



Federal Emergency Management Agency

Region V
536 South Clark Street, 6th Floor
Chicago, IL 60605-1521

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November 18, 2002

Mr. James E. Dyer, Regional Administrator
U. S. Nuclear Regulatory Commission, Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Dear Mr. Dyer:

Enclosed is one copy of the Final Report for the Beaver Valley Power Station, Biennial Radiological Emergency Preparedness (REP) Plume Pathway Exercise, conducted on June 18, 2002.

This report was also transmitted to the Nuclear Regulatory Commission (NRC) Washington, D. C., the FEMA National Office, the State of Ohio and Columbiana County.

There were no Deficiencies identified during this exercise. There was one Area Requiring Corrective Action (ARCA) identified in Columbiana County as a result of this exercise. The ARCA was assessed against Columbiana County under *Criterion 5.a.1, Alert and Notification*. The initial instructional message to the public did not include as a minimum all of the elements required by current FEMA REP guidance. (10 CFR part 50, Appendix E.IV.D and NUREG-0654, E.5, 6, 7) This ARCA was corrected on June 19, 2002, through provision of updated messages that included the minimum required elements.

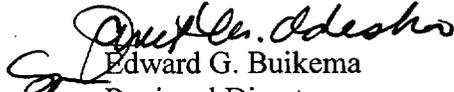
Based on the results of the June 18, 2002, exercise, the offsite radiological emergency response plans and preparedness for the State of Ohio, Columbiana County, site-specific to the Beaver Valley Power Station can be implemented. These plans are adequate to provide reasonable assurance that appropriate 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 and Columbiana County, granted on June 15, 1987, will remain in effect.

NOV 27 2002

If you should have any questions, please call me, or have a member of your staff contact Woodie J. Curtis at (312) 408-5528.

Sincerely,


Edward G. Buikema
Regional Director

Enclosures



Final Exercise Report

Beaver Valley Power Station

Licensee: FirstEnergy Corporation

Exercise Date: June 18, 2002

Report Date: November 18, 2002

**FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION V
536 S. Clark St., 6th Floor
Chicago, Illinois 60605-1521**

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I. EXECUTIVE SUMMARY

On June 18, 2002, an exercise was conducted in the plume emergency planning zone (EPZ) around the Beaver Valley Power Station by the Federal Emergency Management Agency (FEMA) Region V. The purpose of the exercise was to assess the level of State and local preparedness in responding to a radiological emergency. This exercise was held in accordance with FEMA's policies and guidance concerning the exercise of State and local radiological emergency response plans (RERP) and procedures.

The most recent exercise at this site was conducted on June 27, 2000. The qualifying emergency preparedness exercise was conducted on November 28, 1984.

FEMA wishes to acknowledge the efforts of the many individuals who participated in this exercise. In the State of Ohio, the risk county of Columbiana participated 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 of all the participants were evident during this exercise.

This report contains the final evaluation of the biennial exercise.

The State and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Deficiencies during this exercise. There was one Area Requiring Corrective Action (ARCA) identified in Columbiana County as a result of this exercise. The ARCA was assessed against Columbiana County under *Criterion 5.a.1, Alert and Notification*. The initial instructional message to the public did not include as a minimum all of the elements required by current FEMA REP guidance.. (10 CFR part 50, Appendix E.IV.D and NUREG-0654, E.5, 6, 7). This ARCA was re-demonstrated on June 19, 2002, through provision of updated messages that included the required elements.

Two prior ARCAs were assessed against Columbiana County under *Criterion 1.c.1: Direction and Control*, where key personnel with leadership roles did not furnished all the EOC staff members vital and pertinent information, and *Criterion 5.b.1, Emergency Information and Instructions for the Public*, where required information for the public was not furnished through special bulletins following the issuance of an EAS message, were corrected during this exercise. A third prior ARCA identified under *Criterion 6.a.1, Support Operations/Facilities*, where the monitors performing at East Palestine School Reception Center were not thoroughly briefed on survey reading that indicates contamination, will remain until this location can re-demonstrate. Detailed information on each of these issues is included in Section 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. FEMA's activities are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351 and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

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

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

- Taking the lead in offsite emergency planning and in the review and evaluation of RERPs and procedures developed by State and local governments;
- Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by State and local governments;
- Responding to requests by the U.S. Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and
- Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:
 - U.S. Department of Commerce,
 - U.S. Nuclear Regulatory Commission,
 - U.S. Environmental Protection Agency,
 - U.S. Department of Energy,
 - U.S. Department of Health and Human Services,
 - U.S. 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 FEMA Region V Regional Assistance Committee (RAC) which is chaired by FEMA.

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

A REP exercise was conducted on June 18, 2002, by FEMA Region V 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 FEMA Region V RAC Chairperson, and approved by the Regional Director.

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

- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980;
- FEMA-REP-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, dated 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 ARCAs assessed during this exercise, recommended corrective actions, and the State and local governments' schedule of corrective actions for each identified exercise issue 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 18, 2002, exercise to test the offsite emergency response capabilities in the area surrounding the Beaver Valley Power Station. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities, which were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

A. Plume and Ingestion Emergency Planning Zone Descriptions

The Beaver Valley Power Station (BVPS) is located 22 miles northwest of Pittsburgh, Pennsylvania. It 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 fifty-mile radius of the ingestion Emergency Planning Zone (EPZ) 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 exercise on June 18, 2002.

STATE OF OHIO

Ohio Department of Public Safety
Ohio Emergency Management Agency
Ohio State Highway Patrol
Ohio Department of Health
Ohio Environmental Protection Agency

RISK JURISDICTIONS

COLUMBIANA COUNTY

Operations Center Staff
Salem (OH) Chapter of the American Red Cross
Negley Fire Department and EMS
Columbiana Fire Department
East Palestine Fire Department
Glenmoor Fire Department
East Liverpool Fire Department
Columbiana County Sheriff Dept.
EAS Radio Station WKBN
Amateur Radio
Ohio Department of Public Safety
Columbiana County Emergency Management Agency

PRIVATE/VOLUNTEER ORGANIZATIONS

COLUMBIANA COUNTY

American Red Cross
Radio Amateur Civil Emergency Services
WKBN Radio Station

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 exercise on June 18, 2002. Also, included are times notifications were made to the participating jurisdictions/functional entities.

