZ	Emergency Planning Zone
ETA	Estimated Time of Arrival
ETE	Evacuation Time Estimate
EW	Emergency Worker
EWMS	Emergency Worker Monitoring and Decontamination Station
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FTC	Field Team Coordinator
Ft/min	feet per minute
Ft ³ /min	cubic feet per minute
GE	General Emergency
GM	Guidance Memorandum
JDF	Joint Dispatch Facility

JIC	Joint Information Center
KI	Potassium Iodide
mR	milliroentgen
mR/h	milliroentgen per hour
MS-1	Medical Services Drill
NOUE	Notification of Unusual Event
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	NUREG-0654/FEMA-REP-1, Rev. 1, <i>"Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980</i>
NWS	National Weather Service
ORO	Offsite Response Organization
OEMA	Ohio Emergency Management Agency
ODH	Ohio Department of Health
OSHP	Ohio Department of Public Safety/State Highway Patrol
ODA	Ohio Department of Agriculture
ONG	Ohio National Guard
OANG	Ohio Air National Guard
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PIO	Public Information Officer
R/h	Roentgen(s) per hour
RACES	Radio Amateur Civil Emergency Services
REA	Radiation Emergency Area
RERP	Radiological Emergency Response Plan
RO	Radiological Officer
RPCC	Radiological Preparedness Coordinating Committee
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
TACP	Traffic and Access Control Point
TL	Team Leader
TLD	Thermoluminescent Dosimeter

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

The following is a list of the personnel who evaluated the Beaver Valley Power Station REP Full Participation Ingestion Exposure Pathway exercise on June 27 and 28, 2006. The letters "(T/L)" indicates evaluator Team Leaders after their organization's names. The organization each evaluator represents is indicated by the following abbreviations:

DHS	Department of Homeland Security
DOT	U.S. Department of Transportation
ICF	ICF Consulting

<u>TITLE</u>	<u>NAME</u>	<u>ORGANIZATION</u>
RPCC Chairman	William E. King	DHS
Exercise Director	Gary L. Naskrent	DHS
Regional Site Specialist	Carolyn Sturghill	DHS

1. Full Participation Ingestion Exposure Pathway Exercise - June 27 and 28, 2006

STATE OF OHIO

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Initial Notification Point	Jan Jackson	ICF
State Assessment Room	Marcy Campbell Harry Harrison	ICF ICF
State Emergency Operations Center (EOC)	Carolyn Sturghill (T/L) Sandra Bailey Gary Goldberg Tracey Green Carl Bebrich Jan Jackson	DHS DHS ICF ICF DHS ICF
State EOC Ingestion Phase -- Day 2	Carolyn Sturghill (T/L) Sandra Bailey Gary Goldberg Tracey Green Jan Jackson	DHS DHS ICF ICF ICF

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
State EOC IZRRAG – Day 2	Carolyn Sturghill (T/L) Marcy Campbell Carl Bebrich	DHS ICF DHS
Joint Information Center – Day 1 and 2	Not Demonstrated	
Emergency Operations Facility – Day 1	Dave Schweller	ICF
State Communications Van – Day 1	William McRee	ICF
State Sampling Screening Point – Day 1	William McRee	ICF
State Field Monitoring Team Leader - Day 1	James Hickey	ICF
State Field Monitoring Team #1 – Day 1	Kevin Flynn	ICF
State Field Monitoring Team #2 – Day 1	Dave Seebart	ICF
State Field Team Center – Day 2	Ronald Biernacki	ICF
State Field Sampling Screening Point – Day 2	Ronald Biernacki	ICF
State Field Sampling Team #1 (EPA) – Day 2	James Reese	ICF
State Field Sampling Team #2 (EPA) – Day 2	Jon Fox	ICF
State Field Sampling Team #3 (ODA) – Day 2	Kevin FLynn	ICF
State Field Sampling Team #4 (ODA) – Day 2	Dave Seebart	ICF
State Field Sampling Team #5 (ODNR) – Day 2	James Hickey	ICF

COLUMBIANA COUNTY

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Initial Notification Point	Patricia Tenorio	DHS
Emergency Operations Center	Harral Logaras (T/L) Patricia Tenorio Robert Duggleby Terri Connors-Hartman James McClanahan	DHS DHS ICF DHS ICF
Traffic and Access Control Point - (Ohio State Patrol)	Jeffry McSpaden	DOT
Implementation of Protective Actions for Schools, (EV-2) School Interview - Beaver Local School District	Tom McCance	ICF
Backup Route Alerting – Dixonville/LaCroft Fire Department	Richard Grundstrom	ICF
Route Verification (Interview) – Dixonville/LaCroft Fire Department	Jon Fox	ICF
Registration of Evacuees – Beaver Local High School Reception Center, West Point Fire Department	William McRee	ICF
Monitoring/Decontamination of Evacuees – Beaver Local High School Reception Center, West Point Fire Department	Richard Wessman	ICF
Monitoring/Decontamination of Evacuee Vehicles – Beaver Local High School Reception Center, West Point Fire Department	James Reese	ICF
Monitoring/Decontamination Emergency Workers – Negley Fire Department	Richard Wessman	ICF
Monitoring/Decontamination Emergency - Worker Equipment and Emergency Worker Vehicles – Negley Fire Department	James Reese	ICF

