



Federal Emergency Management Agency

Region III
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105 South Seventh Street
Philadelphia, PA 19106

MAR 9 1994

Mr. Dave Silk
Emergency Preparedness Specialist
Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, Pennsylvania 19406

Dear Mr. Silk:

Enclosed is the final report for the Beaver Valley Power Station (BVPS) Radiological Emergency Preparedness (REP) exercise conducted June, 1992.

If you have any questions, do not hesitate to contact me at (215) 931-5562, or Mrs. Angela Hough, the current Project Officer for the BVPS, at (215) 931-5564.

Sincerely,

Steven A. Adukaitis

Steven A. Adukaitis
Chairman, Regional Assistance
Committee

Enclosure

FACILITY: BEAVER VALLEY POWER STATION
OPERATOR: DUQUESNE LIGHT COMPANY
LOCATION: SHIPPINGPORT, PENNSYLVANIA

REPORT DATE: December 15, 1993
EXERCISE DATE: JUNE 9-11, 1992

PARTICIPATING
JURISDICTIONS:

COMMONWEALTH OF PENNSYLVANIA

RISK COUNTY: BEAVER

RISK MUNICIPALITIES: 27

SUPPORT COUNTIES: ALLEGHENY, BUTLER,
LAWRENCE, AND
WASHINGTON

INGESTION COUNTIES: ARMSTRONG, CLARION,
FAYETTE, GREENE,
MERCER, VENANGO, AND
WESTMORELAND

STATE OF WEST VIRGINIA

RISK COUNTY: HANCOCK

INGESTION COUNTIES: BROOKE, OHIO, AND
MARSHALL

NON-PARTICIPATING
JURISDICTIONS: NONE

REPORT PREPARED
BY: FEDERAL EMERGENCY MANAGEMENT AGENCY
AND THE REGIONAL ASSISTANCE COMMITTEE,
REGION III,
PHILADELPHIA, PENNSYLVANIA

Prepared in accordance with 44 CFR 350 and NUREG-0654/FEMA-REP-1,
Revision 1, November 1980.

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LIST OF ACRONYMS

ACP	Access Control Point
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARFI	Area Recommended For Improvement
ASCS	Agriculture Stabilization and Conservation Service
BRP	Bureau of Radiological Protection
BVPS	Beaver Valley Power Station
CEB	County Emergency Board
CENIC	Commonwealth Emergency News and Information Center
DER	Department of Environmental Resources
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EBS	Emergency Broadcast System
ECL	Emergency Classification Level
ECOMM	Emergency Communications Computer System
EIS	Emergency Information System
EMC	Emergency Management Coordinator
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPLO	Emergency Preparedness Liaison Officer
EPZ	Emergency Planning Zone
ESD	Emergency Services Director
FEMA	Federal Emergency Management Agency
FNARS	FEMA National Radio System
FNATS	FEMA National Teletype System
FRMAC	Federal Radiological Monitoring and Assessment Center
GE	General Emergency
GM	Guidance Memorandum
FDA	U.S. Food and Drug Administration
JPIC	Joint Public Information Center
KI	Potassium Iodide
N/A	Not Applicable
NOUE	Notification of Unusual Event
NRC	U.S. Nuclear Regulatory Commission
NUREG-0654	NUREG-0654/FEMA-REP-1, Revision 1
OES	Office of Emergency Services
PA	Protective Action
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PEMA	Pennsylvania Emergency Management Agency

PEMARS	Pennsylvania Emergency Management Agency Radio System
PIO	Public Information Officer
PSP	Pennsylvania State Police
RACES	Radio Amateur Civil Emergency Services
REACT	Radio Emergency Association Citizens' Team
RO	Radiological Officer
SAE	Site Area Emergency
SOP	Standard Operating Procedures
TCP	Traffic Control Point
TLD	Thermoluminescent Device
USDA	U.S. Department of Agriculture
VFD	Volunteer Fire Department

I. EXERCISE SUMMARY

This document is the Post Exercise Evaluation Report of the Radiological Emergency Preparedness Exercise for the Beaver Valley Power Station (BVPS) which was conducted on June 9-11, 1992. The Federal Emergency Management Agency (FEMA) Report is prepared in accordance with 44 CFR 350, NUREG-0654, FEMA-REP-1, Revision 1 and Guidance Memorandum (GM) EX-3. Participating in this exercise were the Commonwealth of Pennsylvania, State of West Virginia, two risks counties, four support counties, 27 risk municipalities, and 10 ingestion counties located within the 50-mile Emergency Planning Zone (EPZ) of the BVPS.