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: *June 18, 2002* *Beaver Valley Power Plant*

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken				
		OHIO STATE EOC	ASSES. ROOM	COLUMBIANA COUNTY EOC	JPIC	EOF
Unusual Event	N/A	N/A	N/A	N/A	N/A	N/A
Alert	1622	N/A	1632	(Warning Point)1631 (EOC)1646	N/A	1628
Site Area Emergency	1752	1800	1800	1805	1755	1755
General Emergency	1921	1926	1925	1930	1923	1922
Simulated Radiation Release Started	1909	1930	1934	1930	1952	1917
Simulated Radiation Release Terminated	2004	2010	2006	2020	2003	2006
Facility Declared Operational		1800	1800	1645	1748	1728
Declaration of State of Emergency		1831	1831	1847	1848	1831
Exercise Terminated: Plume Pathway Phase		2006	2010	2100	2125	2125
1 st Early Precautionary Action: Place animals on stored feed protected water up to 10-miles (Stay Tuned Only Message)		1827	N/A	1827	1848	1836
					1949	1835
1st Siren Activation		1837	1837	1837	1837	1837
1st EAS/EBS Message "B"		1840	1840	1840	1840	1840
1st Protective Action Decision: Evacuation sub-areas 1,2,3,4 out to 10-miles 3060 degrees						
		1937	1937	1940	1945	1940
2nd Siren Activation		1950	N/A	1950	1950	1950
2nd EAS/EBS Message "D"		1953	N/A	1953	1953	1953
KI Administration Decision:		1948	1937	1955	2005	1940

LEGEND: D - Decision-Making Jurisdiction A - Activating Jurisdiction N/A - Not Applicable Blank - Not Reported

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the June 18, 2002, 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 on the basis of its demonstration of exercise criteria delineated in FEMA "Radiological Emergency Preparedness: Exercise Evaluation Methodology," as published in the 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 - Table 2

The matrix presented in Table 2, on the following page(s), presents the status of all exercise criteria from the Federal Register Notice Vol. 67, No. 80, dated April 25, 2002 that 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 assessed and no unresolved ARCA(s) from prior exercises)
- D - Deficiency assessed
- A - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)
- N - Not Demonstrated (Reason explained in Subsection B)

Table 2 Summary Results of Exercise Evaluation

Site and Date: Beaver Valley Power Station June 18, 2002

JURISDICTION/FUNCTIONAL ENTITY	1a	1b	1c	1d	1e	2a	2b	2c	2d	2e	3a	3b	3c	3d	3e	3f	4a	4a2	4a3	4b	4c	5a	5a2	5a3	5b	6a	6b	6c	6d	
STATE OF OHIO																														
Initial Notification Point	M			M																										
State Emergency Operations Center	M	M	M	M	M	M								M											M				M	
State Assessment Room			M			M	M	M												M										
Joint Public Information Center		M	M		M																								M	
Field Monitoring Team I											M																			
Field Monitoring Team II											M																			
Sample Screening Point											M																			
State Communications Van	M	M	M	M																										
RISK JURISDICTIONS																														
COLUMBIANA COUNTY																														
Initial Notification Point	M			M																										
Columbiana Co. Emergency Operations Center	M	M	M	M	M	M		M	M	M			M		M											A		M	M	
Joint Public Information Center		M	M		M																							M	M	
Assembly Area											M	M																		
Backup Route Alerting			M																										M	
Monitoring/Decontamination - EW	M										M	M																M	M	
Congregate Care Center	M			M								M																M	M	
Traffic and Access Control Points				M							M	M			M	M														
Congregate care Center -Personnel/Vehicle Decontamination	M			M								M																M	M	
Protective Actions-Schools EV-2	M		M	M							M	M		M																

LEGEND:

M = Met (No Deficiency or ARCA's assessed) A = ARCA(s) assessed or prior ARCA's not resolved D = Deficiency(ies) assessed

N = Not Demonstrated Blank = Not Scheduled For Demonstration

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 is a definition of the terms used in this subsection relative to criteria demonstration status.

- **Met** - Listing of the demonstrated exercise objectives 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 objectives under which one or more Deficiencies was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.
- **Area Requiring Corrective Actions** - Listing of the demonstrated exercise objectives 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 objectives which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.
- **Prior Issues - Resolved** - Descriptions of ARCAs assessed during previous exercises, which were resolved in this exercise and the corrective actions, demonstrated.
- **Prior Issues - Unresolved** - Descriptions of ARCAs assessed during prior exercises, which 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, which are 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."

FEMA has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise reports within each Region. 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 Regional Director. 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 (ARCA):** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.2 State Emergency Operations Center

- a. **MET:** Criteria 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 3.d.1, 5.a.1 and 5.b.1.
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION (ARCA):** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ARCAs - RESOLVED:** NONE
- f. **PRIOR ARCAs - UNRESOLVED:** NONE

1.3 State Assessment Room

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

1.4 Joint Public Information Center

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

1.5 Field Monitoring Team I

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

1.6 Field Monitoring Team II

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

1.7 Sample Screening Point

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

1.8 State Communications Van

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

2. RISK JURISDICTION

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 (ARCA): NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ARCAs - RESOLVED: NONE

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

2.1.2 **Columbiana County 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, 2.e.1, 3.c.1, 3.d.2, 3.f.1, 5.a.3. and 5.b.1.
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION (ARCA):** Criterion 5.a.1

Issue: 04-02-5.a.1-A-01

Condition: EAS message “B” did not contain the identification of the local government organization and approving official, this is one of the four required elements for the initial message to the public. The additional informational requirements are as follows; Identification of the Beaver Valley Power Station and that an emergency situation exists at the plant; refer to the local telephone book for emergency information, and a statement to continue to listen to the EAS station for additional information.

Possible Cause: Local government organization and approving official were not included in pre-scripted messages.

Reference: NUREG-0654, E.5, 6, 7

Effect: Public confusion as to who was authorizing the protective action being recommended.

Recommendation: Pre-scripted EAS messages contain the identification of the local government organization and approving official.

Corrective Action Demonstrated: Pre-scripted EAS messages were modified to include the identification of the local government organization and approving official.

- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED:** Criteria 1.c.1. and 5.a.1 (formerly Objectives 3 and 11)

Issue: 03-00-A-03-01

Description: In the Operations Room, the Operations Officer, and at various times throughout the exercise, a Commissioner or the EMC, briefed the staff of

actions being taken by the County. At 1955 hours the Executive Room staff received word that a release at the Beaver Valley Power Station (BVPS) began at 1945 hours. This information was not passed on to the staff in the Operations Room nor was it noted on any of the Operations Room staff member's logs. It is noted that this caused no adverse affects or omissions as both KI implementation and dosimetry responsibilities were demonstrated correctly according to their plans and procedures. (NUREG 0654: A. 1. D., 2. a.)

Corrective Action Demonstrated: Vital and pertinent plant information (Release In Progress) was furnished to Operations Group via the Radiological Officer, Radiological Analyst, EMA Director. To ensure this action taking place the Standard Operating Procedure for the Radiological Officer, Radiological Analyst, & EMA Director included reminders to brief this information to the Operations Group.