COLUMBIANA COUNTY (cont'd)

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
Temporary Care of Evacuees – Congregate Care Center – United Local School Complex	Ronald Bernacki	ICF
Temporary Care of Evacuees Congregate Care Center – (Interview) East Palatine School Complex	Dave Schweller	ICF

APPENDIX 3

EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criteria that were scheduled for demonstration in the Beaver Valley Power Station REP Full Participation Ingestion Exposure Pathway exercise on June 27 and 28, 2006, and the off-site extent-of-play agreement approved by DHS CFO on June 2, 2006.

The exercise criteria, contained in FEMA, Radiological Emergency Preparedness Exercise Evaluation Methodology, as published in the Federal Register Notice/Vol 67, No 80, dated April 25, 2002, represent a functional translation of the planning standards and evaluation criteria of NUREG-0654/FEMA-REP-1, Rev. 1, Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November 1980.

Because the exercise criteria are intended for use at all nuclear power plant sites, and because of variations among off-site plans and procedures, an extent-of-play agreement is prepared by the State and approved by DHS to provide evaluators with guidance on expected actual demonstration of the criteria.

A. Exercise Criteria and Extent-of-Play

Listed below are the specific REP criteria scheduled for demonstration during this exercise.

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, 4.a.3, 4.b.1, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairman of the Radiological Preparedness Coordinating Committee, include the following: 2.a.1, 2.b.1, 2.b.2, 5.a.1 and 5.b.1.

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

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

EXTENT OF PLAY

During the plume phase, the State Emergency Operations Center (SEOC) and the Ohio Highway Patrol Dispatch Center will receive initial notification over BVPS' Initial Notification Conference Line. Once the SEOC Assessment Room is activated all phone

communications will be received there. SEOC personnel will notify and mobilize State agencies to respond at the appropriate Emergency Classification Level (ECL) in accordance with procedures. The following State Agencies will participate in the exercise:

American Red Cross	Ohio Dept of Public Safety/Highway Patrol
Attorney General's Office	Ohio Emergency Management Agency
Governor's Office	Ohio Dept of Mental Health
Ohio Dept of Agriculture	Ohio Dept of Natural Resources
Ohio Dept of Health	Ohio Dept of Transportation
Ohio National Guard	Ohio Environmental Protection Agency
Ohio Dept of Insurance	Ohio Dept of Job and Family Services
Public Utilities Commission of Ohio	
Ohio State University Extension	
Department of Administrative Services	

State personnel who staff field positions will be pre-positioned. These functions are:

- Communications Van
- Emergency Operations Facility
- Field Monitoring Teams
- Field Sample Screening Point
- Joint Information Center

The Ingestion Phase (criteria related to ingestion, relocation, re-entry, and return) will be demonstrated on June 28. The scenario for the Ingestion Phase is separate from that of the Plume Phase. This part of the exercise will consist of two functions:

1. The Ingestion Zone Recovery/Re-entry Advisory Group (IZRRAG) will be pre-positioned at the SEOC for demonstration its' procedures at 10:00 AM. The state agencies on the IZRRAG are: Ohio Department of Health (Chair), Ohio Dept of Agriculture, Ohio Environmental Protection Agency, Ohio Department of Natural Resources, Ohio Emergency Management Agency, Ohio State University Extension, and USDA – Farm Service Agency.
2. The Field Team Center (FTC) will be pre-positioned at the Mahoning County EOC at 10:00 AM. The state agencies that take samples are the Ohio Department of Agriculture, Ohio Environmental Protection Agency, and the Ohio Department of Natural Resources. The Ohio Department of Health staffs the Sample Screen Point. Ohio EMA manages the FTC.
3. The ODH lab demonstration is delayed because the lab is being moved. It will be conducted during the week of the Perry exercise in October 2006.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

EXTENT OF PLAY

The baseline exercise for demonstration of this criterion was conducted in April 2002. The State of Ohio will demonstrate the availability of facilities to support the accomplishment of emergency operations (e.g., adequate space, furnishings, lighting, restrooms and ventilation).

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

EXTENT OF PLAY

Direction and control of state activities will be demonstrated at the SEOC. The Executive Director of Ohio EMA will be positioned in the SEOC Executive Room and will coordinate decisions on behalf of the Governor's office. The Operations Officer will conduct periodic briefing for the SEOC Operations Room staff. The Ohio Department of Health is responsible for determining the State PAR in the SEOC Assessment Room and will provide periodic briefings.