One Deficiency was identified during this exercise. The Deficiency resulted when the Commonwealth of Pennsylvania's Emergency Operations Center (EOC) staff failed to properly coordinate with the Beaver County EOC staff the dissemination of an appropriate Emergency Broadcast System (EBS) message. Thus, adequate information was not contained within the released EBS message concerning the Governor of Pennsylvania's order to evacuate the public within ten miles of the BVPS. Specifically, EBS Announcement 2, released by the Commonwealth of Pennsylvania's EOC staff to the Beaver County EOC staff, was not the detailed sample General Evacuation EBS Announcement located on page E-16-11 of Attachment D to Appendix 16 to Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan (EOP). Consequently, the Beaver County EOC staff merely used EBS Announcement 2, instead of the detailed General Evacuation EBS Announcement specific to Beaver County located on page E-4-9 of Attachment D to Appendix 4 to Annex E of the Beaver County EOP. EBS Announcement 2 did not contain pertinent information such as: the names of municipalities within the 10-mile EPZ; geographic landmarks including rivers, roads, railroad tracks, towns and villages, or any combination thereof to delineate the area to be evacuated; reference to the Beaver County Emergency Information Brochure; the names and locations of, and evacuation routes to, the reception centers serving the municipalities; instructions for special needs populations; and suggested items to be taken when evacuating. The remedial exercise to correct this Deficiency was conducted on August 17, 1992.

Thirty-three Areas Requiring Corrective Action (ARCA) and 29 Areas Recommended for Improvement (ARFI) have been identified. ARCAs are required to be corrected during the next biennial exercise. ARFIs are suggestions only that, if adopted, would enhance overall emergency operations.

II. INTRODUCTION

A. Participating Jurisdictions and Evaluator Assignments*

<u>EVALUATION SITES</u>	<u>INDIVIDUAL</u>	<u>ORGANIZATION</u>
Observers-at-Large	P. Giordano Regional Director	FEMA
	D. Hammons RAC Chairman	FEMA
	H. Skoczalek Project Officer	FEMA
Plume Phase - Day 1 Tuesday, June 9, 1992		
Commonwealth of Pennsylvania		
Emergency Operations Center	A. Hough	(TL) FEMA
	S. Curtis	(ATL) ANL
State Public Information Situation Analysis (State EOC)	K. Lott	NTHMC
	E. Post	USDA
Accident Assessment (Fulton Building)	J. Noble	EPA
Emergency Operations Facility (EOF) (Utility)	C. Gordon	NRC
State Traffic and Access Control (4 Points)	P. Ramsey	DOT
Joint Public Information Center (JPIC)	C. Saricks	ANL
Field Air Sampling Team A	M. Simonin	ANL
Field Air Sampling Team B	C. Klimizak	ANL
State Area EOC (Indiana)	R. Van	FEMA
Beaver County (Risk)		
County EOC	G. Marrone	(TL) FEMA
	J. Muzzarelli	(ATL) ANL
Emergency Worker Decontamina- tion Station	B. Young	ANL
Risk Municipalities		
Aliquippa Borough EOC	S. James	FEMA
Beaver Borough EOC	M. Farrell	FEMA
Bridgewater Borough and Fallston Borough EOC	T. Holliday	FEMA
Brighton Township EOC	B. Neisius	ANL

Center Township EOC	S. Gray	FEMA
Chippewa Township EOC	C. Bebrich	ANL
Georgetown Borough/Green Township/Hookstown Borough EOC	R. Bookser	FEMA
Hanover Township/Frankfort Borough EOC	L. Ploener	FEMA
Hopewell Township EOC	W. Waddell	ANL
Independence Township EOC	R. Winter	ANL
Industry Borough EOC	D. Joyce	FEMA
Midland Borough EOC	D. Salley	FEMA
Monaca Borough EOC	C. Riemer	ANL
Patterson Heights Borough/ Patterson Township EOC	F. Denzel	ANL
Potter Township EOC	J. Jackson	ANL
Raccoon Township EOC	L. Poch	ANL
Shippingport Borough EOC	J. Moore	ANL
South Beaver Township/ Glasgow Borough/Ohioville Borough	S. Bailey	ANL
South Heights Borough EOC	R. Isso	ANL
Vanport Township EOC	K. Elly	NTHMC