Issue No.: 03-00-A-11-02

Description: The special news bulletins issued after an EAS message needs to furnish the following information even though it is partially covered in the "Beaver Creek/- Columbiana County " telephone book: (NUREG 0654: E.7.)

- Description of current emergency conditions at the power station, with reference to both the potential for or actual release of radioactivity and the current emergency classification level (ECL).
- Instructions for transients without shelter
- What to leave behind and what to take along when evacuating
- Evacuation routes
- Location of reception centers, assembly areas
- Information for transportation-dependent individuals
- Information for special populations
- Rumor control telephone numbers
- Information to address false or misleading rumors

Corrective Action Demonstrated: County procedures were revise so that the required information was furnished to the public through special news bulletins following the issuance of an EAS message.

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

2.1.3 **Joint Public Information Center**

a. **MET:** Criteria 1.b.1, 1.c.1, 1.e.1, 5.a.3. and 5.b.1.

b. **DEFICIENCY: NONE**

- c. **AREAS REQUIRING CORRECTIVE ACTION (ARCA): NONE**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.4 Assembly Area

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

2.1.5 Back-up Route Alerting

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

2.1.5 Monitoring/Decontamination – Emergency Workers

- a. **MET: Criteria 1.b.1, 3.a.1, 3.b.1, 6.a.1. and 6.b.1.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION (ARCA): NONE**

- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: Criterion 6.a.1 (formerly Objective 18)**
Issue: 03-00-A-18-03

Description: The two monitors performing initial monitoring of evacuees at the East Palestine School Complex Reception Center were confused over the survey meter reading that indicated contamination, although the contamination level was posted on a sheet of paper on the wall behind the monitors.

Recommendation: The monitors at the East Palestine School Reception Center should be thoroughly briefed, before monitoring begins, on the survey meter reading that indicates contamination. They should also be told that information on contamination level is posted on the wall behind them. It may also be helpful if the information on the contamination trigger point was posted more prominently, such as posting the level in large type and block letters rather than on a small typewritten page.

Schedule of Corrective Action: The radiological monitors performing surveys will be briefed on the survey meter reading that indicates contamination. They will be reminded that contamination level information is also posted in the monitoring areas. The poster containing the contamination trigger point will be revised so the level is in large type and block letters.

2.1.7 Congregate Care Center

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

2.1.8 Traffic and Access Control Points

- a. **MET: Criteria 1.e.1, 3.a.1, 3.b.1, 3.d.1. and 3.d.2.**

- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION (ARCA):**
- d. **NOT DEMONSTRATED: NONE**
- e. **PRIOR ARCAs - RESOLVED: NONE**
- f. **PRIOR ARCAs - UNRESOLVED: NONE**

2.1.8 Congregate Care Center – Personnel Monitoring/ Vehicle Decontamination

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

2.1.9 Protective Actions - Schools EV-2

- a. **MET: Criteria 1.b.1, 1.d.1, 1.e.1, 3.a.1, 3.b.1. and 3.c.2.**
- b. **DEFICIENCY: NONE**
- c. **AREAS REQUIRING CORRECTIVE ACTION (ARCA): 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.

CFR	Code of Federal Regulations
CPM	Counts Per Minute
DRD	Direct Reading Dosimeter
EAL	Emergency Action Level
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ECL	Emergency Classification Level
EEM	Exercise Evaluation Methodology
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
EWMS	Emergency Worker Monitoring and Decontamination Station
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
JPIC	Joint Public Information Center
KI	Potassium Iodide
mR	milliroentgen
mR/h	milliroentgen per hour
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</i> ," November 1980
NWS	National Weather Service

PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PIO	Public Information Officer
ORO	Offsite Response Organizations
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Service
RERP	Radiological Emergency Response Plan
R/h	Roentgen(s) per hour
SAE	Site Area Emergency
SEOC	State Emergency Operations Center
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 exercise on June 18, 2002. The letters "(TL)" indicates evaluator Team Leaders after their names. The organization that each evaluator represents is indicated by the following abbreviations:

FEMA - Federal Emergency Management Agency
ICF - Consultants

Exercise Director	Bill King	FEMA
State Liaison	Terri Connors- Murphy	FEMA

<u>EVALUATION SITE</u>	<u>EVALUATOR</u>	<u>ORGANIZATION</u>
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STATE OF OHIO

Carolyn Sturghill	Team Leader	FEMA
Gary Naskrent	Evaluator	FEMA
Richard Grundstrom	Evaluator	ICF
Bill Lueders	Evaluator	ICF
Kevin Flynn	Evaluator	ICF
Neil Gaeta	Evaluator	ICF
Jon Fox	Evaluator	ICF
Daryl Thome	Evaluator	ICF

COLUMBIANA COUNTY

Terri Connors- Murphy	Team Leader	FEMA
Clint Crackel	Evaluator	FEMA
Cleven Llyod	Evaluator	FEMA
Richard Grundstrom	Evaluator	ICF
Bill Lueders	Evaluator	ICF
Kevin Flynn	Evaluator	ICF
Neil Gaeta	Evaluator	ICF
Jon Fox	Evaluator	ICF
Daryl Thome	Evaluator	ICF

APPENDIX 3

EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AGREEMENT

This appendix lists the exercise criterion that were scheduled for demonstration in the Beaver Valley Power Station exercise on June 18, 2002, extent-of-play agreement approved by FEMA Region V on May 27, 2002.

The exercise criterion, contained in FEMA "Radiological Emergency Preparedness Exercise Evaluation Methodology," April 25, 2002, represents 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 criterion are intended for use at all nuclear power plant sites, and because of variations among offsite plans and procedures, an extent-of-play agreement is prepared by the State and approved by FEMA to provide evaluators with guidance on expected actual demonstration of the objectives.

A. Exercise Criteria

Listed below are the specific radiological emergency preparedness criteria scheduled for demonstration during this exercise.

BEAVER VALLEY POWER STATION

FULL PARTICIPATION EXERCISE

EXTENT OF PLAY AGREEMENT

State of Ohio

JUNE 18, 2002

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

The State Emergency Operations Center (SEOC) and the Ohio Highway Patrol Dispatch Center will receive initial notification over the 24-hour phone 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	

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 Public Information Center
- County Liaison

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

Extent of Play

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 the decision making process in the SEOC Assessment Room.

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 and the County EOC, JPIC, and the EOF is by commercial and/or dedicated 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.

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 State Field Monitoring Teams and the Columbiana County EOC. County EOCs will disseminate recommendations to their emergency workers.

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 on-site and off-site 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 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 decisions based on recommendations from the EOC Assessment Room. The Governor or his designee will coordinate with the Governors of Pennsylvania and West Virginia toward the development of Protective Action Recommendations (PARs). The PARs are also coordinated with the Columbiana County EOC. They are then forwarded to the county for approval and dissemination to the general public.