During the Ingestion Phase, overall direction and control will be exercised by the Executive Director. The IZRRAG Chairperson oversees the activities of the IZRRAG. The FTC Coordinator provides leadership in the FTC. Each of the state agencies with teams in the FTC also has a Team Leader.

Criterion 1.d.1: At least two communication systems are available and operate properly and communication links are established with appropriate locations. Communications capabilities are managed in support of emergency operations.

EXTENT OF PLAY

The primary means of communications between the State EOC, County EOC, Pittsburgh Airport JIC, EOF and FTC is by commercial telephone. Backup communications (radio and/or cellular phones) will be demonstrated.

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

EXTENT OF PLAY

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

potassium iodide supplies during the state field team demonstrations.

The baseline for the State EOC, including Assessment Room, was established in April 2002.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

EXTENT OF PLAY

The State EOC Assessment Room staff 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 Columbiana County EOC. The County EOC will disseminate recommendations to their emergency workers. Field monitoring data will be provided to the State EOC Assessment Room via controller injects.

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions.

EXTENT OF PLAY

The State EOC Assessment Room 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 protective action recommendations to the EOC Executive Room. Approved recommendations will then be forwarded to the Columbiana County EOC via a dedicated 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).

EXTENT OF PLAY

The Governor or his designee will demonstrate the ability to make appropriate protective action recommendations based on technical information from the EOC Assessment Room. Recommendations concerning the use of KI for the general public and emergency workers are the responsibility of the Ohio Department of Health. They are made in the

SEOC Dose Assessment Room in accordance with the ODH KI policy and will accompany the protective action recommendation.

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

Ohio Protective Action Decisions are not necessarily the same as those of Pennsylvania or West Virginia.

At least two (2) Protective Action Decisions will be demonstrated.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups.

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective action decisions are made based on the ORO planning criteria.

EXTENT OF PLAY

At the Site Area ECL, the SEOC Dose Assessment Room issues a precautionary protective action recommendation to shelter livestock and place them on stored feed and water within the 10-mile EPZ.

During the Ingestion Phase the IZRRAG is activated and the recommendation is re-assessed, based on computer projections. The recommendation is processed through the Executive Room and distributed to the media via the JPIC, the agricultural community via the IZRRAG, and to the affected county EMAs via the IZRRAG. The issuance of advisories to the public, the agricultural community and county EMAs will be simulated.

The IZRRAG then issues sample requests to the FTC. As the results of samples are received from the Ohio Department of Health Lab, advisories are modified or lifted and distributed as mentioned earlier.

Federal agencies will participate in the IZRRAG and FTC demonstrations to facilitate coordination of state and federal resources.

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate, based on assessments of radiological conditions and criteria in the ORO's plan and/or procedures.

EXTENT OF PLAY

Relocation, reentry, and return decision making will be demonstrated by tabletop discussions between the Executive Room, the IZRRAG, Columbiana County EMA (via telephone), and the participating federal agencies.

EVALUATION AREA 3 – PROTECTIVE ACTION IMPLEMENTATION

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures and manage radiological exposure to emergency workers in accordance with the plan and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart.

EXTENT OF PLAY

Direct reading dosimeters will be issued to State of Ohio workers who have assignments in the 10-mile EPZ. The Field Monitoring Team Leader will record the exposure of the Field Monitoring Teams, Communications Van and Sample Screening Point. All State field activities are pre-positioned.

If the scenario does not provide for the demonstration of turn back limits, turn back values will be covered by interview with the evaluator.

Criterion 3.b.1: KI and appropriate instructions are made available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.

EXTENT OF PLAY

All emergency workers that are directed to take KI will demonstrate the availability of KI, appropriate instructions, and record keeping in accordance with their procedures/guidelines.

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions.

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools.

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

EXTENT OF PLAY

Traffic and access control is primarily a county function. See Columbiana County Extent-of-Play Agreement.

The State EOC Dose Assessment Room will procedurally demonstrate restricting air and rail traffic within the Emergency Planning Zone.

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

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.

EXTENT OF PLAY

The IZRRAG will demonstrate the capability to determine dose and sample activity by controller data based on simulated laboratory analysis of ingestion samples and will demonstrate the capability to implement protective action for the ingestion exposure pathway. Current lists of farmers, food producers, distributors, and water supplies within the IPZ will be used in making recommendations.

Department of Energy flyover data will also be used in developing protective action recommendations. Federal agencies will be present during the drill to advise the IZRRAG on federal capabilities.

There will be two facilitators for the Ingestion Phase demonstration.

Criterion 3.e.2: Appropriate measures, strategies, and pre-printed instructional material are developed for implementing protective action decisions for contaminated water, food products, milk, and agricultural production.