Support Counties

Alleghney County EOC	A. Lookabaugh (TL)	ANL
Reception/Mass Care/ Decontamination Center	J. Staroba (ATL)	ANL
Butler County EOC	D. Hulet	ANL
Reception/Mass Care/ Decontamination Center	W. Nowicki	ANL
Lawrence County EOC	J. Jacobson	ANL
Reception/Mass Care/ Decontamination Center	K. Picei	ANL
Washington County EOC	A. Hall	ANL
Reception/Mass Care/ Decontamination Center	K. Lerner	ANL
	C. Herzenberg	ANL

State of West Virginia

Emergency Operations Center	T. Ciccarello (TL)	FEMA
State Public Information Accident Assessment Field Air Monitoring Team	F. Bold (ATL)	ANL
	J. Zagone	FEMA
	K. Flynn	ANL
	C. Hunckler	ANL

Hancock County (Risk)

Emergency Operations Center	J. Price (TL)	FEMA
	R. Thompson (ATL)	ANL

Traffic/Access Control and Route Alerting (Not Co-located)	E. Taylor		FEMA
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Emergency Worker Decontamination/Reception Center (Not Co-located)	N. Meshkov		ANL
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Mass Care Center	D. Hall		FEMA
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Ingestion (Pennsylvania) and Ingestion/Recovery & Reentry
(West Virginia) Phase - Day 2
Wednesday, June 10, 1992

Commonwealth of Pennsylvania

Emergency Operations Center	A. Hough	(TL)	FEMA
	S. Curtis	(ATL)	ANL
State Public Information Situation Analysis (State EOC)	K. Lott		ANL
	E. Post		USDA
Accident Assessment (Fulton Building)	J. Noble		EPA
Field Sampling Team A (Water)	J. Staroba		ANL
Field Sampling Team B (Water)	C. Klimizak		ANL
Field Sampling Team C (Milk)	J. Jacobson		ANL
Joint Public Information Center (JPIC)	C. Saricks		ANL

Ingestion Counties

Alleghney	A. Lookabaugh	(TL)	ANL
	N. Meshkov	(ATL)	ANL
Butler	C. Bebrich		ANL
Lawrence	S. Bailey		ANL
Washington	W. Nowicki		ANL
Beaver	G. Marrone	(TL)	FEMA
	J. Muzzarelli	(ATL)	ANL
	S. James		FEMA
Armstrong	B. Young		ANL
Clarion	L. Ploener		FEMA
	M. Farrell		FEMA
Fayette	W. Waddell		ANL
Greene	D. Salley		FEMA
	T. Holliday		FEMA
Mercer	R. Van		FEMA
	S. Gray		FEMA
Venango	A. Hall		ANL
Westmoreland	K. Picel		ANL

State of West Virginia

Emergency Operations Center	T. Ciccarello (TL)	FEMA
	F. Bold (ATL)	ANL
State Public Information	J. Zagone	FEMA
Accident Assessment	K. Flynn	ANL
Field Sampling Center	C. Herzenberg	ANL
Field Sampling Team A	C. Hunckler	ANL
Field Sampling Team B	D. Hulet	ANL

Ingestion Counties

Hancock	J. Price (TL)	FEMA
	R. Thompson (ATL)	ANL
Ohio and Brooke	E. Taylor	FEMA
Marshall	K. Lerner	ANL

Recovery and Reentry (Pennsylvania) Phase - Day 3
Thursday, June 11, 1992

Commonwealth of Pennsylvania

Emergency Operations Center	A. Hough (TL)	FEMA
	S. Curtis (ATL)	ANL
State Public Information	K. Lott	ANL
Situational Analysis (BRP) (State EOC)	E. Post	USDA
Accident Assessment (Fulton Building)	J. Noble	EPA

Recovery and Reentry County

Beaver	G. Marrone (TL)	FEMA
	J. Muzzarelli (ATL)	ANL
	S. James	FEMA

Support Counties

Alleghney	R. Van	FEMA
	M. Farrell	FEMA
Butler	C. Bebrich	ANL
	T. Holliday	FEMA
Lawrence	S. Bailey	ANL
	S. Gray	FEMA
Washington	W. Nowicki	ANL

* TL = Team Leader, ATL = Assistant team Leader, ANL = Argonne National Laboratory, RAC = Regional Assistance Committee, NTHMC = Natural and Technological Hazards Management Consulting, EPA = U.S. Environmental Protection Agency, USDA = U.S. Department of Agriculture, NRC = U.S. Nuclear Regulatory Commission, and DOT = U.S. Department of Transportation.

B. Non-Participating Jurisdictions

All jurisdictions required to participate by the Extent-of-Play Agreements with the FEMA, the Commonwealth of Pennsylvania, and the State of West Virginia participated.