Decisions about the use of KI are the responsibility of the Ohio Department of Health and are made in the SEOC Dose Assessment Room. State personnel who have responsibilities in the 10-mile EPZ are issued dosimetry packets that contain KI before departure from Columbus. However, since State Field activities are pre-positioned (see criterion 1.a.1), they will have the packets prior to the start of their demonstrations. The State Plan does not specify the use of KI by the general public.

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.

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

The State demonstrated this criterion at the May 2001 DBNPS exercise. It will be demonstrated again at the June 2006 BVPS exercise.

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

Extent of Play

The State demonstrated this criterion at the May 2001 DBNPS exercise. It will be demonstrated again at the June 2006 BVPS 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 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 and KI 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 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

The State demonstrated this criterion at the May 2001 DNBPS exercise. It will be demonstrated again at the June 2006 BVPS exercise.

Criterion 3.c.1: Protective action decisions are implemented for special population groups within areas subject to protective actions.

Extent of Play

N/A - This is a county function.

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.

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 State EOC Dose Assessment Room will procedurally demonstrate restricting air, water 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.

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 State demonstrated this criterion at the May 2001 DBNPS exercise. It will be demonstrated again at the June 2006 BVPS 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

The State demonstrated this criterion at the May 2001 DBNPS exercise. It will be demonstrated again at the June 2006 BVPS 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

The State demonstrated this criterion at the May 2001 DBNPS exercise. It will be demonstrated again at the June 2006 BVPS 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

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 18th. 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 18th. 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 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.

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 18th. 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

The State demonstrated this criterion at the May 2001 DBNPS exercise. It will be demonstrated again at the June 2006 BVPS exercise.

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

Extent of Play

The State demonstrated this criterion at the May 2001 DBNPS exercise. It will be demonstrated again at the June 2006 BVPS exercise.

EVALUATION AREA 5 – EMERGENCY NOTIFICATION AND PUBLIC INFORMATION

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

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 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.

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 State PIO and a representative from the Ohio Department of Health will be present at the JPIC 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 JPIC. A Public Inquiry telephone will be established and demonstrated.

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.

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.

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.

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.

BEAVER VALLEY POWER STATION
2002
RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

1. Beaver Valley Power Station

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

2. Offsite Response Functions:

County:

Columbiana County Emergency Operations Center

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

Field Play:

(See 5. Demonstration Windows)

3. Controllers

First Energy Nuclear Operating Company (FENOC) will provide controllers at the Columbiana County locations.

Controllers will not take an active part in the proceedings, but will interact with staff members to the extent necessary to fulfill their observer responsibilities. Coaching of players by Controllers is not permitted except to provide training to participants awaiting a re-demonstration. Re-demonstration can only occur with FEMA approval.

4. FEMA Evaluators

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

5. Demonstration Windows

The demonstration windows are those periods of time designated in the exercise during which specified demonstrations will be accomplished. The purpose of the

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RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

window is to provide for more effective demonstrations as well as permitting the release of volunteers from the exercise play at a reasonable hour.

- The County EOC Operations will be conducted on June 18, 2002.
- Out of Sequence Demonstrations will be run independently of each other.
- Out of Sequence Demonstrations will be managed by the Lead Controller at each field location.
- MS-1 Hospital Exercise was conducted and evaluated at the Salem Hospital on November 7, 2001.
- School demonstration 10:00 - 12:00 a.m. on June 18th at the Beaver Local School District Office.
- Assembly Area will be conducted from 7:00 p.m. - 9:00 p.m. on Tuesday, June 18, 2002 at the Lisbon Fire Department.
- Congregate Care Center (Personnel Monitoring / Decontamination, Vehicle Decon) will be conducted from 9:00 a.m. - 12:00 p.m. (noon) on Tuesday, June 18, 2002 at the Salem High School.
- Congregate Care Center (Talk Through) will be from 7:00 p.m. - 9:00 p.m. on Monday, June 17, 2002 at the United Local School Complex.
- The Emergency Worker Monitoring/Decontamination Center will be demonstrated from 7:00 p.m. - 9:00 p.m. on Monday June 17, 2002 at the Negley Fire/EMS Department.
- Traffic Control / Access Control point will be from 9:00 a.m. - 11:00 a.m. on Tuesday, June 18, 2002 at the Ohio Highway Patrol Parking Lot.
- Backup Route Alerting will be demonstrated from 7:00 p.m. - 9:00 p.m. on Monday, June 17, 2002 at the Calcutta Fire Department.
- All demonstrations will commence promptly and, barring any complications, not continue past the end of the windows.

BEAVER VALLEY POWER STATION
2002
RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

5. Demonstration Windows (Continued)

- Re-Entry Recovery Table Top Exercise will be conducted on Wednesday, June 19, 2002 at 1:00 p.m. in the Columbiana County EOC.

6. Termination

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

7. General Concepts

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

8. Re-demonstrations

During the out of sequence demonstrations on June 17, 18 and 19, 2002, or the plume phase demonstrations on June 18, 2002. Criteria that can be re-demonstrated immediately for credit, at the decision of the evaluator, include the following: 3.a.1, 3.d.1, 3.d.2, 6.a.1, 6.b.1, 6.c.1 and 6.d.1. Criteria that may be re-demonstrated, as approved on a case-by-case basis by the Chairperson of the Regional Assistance Committee, include the following: 2.a.1, 2.b.1, 5.a.1 and 5.b.1. Refresher training can be provided by the players, observers, and/or controllers. Re-demonstrations will be negotiated

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COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

between the players, observers, controllers, and evaluators. It is permissible to extend the evaluation time to accommodate the re-demonstration. Activities corrected from a re-demonstration will be so noted.

EVALUATION AREA 1
Emergency Operations Management

Sub-element 1.a – Mobilization

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to alert, notify, and mobilize emergency personnel and to activate and staff emergency facilities.

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

EXTENT OF PLAY

County:

- Demonstrate the capability to receive notification of an emergency situation from the licensee, verify the notification.
- Demonstrate the activation of facilities for immediate use by mobilized personnel when they arrive to begin emergency operations.
- Activation of facilities should be completed in accordance with the plan and/or procedures.
- Personnel will be pre-positioned. This pre-positioning will be for all locations, to include EOC, field locations and any out-of-sequence demonstrations.
- Twenty-four (24) Hour Staffing will be demonstrated by roster.

BEAVER VALLEY POWER STATION
2002
RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

All activities must be based on the OROs plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 1
Emergency Operations Management

Sub-element 1.b – Facilities

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have facilities to support the emergency response.