EXTENT OF PLAY

The IZRRAG will demonstrate the capability to implement protective action for the ingestion exposure pathway. Current lists of farmers, food producers, distributors, and water supplies within the IPZ will be used in making recommendations. The state will demonstrate the capability to make ingestion information available to farmers, food processors and food distributors. The issuance of advisories and public information material will be simulated.

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented.

EXTENT OF PLAY

Implementation of reentry will be demonstrated by the Ingestion Zone Recovery/Reentry Advisory Group through tabletop discussions and coordination with Columbiana County EMA.

The IZRRAG will formulate recommended protective action related to re-entry, relocation and return of public to restricted areas. These recommendations will be communicated and coordinated with the Executive Room. Upon agreement of the PAR for re-location, re-entry, and return of public the state will demonstrate the capability to develop and implement actions required to allow for the controlled re-entry of essential workers to the evacuated area and for relocation and return of the public. These actions will be coordinated with county agencies.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.

EXTENT OF PLAY

Two Field Monitoring Teams (FMTs) will participate in the exercise. The teams will be demonstrated out-of-sequence at the Columbiana County EOC 10:00 AM on June 27th. FMTs will be fully equipped to perform field measurements and will function in accordance with their SOPs. However, charcoal cartridges will be used in the air samplers instead of the more costly silver zeolite filters. Samples will be taken to the Field Sample Screening point, but will not be transported to the lab in Columbus.

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

EXTENT OF PLAY

FMTs will be demonstrated out-of-sequence at 10:00 AM on June 27th. Radiation readings will be provided to the teams by controllers. They will receive information about predicted plume location and direction, travel speed, and exposure control procedures by controller messages to the FMT Leader. Controllers will provide FMT radiation readings to the State Dose Assessment Room during the plume phase demonstration.

Chain of Custody will be demonstrated by the use of forms that are filled out by FMTs and passed on to the Sample Screening Point when samples are dropped off.

There will be no federal play in the Plume Phase of the 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.

EXTENT OF PLAY

Measurements will be made by Department of Health/Ohio EMA FMTs in accordance with their Standard Operating Procedures (SOPs). Two mobile monitoring teams will demonstrate ambient radiation monitoring, radioiodine and particulate sampling. FMTs will be equipped with appropriate dosimetry and KI. The FMT Leader will direct each team from the Columbiana County EOC. FMTs will perform radiation measurements and air samples. Readings will be reported to the FMT Leader and samples will be taken to the Sample Screening Point. In place of silver zeolite cartridges, charcoal cartridges will be used for the exercise. Evaluators will meet the FMTs at the Columbiana County EOC at 10:00 AM on June 27th. Controllers will provide FMT radiation readings to the State Dose Assessment Room during the plume phase demonstration.

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (e.g., food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making.

EXTENT OF PLAY

Field Team Center (FTC) play will be separated from the Recovery/Reentry table top, which will take place simultaneously at the State EOC. An exercise controller will inject the requests for field samples that would normally originate from the State Ingestion Zone Recovery/Reentry Advisory Group (IZRRAG). Field sample teams will be prepositioned at the FTC. Upon receipt of requests for samples, teams will be dispatched

to locations within the ingestion EPZ to collect the samples. Meat, water, soil, milk, vegetation, and fish samples will be collected.

Samples will be taken to the sample screening point (located at the FTC) but will not be transported to the lab in Columbus. The lab will be demonstrated at a later date.

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

EXTENT OF PLAY

The ODH lab demonstration is delayed because the lab is being moved. It will be conducted during the week of the Perry exercise in October 2006.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized off-site emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include:

1. Identification of the state or local government organization and the official with the authority for providing the alert signal and instructional message
2. Identification of the commercial nuclear power plant and a statement that an emergency situation exists at the plant
3. Reference to REP-specific emergency information (e.g., brochures and information in telephone books) for use by the general public during an emergency
4. A closing statement asking the affected and potentially affected population to stay tuned for additional information.

EXTENT OF PLAY

The State will consult with the 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.)

Criterion 5.a.2: [RESERVED]

Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

EXTENT OF PLAY

During the Plume Phase, the State PIO and a representative from the Ohio Department of Health will be present at the JIC at the Pittsburgh airport 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 State EOC to communicate with the JIC.

A Public Inquiry telephone will be established and demonstrated at the State EOC and driven by controller injects. Public Inquiry will address an average of 3 calls per hour once Site Area Emergency is declared for two (2) hours. Trends in rumors will be identified and responded to as needed.

During the Ingestion Phase, the JIC will be located at the SEOC. Advisories will be processed and disseminated from there.

EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers.

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles.

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

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

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

EXTENT OF PLAY

N/A –This is a county function. See Columbiana County Extent-of-Play Agreement.

COLUMBIANA COUNTY

EVALUATION AREA 1 – EMERGENCY OPERATIONS MANAGEMENT

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

EXTENT OF PLAY

- 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 facility will not begin until notification / inject.
- State players will arrive at their positions after the Alert is declared.
- Twenty-four (24) Hour Staffing will be demonstrated by roster.