**Criterion 1.b.1: Facilities are sufficient to support the emergency response.
(NUREG-0654, H.3)**

EXTENT OF PLAY

County:

- All facilities that are participating, will be evaluated during this exercise in order to establish a baseline.

Facilities must be set up based on the ORO's plans and procedures and demonstrated as they would be used in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 1
Emergency Operations Management

Sub-element 1.c - Direction and Control

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to control their overall response to an emergency.

BEAVER VALLEY POWER STATION
2002
RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE

COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

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

EXTENT OF PLAY

County:

- 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.

All activities associated with direction and control must be performed based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise noted above or indicated in the extent of play agreement.

EVALUATION AREA 1

Emergency Operations Management

Sub-element 1.d – Communications Equipment

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should establish reliable primary and backup communication systems to ensure communications with key emergency personnel at locations such as the following: appropriate contiguous governments within the emergency planning zone (EPZ), Federal emergency response organizations, the licensee and its facilities, emergency operations centers (EOC), and field teams.

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

EXTENT OF PLAY

County:

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- Demonstrate a primary and at least one backup system are 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.

EVALUATION AREA 1
Emergency Operations Management

EXTENT OF PLAY

County:

- Communications associated with medical support facilities were demonstrated during the November 7, 2001 MS-1 Federal Evaluated Exercise.

All activities associated with the management of communications capabilities must be demonstrated based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise noted above or in the extent of play agreement.

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have emergency equipment and supplies adequate to support the emergency response.

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H.7, 10; J.10.a, b, e, J.11; K.3.a)

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EXTENT OF PLAY

County:

- Sufficient quantities of appropriate direct-reading and permanent record dosimetry and dosimeter chargers should be available for issuance to all categories of emergency workers that could be deployed from that facility. Appropriate direct-reading dosimetry should allow individual(s) to read the maximum exposure limits contained in the County plans and procedures.
- The dosimetry is exchanged annually and documentation can be verified during the exercise.

EVALUATION AREA 1
Emergency Operations Management

EXTENT OF PLAY

County:

- The County will demonstrate the capability to maintain inventories of KI sufficient for use by emergency workers.
- Adequate quantities of dosimetry and KI have been distributed to ORO's. Available supplies of KI will be within the expiration date indicated on KI bottles or blister packs, or by letter.
- Maps and displays will be utilized.
- Dosimetry will be available at the field locations to demonstrate the use of dosimetry.
- KI is not used for the General Public.
- CDV-138s are not used in Columbiana County.
- A Law Officer in the County EOC will discuss traffic and Access Control. An actual control point will not be established.

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All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 2

Protective Action Decision-Making

Sub-element 2.a - Emergency Worker Exposure Control

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to assess and control the radiation exposure received by emergency workers and have a decision chain in place, as specified in the ORO's plans and procedures, to authorize emergency worker exposure limits to be exceeded for specific missions.

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

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

EXTENT OF PLAY

County:

- The Criterion to send emergency workers into the plume exposure pathway EPZ should be demonstrated.
- Demonstrate the capability to make decisions concerning the authorization of exposure levels in excess of pre-authorized levels and to the number of emergency workers receiving radiation dose above pre-authorized levels.
- KI is predistributed to emergency workers.

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- Demonstrate the capability to make decisions on the administration of KI as a protective measure.
- The decision on KI can be not to take KI.

EVALUATION AREA 2

Protective Action Decision-Making

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to independently project integrated dose from exposure rates or other information and compare the estimated dose savings with the protective action guides. OROs have the capability to choose, among a range of protective actions, those most appropriate in a given emergency situation. OROs base these choices on PAGs from the ORO's plans and procedures or EPA 400-R-92-001 and other criteria, such as, plant conditions, licensee protective action recommendations, coordination of protective action decisions with other political jurisdictions (e.g., other affected OROs), availability of appropriate in-place shelter, weather conditions, evacuation time estimates, and situations that create higher than normal risk from evacuation.

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. (NUREG-0654, I.8, 10 and Supplement 3)

EXTENT OF PLAY

County:

- N/A

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

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EVALUATION AREA 2

Protective Action Decision-Making

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). (NUREG-0654, J.9, 10.f,m)

EXTENT OF PLAY

County:

- The County will demonstrate the capability to communicate the contents of decisions to the affected jurisdictions.
- The PAD 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 PAD / PAR will be demonstrated with one being the actions taken at Site Area Emergency.
- In Ohio KI is not given to the General Public.

All decision-making activities by ORO personnel must be performed based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Sub-element 2.c - Protective Action Decisions Consideration for the Protection of Special Populations

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to determine protective action recommendations, including evacuation, sheltering and use of potassium iodide (KI), if applicable, for special population groups (e.g., hospitals, nursing homes, correctional facilities, schools, licensed day care centers, mobility impaired individuals, and transportation dependent individuals). Focus is on those special population groups that are (or potentially will be) affected by a radiological release from a nuclear power plant.

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EVALUATION AREA 2
Protective Action Decision-Making

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9, J.10.d,e)

EXTENT OF PLAY

County:

- Schools will be demonstrated out of sequence.
- Special populations will be demonstrated through interview with appropriate EOC staff.
- The local special needs will be procedurally explained by the Route Verification Team.
- The County KI Policy for special population will be procedurally explained at the County EOC.

All decision-making activities associated with protective actions, including consideration of available resources, for special population groups must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

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

EXTENT OF PLAY

County:

- This sub-element will not be evaluated during this exercise.

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EXTENT OF PLAY AGREEMENT

EVALUATION AREA 2
Protective Action Decision-Making

Sub-element 2.e. – Radiological Assessment and Decision-Making Concerning Relocation, Re-entry, and Return

County:

- Decision-making will be demonstrated during a Table-Top Exercise in the CCEOC on Wednesday, June 19, 2002, 1:00 p.m – 4:00 p.m..
- CCEOC will demonstrate the capability to relocate those individuals in the general public who have not been evacuated.
- CCEOC will demonstrate the capability to control re-entry into the restricted zone.
- CCEOC will demonstrate the capability to allow the general public to return.
- Radiological assessment is a State function. Data will be provided to the County by Controller input.
- Evacuated and restricted areas will be pre-determined and identified for the CCEOC, by Controller input.

All decision-making activities associated with protective actions, including consideration of available resources, for special population groups must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 3
Protective Action Implementation

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

INTENT

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This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide for the following: distribution, use, collection, and processing of direct-reading dosimetry and permanent record dosimetry; the reading of direct-reading dosimetry by emergency workers at appropriate frequencies; maintaining a radiation dose record for each emergency worker; and establishing a decision chain or authorization procedure for emergency workers to incur radiation exposures in excess of protective action guides, always applying the ALARA (As Low As is Reasonably Achievable) principle as appropriate.

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. (NUREG-0654, K.3.a,b)

EXTENT OF PLAY

County:

- In Columbiana County exposure control equipment, dosimetry, KI, procedures and associated forms are pre-distributed to EWDC, Assemble Area, Personnel Monitoring/ Decontamination Centers, Access Control, Route Verification, etc.
- Radiation exposure control equipment will be assigned to workers who will 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.

EVALUATION AREA 3
Protective Action Implementation

EXTENT OF PLAY

County:

- The emergency worker should report accumulated exposures during the exercise as indicated in the plans and procedures.

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- By interview the Supervisor/Exposure Coordinator will demonstrate the actions described in the procedures to determining whether to replace the worker, or to 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.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 3
Protective Action Implementation

Sub-element 3.b – Implementation of KI Decision

INTENT

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

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained. (NUREG-0654, J. 10. e)

EXTENT OF PLAY

County:

- In Columbiana County KI, dosimeter kits and associated forms are predistributed to EWDC, Assemble Area, Personnel Monitoring/Decontamination Centers, Access Control, Route Verification, etc.

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- 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.

EVALUATION AREA 3
Protective Action Implementation

EXTENT OF PLAY

County:

- Emergency workers should demonstrate the basic knowledge of procedures for the use of KI.
- By interview the Supervisor/Exposure Coordinator will describe the procedures to determine whether to develop and 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.
- In Ohio, KI is not given to the General Public.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 3
Protective Action Implementation

Sub-element 3.c – Implementation of Protective Actions for Special Populations

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to implement protective action decisions, including evacuation and/or sheltering, for all special populations. Focus is on those special populations that are (or potentially will be) affected by a radiological release from a nuclear power plant.

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Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, J.10.c,d,g)

EXTENT OF PLAY

County:

- The County methodology of handling special populations will be explained procedurally at the County EOC where there will be a list available of special needs individuals, hospitals and nursing homes.
- Local special needs will be procedurally demonstrated by the Route Verification Team at Calcutta Fire Department in a time window of 3pm to 6pm.
- County resources should demonstrate the capability to provide for the needs of special populations in accordance with the county plans and procedures.
- Contact with special populations, reception facilities and transportation providers will be simulated. All actual and simulated contacts should be logged.

All implementing activities associated with protective actions for special populations must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 3
Protective Action Implementation

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG-0654, J.10.c, d, g)

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County:

- Applicable OROs should demonstrate the capability to alert and notify all public school systems/districts of emergency conditions that are expected to or may necessitate protective actions for students.
- Contacts with public school systems/districts must be actual.
- In accordance with plans and/or procedures, OROs and/or officials of public school systems/districts should demonstrate the capability to make prompt decisions on protective actions for students.
- Officials should demonstrate that the decision making process for protective actions considers (i.e., either accepts automatically or gives heavy weight to) protective action recommendations made by ORO personnel, the ECL at which these recommendations are received, preplanned strategies for protective actions for that ECL, and the location of students at the time (e.g., whether the students are still at home, en route to the school, or at the school).
- Public school systems/districts shall demonstrate the ability to implement protective action decisions for students.
- The demonstration shall be made as follows:
 - At least one school in each affected school system or district, as appropriate, needs to demonstrate the implementation of protective actions.
 - The implementation of canceling the school day, dismissing early, or sheltering should be simulated by describing to evaluators the procedures that would be followed.

EVALUATION AREA 3
Protective Action Implementation

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County:

- If evacuation is the implemented protective action, all activities to coordinate and complete the evacuation of students to reception centers, congregate care centers, or host schools may actually be demonstrated or accomplished through an interview process.
- If accomplished through an interview process, appropriate school personnel including decision making officials (e.g., superintendent/principal, transportation director/bus dispatcher), and at least one bus driver (and the bus driver's escort, if applicable) should be available to demonstrate knowledge of their role(s) in the evacuation of school children.
- Communications capabilities between school officials and the buses, if required by the plan and/or procedures, should be verified.
- Officials of the school system(s) should demonstrate the capability to develop and provide timely information to OROs for use in messages to parents, the general public, and the media on the status of protective actions for schools.

The provisions of this criterion also apply to any private schools, private kindergartens and day care centers that participate in REP exercises pursuant to the ORO's plans and procedures as negotiated in the Extent of Play Agreement.

EVALUATION AREA 3
Protective Action Implementation

EXTENT OF PLAY

Beaver Local School System

- **Demonstrate the capability to alert and notify the Beaver Local School District of emergency conditions that are expected to or may necessitate protective actions for students.**
- **Officials of the Beaver Local School District will demonstrate the capability to make prompt decisions on protective actions for students.**

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COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

- School Officials will demonstrate the decision making process for protective actions.
- One School Principal in the Beaver Local School District will participate Out-of-Sequence from the Superintendent's Office.
- Transportation of school children, if necessary, will be simulated.

All activities must be based on the ORO's plans and procedures and completed, as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 3
Protective Action Implementation

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

INTENT

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

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

EXTENT OF PLAY

County:

- 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.
- In Columbiana County the Sheriff's Department, Ohio State Highway Patrol and local police departments provide TCP/ACP.

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COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

- For this exercise one Access Control Point (ACP) will be identified, but not activated.
- The Ohio Highway Patrol Officer will discuss the procedure for activating and manning the ACP and discuss dosimeter / radiation exposure control with the Federal Evaluator.
- This function will be conducted out-of-sequence and in the time window of 3pm - 6pm at the OSP barracks on State Route 45.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 3
Protective Action Implementation

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

EXTENT OF PLAY

County:

- 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, and logged.
- The Ohio Highway Patrol Officer will discuss the appropriate actions concerning removal of impediments to the evacuation. Equipment will not actually be requested.
- This function will be conducted out-of-sequence and in the same time window at the OSP barracks on State Route 45.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

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COLUMBIANA COUNTY

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

County:

- This sub-element will not be evaluated during this exercise.

EVALUATION AREA 3

Protective Action Implementation

Sub-element 3.f – Implementation of Relocation, Re-entry, and Return Decisions

EXTENT OF PLAY

County:

- Relocation, re-entry and return implementation will be demonstrated during a Table-Top Exercise in the EOC on Wednesday, July 19, 2002, 1:00 p.m. – 4:00 p.m.
- The CCEOC will coordinate and implement the decision concerning the relocation of individuals, not previously evacuated.
- The CCEOC will demonstrate the capability to control re-entry and exit of individuals into the restricted areas.
- The CCEOC will demonstrate the capability to implement policies concerning return of members of the public to areas that were evacuated during the Plume Phase.
- Radiological assessment is a State function. Data will be provided to the County by Controller input.
- Evacuated and restricted areas will be pre-determined and identified for the CCEOC, by Controller input.