Criterion 1.b.1: Facilities are sufficient to support the emergency response.

EXTENT OF PLAY

- The baseline for the county EOC will be established during the exercise.
- The baseline for the offsite facilities; Sheriff Dispatch, and the Reception Center at Beaver Local Complex will be established during the exercise.

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.

EXTENT OF PLAY

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.

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.

EXTENT OF PLAY

- Demonstrate a primary and at least one backup system is functional 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.
- Out-of-sequence demonstrations will have communications available but not necessarily demonstrate them.
- Communications associated with medical support facilities were demonstrated during the November 15th, 2005 MS-1 Federally Evaluated Exercise.

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

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 2005 annual letter of certification.
- Baselines will be established for the use of maps, displays, and equipment at the new EOC.
- KI was predistributed to the general Public during clinics conducted by the County Health Department.
- KI for the General Public is stockpiled at the County Health Department and transported to the Reception Center for distribution to the General Public as needed.

- CDV-138s are not used in Columbiana County.

EVALUATION AREA 2 – PROTECTIVE ACTION DECISION MAKING

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to ensure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides.

EXTENT OF PLAY

- The capability to send emergency workers into the plume exposure pathway EPZ will be demonstrated.
- The capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels will be procedurally discussed.
- KI is predistributed to emergency workers.
- The Ohio Department of Health recommends the taking of KI.
- Should the scenario dictate a revised exposure limit, the message will be limited to those emergency workers having a 25R limit initially
- The decision to take or to not take KI will be driven by the scenario.

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of onsite and offsite environmental conditions.

EXTENT OF PLAY

N/A – Columbiana County does not demonstrate this criterion; it relies on the State of Ohio and on the 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 (PAD) for the general public (including the recommendation for the use of KI, if ORO policy).

EXTENT OF PLAY

- A decision-making process involving consideration of appropriate factors and necessary coordination is used to make Protective Action Decisions 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.
- PADs will be coordinated between the State and County.
- The number of PADs / PARs will be based on information from the State and BVPS. At least two PADs / PARs will be demonstrated with one being the actions taken at Site Area Emergency.
- The Ohio Department of Health (ODH) (through local health departments) makes KI available to the general public by pre-distribution and by distribution at Reception Centers.
- The County will demonstrate the capability to implement a Protective Action Decision for the public to take KI.

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups

EXTENT OF PLAY

- Managing Special Populations will be demonstrated during the EOC exercise. This play will be driven by controller injects.
- Local special needs will be procedurally explained by the Route Verification Team.
- The County KI Policy for special populations will be procedurally explained at the County EOC.

Criterion 2.d.1: Radiological consequences for the ingestion pathway are assessed and appropriate protective actions decisions are made based on the ORO planning criteria.

EXTENT OF PLAY

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

Criterion 2.e.1: Timely relocation, re-entry, and return decisions are made and coordinated as appropriate based on assessment of radiological conditions.

EXTENT OF PLAY

This sub-element was successfully demonstrated during the 2002 Exercise and will not be evaluated during this exercise.

EVALUATION AREA 3 – PROTECTIVE ACTION IMPLEMENTATION

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

EXTENT OF PLAY

- In Columbiana County exposure control equipment is predistributed to: EWDC (Negley FD), Reception Centers (West Point FD), Access Control (OSP), Route Verification (LaCroft FD), Bus Drivers (Beaver Local), etc.
- 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 should log accumulated exposures during the exercise as indicated in the procedures.
- The County Radiological Officer will coordinate with dosimetry coordinators to monitor exposure of county emergency workers.
- Should the scenario dictate a revised exposure limit, the action will be limited to those emergency workers having a 25R limit initially.
- Advisories from the EOC to field personnel may be simulated via a Controller inject.

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.

EXTENT OF PLAY

- In Columbiana County KI, procedures and associated forms are predistributed. The following field locations will demonstrate the use of KI: Access Control (OSP), Route Verification (LaCroft FD), Bus Drivers (Beaver Local), etc.
- Offsite Response Organizations within the exposure pathway will demonstrate the capability to disseminate appropriate instructions on the use of KI by those advised to take it.
- Emergency workers will demonstrate the basic knowledge of procedures for the use of KI.
- By interview, 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 Ohio Department of Health makes the recommendation to take KI.

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions.

EXTENT OF PLAY

The County methodology of handling special populations will be explained procedurally at the County EOC. A list of special needs individuals, hospitals, nursing homes will be available.

Local special needs will be procedurally demonstrated by the Route Verification Team at the LaCroft Fire station in a time window of 7 pm - 9 pm on Tuesday, June 27th, 2006.

By EOC interview the capability to provide for the needs of special populations in accordance with the county plans and procedures will be discussed.