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

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COLUMBIANA COUNTY

EXTENT OF PLAY AGREEMENT

EVALUATION AREA 4
Field Measurement And Analysis

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to deploy field teams with the equipment, methods, and expertise necessary to determine the location of airborne radiation and particulate deposition on the ground from an airborne plume. In addition, NUREG-0654 indicates that OROs should have the capability to use field teams within the plume Emergency Planning Zone to measure airborne radioiodine in the presence of noble gases and to measure radioactive particulate material in the airborne plume.

In the event of an accident at a nuclear power plant, the possible release of radioactive material may pose a risk to the nearby population and environment. Although accident assessment methods are available to project the extent and magnitude of a release, these methods are subject to large uncertainties. During an accident, it is important to collect field radiological data in order to help characterize any radiological release. This does not imply that plume exposure projections should be made from the field data. Adequate equipment and procedures are essential to such field measurement efforts.

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. (NUREG-0654, H.10; I.7, 8, 9)

EXTENT OF PLAY

County:

- N/A

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 4
Field Measurement And Analysis

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

EXTENT OF PLAY

County:

- N/A

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

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

EXTENT OF PLAY

County:

- N/A

All activities must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EXTENT OF PLAY

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

County:

- N/A

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EXTENT OF PLAY AGREEMENT

EVALUATION AREA 4

Field Measurement And Analysis

Sub-element 4.c - Laboratory Operations

County:

- N/A

EVALUATION AREA 5

Emergency Notification and Public Information

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

INTENT

This sub-element is derived from NUREG-0654, which provides that OROs should have the capability to provide prompt instructions to the public within the plume pathway EPZ. Specific provisions addressed in this sub-element are derived from the Nuclear Regulatory Commission (NRC) regulations (10 CFR Part 50, Appendix E.IV.D.), and FEMA-REP-10, "Guide for the Evaluation of Alert and Notification systems for Nuclear Power Plants."

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D and NUREG-0654, E.5, 6,7)

EXTENT OF PLAY

County:

- 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

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specific time requirements) for primary alerting/notification. The initial message should include the elements required by current FEMA REP guidance.

- Siren activation will be simulated.

EVALUATION AREA 5

Emergency Notification and Public Information

EXTENT OF PLAY

County:

- For exercise purposes, timely is defined as the CCEOC demonstrates actions to disseminate the appropriate information/instructions with a sense of urgency and without undue delay. If message dissemination is to be identified as not having been accomplished in a timely manner, the evaluator(s) will document a specific delay or cause as to why a message was not considered timely.
- Procedures to broadcast the message should be fully demonstrated as they would in an actual emergency up to the point of transmission. 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 Exercise purposes 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.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, except as noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 5

Emergency Notification and Public Information

Criterion 5.a.2: [RESERVED]

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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. (NUREG-0654, E. 6, Appendix 3.B.2.c)

EXTENT OF PLAY

County:

- Columbiana County has three (3) townships in which Route Verification is conducted. The Calcutta Fire Department in St.Clair Township will be demonstrating this exercise.
- The notification of a failure of the primary alert and notification system will be driven by controller inject.
- 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.
- As needed the Route Verification Team should 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.
- Route Verification will be conducted in a time window (3pm - 6pm) starting at the Calcutta FD.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, except as noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 5

Emergency Notification and Public Information

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to disseminate to the public appropriate emergency information and instructions, including any recommended protective actions. In addition, NUREG-0654 provides that OROs should ensure that the capability exists for providing information to the media. This includes the availability of a physical location for use by the media during an emergency. NUREG-0654 also provides that a system should be available for dealing with rumors. This system will hereafter be known as the public inquiry hotline.

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

EXTENT OF PLAY

County:

- The County will ensure that emergency information and instructions are consistent with protective action decisions made by appropriate officials. The emergency information should contain all necessary and applicable instructions (e.g., evacuation instructions, evacuation routes, reception center locations, what to take when evacuating, information concerning pets, shelter-in-place instructions, information concerning protective actions for schools and special populations, public inquiry telephone number, etc.) to assist the public in carrying out protective action decisions provided to them. The County should also be prepared to disclose and explain the Emergency Classification Level (ECL) of the incident.

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Emergency Notification and Public Information

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EXTENT OF PLAY

County:

- Public Inquiry will address an average of 3 calls per hour once Site Area Emergency is declared.
- Subsequent emergency information and instructions will be provided to the public and the media through the Joint Public Information Center.

All activities for this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

EVALUATION AREA 6
Support Operation/Facilities

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) have the capability to implement radiological monitoring and decontamination of evacuees and emergency workers, while minimizing contamination of the facility, and registration of evacuees at reception centers.

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. (NUREG-0654, J.10.h; J.12; K.5.a)

Extent of Play:

County:

- Columbiana County has six (6) Care Centers identified in the County REP. Monitoring and Decontamination of evacuees along with sheltering is provided at our Care Centers.

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- One (1) Care Center will setup in the 2002 exercise and one (1) Care Center operations will be discussed procedurally.
- The Red Cross will operate the Care Center and Salem Fire Department will perform the radiological monitoring / decontamination, and security. The demonstration will be conducted at the Salem High School. This Care Center will be played in a time window (9am - 12pm). Two teams conducting a total of six surveys of potentially contaminated individuals will demonstrate the monitoring procedures. At least one (1) individual will be contaminated, the contamination levels will be provided by Controller Inject. Decontamination will be walked through and explained procedurally, but decontamination, if necessary, will be simulated.

EVALUATION AREA 6
Support Operation/Facilities

Extent of Play:

County:

- The decision to refer individuals who cannot be decontaminated to medical facilities will be procedurally explained via evaluator inquiries.
- Only one shower area will be setup. A floor plan will be available for inspection.
- Evacuee vehicle decontamination will be procedurally demonstrated, but no actual decontamination will take place.
- The Hanoverton/Guilford Fire Department will explain the second Care Center procedurally with a talk through. Red Cross will explain set-up and operations and Hanoverton/Guilford Fire Department will explain monitoring and decontamination. The Care Center will not be set-up and no monitoring or decontamination will be demonstrated. The Care Center will be available for inspection by the evaluation team if requested in advance.
- The procedural talk through will take place in a time window of (7pm-9pm) at the Hanoverton FD.

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- Columbiana County has four (4) Assembly Areas the evacuees may use while leaving the affected area. The Assemble Area at the Columbiana County Career Center is operated by the Lisbon FD and will be demonstrated in a time window (7pm - 9pm).
- A controller notifying the response organizations of the ALERT classification will drive the scenario. Subsequent escalation's in ECLs will be driven by controller injects.
- Assembly Area personnel will monitor two vehicles.
- 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.