Contact with special populations, reception facilities and transportation providers will be simulated. All actual and simulated contacts should be logged. This demonstration will be conducted by interview in the EOC.

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools.

EXTENT OF PLAY

The School Services Officer will be demonstrating on June 27th, 2006.

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 evacuation of schools.
- Coordinate with bus providers to provide for transportation for transportation dependent and the mobility impaired.
- The Schools Liaison communicates with the Superintendents' offices. They, in turn, notify district personnel and coordinate district resources.
- The Beaver Local School District will demonstrate this criterion by interview between the hours of 10:00 a.m. and 12:00 Noon on Tuesday June 27th 2006.
- This demonstration will be conducted in the Superintendents' office.
- The Superintendent, Principal, Bus Driver Supervisor and Bus driver will be available for interview.
- Officials of the Beaver Local School District will demonstrate the decision-making process regarding protective actions for the students.
- Officials of the Beaver Local School 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 evacuation of students to the host school will be accomplished through an interview process.
- 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.

- The distribution, documentation, and taking KI will be procedurally demonstrated.
- Transportation of school children will be simulated.
- No route will be demonstrated.
- All activities will be driven by controller injects.

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.

EXTENT OF PLAY

- The CCEOC will demonstrate the capability to identify appropriate traffic and access control points, consistent with protective actions. The capability to provide instructions to traffic and access control staff will be demonstrated through an interview with the Law Enforcement Officer in the CCEOC.
- For this exercise one Access Control Point (ACP) will be identified, but not activated.
- An Ohio State Highway Patrolman will discuss the procedure for activating and manning the ACP.
- A Law Enforcement Officer in the County EOC will discuss the process of Traffic and Access Control. An actual control point will not be established. The Traffic and Access function will be demonstrated by interview.
- The use of OSP meets the county objective.
- This function will be conducted out-of-sequence and in the time window of 10am – Noon Tuesday June 27th, 2006 at the State Highway Patrol Office.

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

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 requested.

- 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.

Criterion 3.e.1: The ORO demonstrates the availability and appropriate use of adequate information regarding water, food supplies, milk and agricultural production within the ingestion exposure pathway emergency planning zone for implementation of protective actions.

EXTENT OF PLAY

N/A 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.

EXTENT OF PLAY

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

Criterion 3.f.1: Decisions regarding controlled re-entry of emergency workers and relocation and return of the public are coordinated with appropriate organizations and implemented.

EXTENT OF PLAY

This sub-element was successfully demonstrated during the 2002 Exercise and will not be evaluated during this exercise.

EVALUATION AREA 4 – FIELD MEASUREMENT AND ANALYSIS

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulates.

EXTENT OF PLAY

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

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure.

EXTENT OF PLAY

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

EXTENT OF PLAY

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

Criterion 4.b.1: The field teams demonstrate the capability to make appropriate measurements and to collect appropriate samples (for example, food crops, milk, water, vegetation, and soil) to support adequate assessments and protective action decision-making

EXTENT OF PLAY

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

Criterion 4.c.1: The laboratory is capable of performing required radiological analyses to support protective action decisions.

EXTENT OF PLAY

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

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

Criterion 5.a.1: Activities associated with primary alerting and notifications of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance

EXTENT OF PLAY

- The County will demonstrate the capability to sequentially provide an alert signal followed by an initial instructional message to populated areas (permanent resident and transient) throughout the 10-mile plume pathway EPZ. Following the decision to activate the alert and notification system, 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) for primary alerting/notification. The initial message will include the elements required by current FEMA REP guidance.

- 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. The alert signal activation will be simulated. However, the procedures will be demonstrated up to the point of actual activation.
- 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: *Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system.*

EXTENT OF PLAY

- Columbiana County has three (3) townships in which Route Verification is conducted. The Dixonville / LaCroft Fire Department in Liverpool Township will be demonstrating this exercise.
- Following the first Protective Action Decision the Route Verification Team will be notified of a failed siren (# 505). One (1) Route Verification 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.
- Following the second Protective Action Decision the team will be notified to conduct Route Verification 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.

- Route Verification will be conducted in a time window (7 pm - 9 pm) on Tuesday, June 27th, 2006 starting at the LaCroft Station.

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.

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 all 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.

EVALUATION AREA 6 – SUPPORT OPERATION/FACILITIES

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers.

EXTENT OF PLAY

Columbiana County has Two (2) Reception Centers identified in the County REP. Monitoring and Decontamination of evacuees/auto is provided at the Reception Center.

- The demonstration will be conducted at the Beaver Local High School by the West Point Fire Department 7 pm - 9 pm, Tuesday, June 27th, 2006. A total of six potentially contaminated individuals will pass through a portal monitor. At least one (1) 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.
- One evacuee vehicle will be monitored. Decisions on the need for decontamination will be made based on controller injected radiation levels, as specified in the County REP Plan.
- Initial registration of evacuees will take place at this time.
- Contamination control and record-keeping procedures will be demonstrated.
- Implementation of the KI decision will be demonstrated by a Health Department representative.
- Columbiana County has Two (2) Emergency Worker Decontamination Centers.
- The Emergency Worker Decontamination Center at the Negley FD will demonstrate in a time window (7 pm - 9 pm) on Monday, June 26th 2006.
- 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.
- Decontamination efforts will be procedurally explained, but actual decontamination will be simulated.
- The decision to refer individuals who cannot be decontaminated to medical facilities will be procedurally explained via evaluator interview.

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment, including vehicles.

EXTENT OF PLAY

Columbiana County has Two (2) Emergency Worker Decontamination Centers.

- The Emergency Worker Decontamination Center at the Negley FD will demonstrate in a time window (7 pm - 9 pm) on Monday, June 26th 2006.
- The controller notifying the response organizations of the ALERT classification will begin the scenario. Subsequent escalations in ECLs will be driven by controller injects.
- The area to be used for monitoring and decontamination will be set up, as it would be in an actual emergency.
- One vehicle will be monitored and decisions regarding the need for decontamination will be made as radiation levels are presented via controller injects.
- Contamination control and record-keeping procedures will be demonstrated.
- 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.

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. (Found in MASS CARE - Preparedness Operations, ARC 3031) Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities

EXTENT OF PLAY

- Columbiana County has three (3) Care Centers identified in the County REP. Sheltering is provided at Care Centers. One (1) Care Center will setup in the 2006 exercise and one (1) Care Center operations will be discussed procedurally.
- The set-up demonstration will be conducted at the United Local School Complex. This Care Center will be demonstrated 7 pm - 9 pm, Wednesday, June 28th, 2006.

- 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 (ARC) 3031 via interview.
- The Red Cross will demonstrate registration of evacuees. Care Center staff will also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been 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 (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (facilities).
- The second Care Center will be explained procedurally via interview at the East Palestine School Complex, Noon - 3pm Tuesday June 27th, 2006.
- Red Cross will explain set-up and operations, of the Care Center.

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals.

EXTENT OF PLAY

- County demonstration of this objective was met at the Salem Community Hospital exercise on November 15th, 2005 MS-1 Exercise.

APPENDIX 4

EXERCISE SCENARIO

This appendix contains a summary of the simulated sequence of events -- Exercise Scenario -- which was used as the basis for invoking emergency response actions by Offsite Response Organizations in the Beaver Valley Power Station REP Full Participation Ingestion Pathway exercise on June 27 and 28, 2006.

This exercise scenario was submitted by the State of Ohio and FirstEnergy Corporation, and approved by DHS/CFO on June 2, 2006.

During the exercise, controllers from the State of Ohio gave "11 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 response actions by OROs.

SCENARIO SUMMARY:

The following is a summary of the postulated events for the 2006 Beaver Valley Power Station 2006 Evaluated Exercise. These events did not occur.

Initial Conditions: Unit 1 is 100% power. Unit 2 is at 100% power, protected train B. Train A SLCRS FLT205A (208A) Supplementary Leak Collection System Charcoal Filters are being replaced. 2SSR-AOV118A, letdown Flow Sample Sink Isolation air operator is disassembled for diaphragm replacement. Any Reactor Coolant System (RCS) samples will have to be drawn from the RCS Hot Leg sample points. 2CHS-P21C is out of Service for in-progress Preventative Maintenance tasks. Refilling of the oil reservoir is the only task remaining. RCS Leak Rate is 0.039 gpm Identified and 0.024 gpm Unidentified.

An operations crew will be in the Unit 2 Simulator, all drill data for the emergency response facilities will be provided by controllers or by the simulator.

1600 hours - Beaver Valley Power Station evaluated exercise begins. The 21A Reactor Coolant Pump develops higher than normal, but stable, vibrations (13 mils shaft and 3.0 mils frame). The operations crew enters Abnormal Operating Procedure (AOP) AOP-2.6.8 for abnormal Reactor Coolant Pump Operation, but the vibrations are not high enough to require a reactor trip. The cause of the high vibrations is loosened impeller fasteners which will result in several loose parts. These loose parts will find their way into the reactor causing some degree of fuel damage. Indication of the failed fuel will be the slowly increasing activity on 2CHS-RQ101A(B), the Letdown Rad Monitor. Chemistry will be directed to draw a RCS sample to verify activity and to help determine if the elevated activity is due to failed fuel or a crud burst.

1630 hours - 2CHS-RQI-101A(B), Letdown Radiation Monitor activity increases to >300 uCi/gm. The increase in activity will require an ALERT to be declared based on Emergency

Action Level (EAL) 1.1.5, Letdown Monitor Indication/loss of Fuel Clad Barrier. Plant Management will direct a plant shutdown to be started at 12% per hour.