EVALUATION AREA 6
Support Operation/Facilities

Extent of Play:

County:

- Columbiana County has Two (2) Emergency Worker Decontamination Centers.
- The Emergency Worker Decontamination Center at the Negley FD will demonstrate in a time window (7pm - 9pm).
- A controller notifying the response organizations of the ALERT classification will drive the scenario. Subsequent escalations in ECLs will be driven by controller injects.
- Two Emergency Worker will be monitored for contamination.
- 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.

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- 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 inquiries.

Sub-element 6.b – Monitoring and Decontamination of Emergency Worker Equipment

INTENT

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

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment, including vehicles. (NUREG-0654, K.5.b)

Extent of Play:

County:

- Columbiana County has Two (2) Emergency Worker Decontamination Centers.
- The Emergency Worker Decontamination Center at the Negley FD will demonstrate in a time window (7pm - 9pm).
- A controller notifying the response organizations of the ALERT classification will drive 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.

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

EVALUATION AREA 6

Support Operation/Facilities

Sub-element 6.c - Temporary Care of Evacuees

INTENT

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

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. (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. (NUREG-0654, J.10.h, J.12)

EXTENT OF PLAY

County:

- Columbiana County has six (6) Care Centers identified in the County RERP. Monitoring and Decontamination of evacuees along with sheltering is provided by our Care Centers. One (1) Care Center will setup in the 2002 exercise and one (1) Care Center operations will be discussed procedurally.
- The demonstration will be conducted at the Salem High School. This Care Center will be demonstrated in a time window (9am - 12pm) The Red Cross will operate the Care Center and Salem Fire Department will perform the radiological monitoring / decontamination.

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- A walk-through of the center may be conducted to determine, through observation and inquiries, that the services and accommodations are consistent with ARC 3031.

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Support Operation/Facilities

EXTENT OF PLAY

County:

- The Red Cross will demonstrate registration of evacuees. Care Center staff should also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been decontaminated as appropriate. This capability may be determined through an interview process. If operations at the center are demonstrated, material that would be difficult or expensive to transport (e.g., cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (facilities).
- The second Care Center will be explained procedurally with a talk through at the Hanoverton/Guilford Fire Department.
- Red Cross will explain set-up and operations and Hanoverton/Guilford Fire Department will explain monitoring and decontamination. The Care Center will not be set-up.
- The Care Center will be available for inspection by the evaluation team if requested in advance.
- The procedural talk through will take place in a time window of (7pm-9pm).

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

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Support Operation/Facilities

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

INTENT

This sub-element is derived from NUREG-0654, which provides that Offsite Response Organizations (ORO) should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.

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

Extent of Play:

County:

- County demonstration of this objective was met at the Salem Community Hospital, November 7th, 2001 MS-1 Exercise.

All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.

Frequency for Evaluation of New Criteria.

The REP-14 objectives are currently evaluated at the frequency described on Pages C-2.3 and C-2.4 of REP-14. Adoption of the new Exercise Evaluation Areas renders these pages obsolete. Table 2 establishes the minimum frequency where each of the Exercise Evaluation Areas would be exercised. FEMA is open to ORO proposals to voluntarily exercise certain criteria more frequently than the minimums listed.

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 Plant exercise on June 18, 2002.

This exercise scenario was submitted by the State of Ohio and First Energy Company, and approved by FEMA Region V on May 26, 2002.

During the exercise, controllers from the State of Ohio gave "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:

- 1600 Beaver Valley Power Station Evaluated Exercise begins.
- 1615 During the performance of OST-1.36.2, #2 D/G catches fire, the Operators evacuate the DG Room and activate the CO2 system, which extinguishes the fire.
- 1630 **An Alert should be declared base on EPP/I-1a, EAL 4.1 "Fire, fire affecting Safety Related equipment (Diesel Generator)".**
- Beepers are activated, and notifications are begun to plant personnel, the NRC and offsite agencies per EPP/I-3 (Alert). The onsite Emergency Response Organization begins activating the Technical Support Center (TSC) and Operations Support (OSC). Personnel in the Emergency Operations (EOF) and Joint Public Information Center (JPIC) are placed on standby.
- 1657 The Motor Driven Aux Feedwater pump (FW-P-3A) trips due to spurious activation of the Ground Overcurrent Relay.
- 1800 **A SITE AREA EMERGENCY should be declared based on EPP/I-1a, EAL's 2.3, "Failure of Reactor Protection. Reactor trip failure after VALID Trip signal with reactor power > 5% and attempts to cause a manual trip from the control room are unsuccessful."**
- 1810 Containment Instrument Air Compressor 1A due to lack of chilled water. There are currently no Station Air Compressors and no Chilled Water.

A Site Area Emergency should be declared by now. The controller should use the contingency card provided if this action has not been completed, however, if discussions are underway which the Controller feels will lead to the declaration, this CIS may be held for an additional time period.

- 1820 The Diesel Air Compressor is started. The Pressurized Relief Tank (PRT) Rupture disk fails allowing RCS to enter the containment Building. Containment radiation levels begin to slowly rise.
- 1857 The Steam Generator Atmospheric Dump Valve (which has been cycling) on the S/G which is now being provided Feedwater, sticks in the OPEN position. (a Faulted S/G). Non-radioactive steam is being released to the environment.
- 1900 A Steam Generator Tube Rupture (800 gpm) occurs in the Faulted S/G. The RCS Letdown and Main Steam Radiation Monitors alarm. **A radioactive release to the environment has begun.**
- 1915 **A General Emergency IS DECLARED BASED ON epp/I-IA, eal 7.1, Gaseous Effluent". Also, a protective action recommendation of evacuate 10 miles, 360 degrees" is recommended due to dose projections,**
- or
- declaration on EAL's 1.3.4 Containment Bypass, 1.2.4 Primary to Secondary Leak and 1.1.1 Critical Safety Function Status. Also, a protective action recommendation of "Evacuate 0-5 miles 360 degrees and Shelter the remainder of the 10-mile EPZ". (upon dose projection results being available, the PAR should be upgraded to evacuate 10 miles 360 degrees.)**
- 1925 A General Emergency should be declared by now. The Controller should use the contingency card provided if this action has not been completed, however, if discussions are underway which the Controller feels will lead to the declaration of the emergency classification, this CIS may be held for any additional time period.
- 20:00 **The stuck open Atmospheric Dump Valve closes. The release to the environment ends.**
- 2035 Due to a weather front, meteorological conditions improve, the plume has dispersed and offsite readings have returned to background.
The front of the plume reached the Ohio/West Virginia border. With the weather front passing through the area, the plume transit speed slows.
- 2100 Termination and Recovery discussions may begin.
- 2130 **The Exercise is terminated.**