With the declaration of the ALERT, the BVPS Emergency Response Organization will be activated. The Technical Support Center and Operations Support Center are required to be activated within 60-minutes of the event declaration. The Emergency Operations Facility and Joint Public Information Center are staffed. These facilities can activate at any time, but are required within 60-minutes of declaring a Site Area Emergency.

Chemistry will report a sample valve malfunction to the control room (2SSR-SOV121D does not close). The control room will try to close 2SSR-SOV128A1. This valve does not close. This prompts entry in Technical Specification (T.S.) T.S.3.6.3.1 for containment Isolation valves, a 4 hour action.

1720 hours - 2SWS-P21A, Service Water Pump, trips on spurious MEPT. The Standby Service Water Pump 2SWE-P21A does not "auto-start". Control Room enters AOP-2.30.1 and manually starts 2SWE-P21A(B). The Service Water header pressure transient causes the end bell gasket to begin leaking on 2CHS-E25A the 2CHS-P21A Charging Pump Lube Oil Cooler.

1730 hours - the "Charging Pump Lube Oil Temp High" alarm (A2-1C) alarms. One minute later, 2CHS-P21A (Highhead Safety Injection/Charging Pump) trips. The Control Room enters AOP-2.7.1 Loss of Charging or Letdown. 2CHS-P21B can be started once the crew determines the 21A pump did not trip due to cavitation.

The 21A Reactor Coolant Pump vibrations increase at 1800 hours to values in excess of the limits. This causes damage to the Reactor Coolant Pump seal package resulting in a ~150 gpm leak through the damaged seal package.

A manual Reactor Trip will be performed and the crew may elect to manually initiate Safety Injection (SI) or wait for the Automatic SI. The goal of the control room is to cooldown to <500°F within 6 hours.

The conditions for a Site Area emergency will be met based on EALs 1.1.4 (Loss) Primary Coolant Activity Level and 1.2.3 (Potential Loss) RCS Leak Rate.

The previous SSR valve malfunction should not be a concern as the line will be isolated by 2SSR-SOV-128A2.

When notified that the work on 2CHS-P21C has been completed, the Control Room will align 2CHS-P21C as the Train A Charging Pump.

1915 hours - 2SSR-RV120, Hot Leg Sample Relief Valve will stick open, creating a high energy steam release from a high activity RCS source into the A Penetrations area of the 718' level of the Cable Vault Building. Rod Control Building sump alarms and area ventilation radiation monitors will alert the control room to the change in plant conditions. Additional alarms will

provide indication of high temperatures in this area. 2RMR-RQ301, (Leak Collection Vent Monitor) will immediately begin to trend upward. The SLCRS contiguous area flowpaths will have switched from “unfiltered” to “filtered” with the previous SI initiation and 2HVS-RQ-109, Elevated Release Monitor, will also begin to trend upward.

The criteria for a General Emergency is met at this time based on EALs 1.1.4 (LOSS) Primary Coolant Activity Level, 1.2.3 (Potential LOSS) RCS Leak Rate and EAL 1.3.3 (LOSS) Containment Isolation Status. A Protective Action Recommendation “Based on EPP/IP 4.1 “Recommendation of Offsite Protective Actions” operational and meteorological conditions, an offsite Protective Action Recommendation (PAR) of “Evacuate 0 – 5 miles, 360 degrees AND SHELTER the remainder of the 10-mile EPZ AND advise the general public to administer KI in accordance with the State Plan”, is provided to offsite agencies in the EOF and via the Gold Executive Conference (GEC) call.

The highly radioactive steam entering the A Penetrations, 718’ Cable Vault Building, is being swept into SLCRS, which is exhausting through the Train B SLCRS Filter Bank. The heavily moisture laden air will result in the wetting of the charcoal in both filter houses (#3 & #4)

2015 hours - an exothermic reaction results in sufficient heat being generated in filter houses #3 and #4 to initiate a fire detection system alarm. The control room will receive alarm A10-7B, Charcoal Filter Banks Pre-Alarm which comes in at 190°F. Per the Alarm Response Procedure, an operator will be dispatched to investigate the alarm. Investigation of the alarm will indicate evidence of smoldering in the filter housings. Activation of the deluge system for the filter housing will not be successful for filter housing #4.

Filter bank #4 continues to smolder, further degrading the charcoal, and previously trapped activity is released. 2HVS-RQ109, Elevated Release Monitor alarms and indicates an upscale release of gaseous activity. This will prompt a second protective action recommendation “Based on EPP/IP 4.1 “Recommendation of Offsite Protective Actions” dose projections, an UPGRADED PAR of “Evacuate 0 – 10 miles, 360 degrees AND advise the general public to administer KI in accordance with the State Plan”, is provided to offsite agencies in the EOF and via the Gold Executive Conference (GEC) call.” After investigation, 2FPW-STV228 may be opened locally which will terminate the release.

2130 hours – The exercise is terminated.