C. Exercise Scenario Summary

As the exercise commenced, the BVPS Unit 2 had been at 100 percent power for the past 364 days and was near the end of core life. Unit 1 was in a refueling outage. The following equipment problems existed at Unit 2.

(a) The A Station Service Transformer was out of service due to a lightning strike.

(b) The B emergency diesel was out of service due first to voltage adjuster problems and when those repairs were completed, the engine did not come up to speed due to the fuel rack failing to open completely. However, the A train diesel was "bumped" at 1350 hours and declared operable. Now, it was ready for a test run.

(c) The start up feed water pump was out of service due to seal repairs.

(d) The A charging pump was out of service for preventive maintenance while the C pump was running and the B pump was in stand-by.

At 1445 hours, a call was received from the Beaver County Emergency Management Coordinator (EMC) regarding the release of chlorine gas from the Midland Water Treatment Plant. After checking the current wind direction, the Control Room determined that the gas could pose a danger to the site. Based on EPP/IP I-1, Tab. 18, Criterion C, an Unusual Event (NOUE) was declared at approximately 1455 hours. Notifications were initiated to onsite personnel and the appropriate offsite agencies. At 1505 hours, the Beaver County EMC called to inform BVPS that the chlorine leak had ended and that the gas cloud was no longer a threat.

At 1515 hours, during the testing of the B emergency diesel, a fire ball occurred between the exciter and generator. This resulted in a fire near the fuel rack. The test personnel safely exited the room and a call was made to the Control Room, which called for the Fire Brigade to assemble. By about 1527 hours, the Brigade was on the scene to assess the situation and fight the fire. At approximately 1530 hours, an Alert was declared based on EPP/IP I-1, Tab 26, Criterion A. With the Alert declaration, offsite notifications were made and personnel were requested to activate the Technical Service Center with the EOF placed in a standby status. By 1550 hours, the fire in the Diesel Generator Building had been extinguished. By approximately 1630 hours, the Technical Service Center was fully activated and provided support to the Control Room.

At 1630 hours, a laborer, working in the Fuel Handling Building, slipped and fell. This resulted in a gashed and broken arm. In falling, he broke off a temperature indicator, which sprayed him with contaminated water. Water was spraying into the area as he exited through a fire escape door (simulated). This set off a security alarm and the Central Alarm Station sent a security officer to investigate. The officer found the individual sitting outside the door. The guard placed a call to Central Alarm Station (Control Room). The Control Room activated the emergency squad and when they arrived on the scene, they determined that offsite support would be necessary. The Control Room requested an ambulance through Beaver County Emergency Services. By approximately 1703 hours, the ambulance crew assumed responsibility for the care of the contaminated and injured person. At 1645 hours, the fuel pool water began flowing out from under the Fuel Handling Building roll-up door and began to make its way toward the nearest catch basin and then, at 1700 hours, to the Ohio River.

At 1749 hours, a relay actuated on the D bus and locked out the D bus feeder breakers. At 1751 hours, an Anticipated Transient Without Scram occurred and when the steam driven auxiliary feed water pump started, it tripped on overspeed and would not restart. When the reactor could not be tripped from the bench board, an operator was dispatched to switch gears. At 1757 hours, the operator successfully opened the reactor trip breakers.

At approximately 1800 hours, a Site Area Emergency (SAE) was declared based on EPP/IP I-1, Tab 14, Criterion A. Per procedure, there was a call for site assembly and accountability. At that time, the EOF began to activate as did the JPIC.

At 1802 hours, the A auxiliary feed water pump stopped running due to a shorted trip coil in a breaker. At 1805 hours, the B System Service Station Transformer was shorted out by metal from the disintegration of the oil transfer pump impeller. This resulted in the loss of the normal 4 kV C and D busses. However, the emergency response facility diesel generator was powering the G and H busses and the 1 (A) diesel generator was powering the AE bus. The DF emergency bus was not powered because of the fire in the 2 (B) diesel generator.

At 1810 hours, operators initiated a manual safety injection which resulted in a phase A containment isolation. At 1812 hours, the speed increaser gear train in the C charging pump seized. That left no source of water to the reactor and no heat sink, due to the loss of auxiliary feed water pumps. At 1815 hours, the pressure increased in the Reactor Coolant System, lifted a pressurizer relief valve, and, at the sampling, the pressure spike blew out the pressurizer relief tank rupture disk. This resulted in a small loss of coolant accident in containment.

By 1951 hours, indications were that fuel damage was beginning to occur. At 2000 hours, the A Auxiliary Feed Water pump was ready for service and operators began feeding the C steam generator to retain a heat sink. The shock of the cold water on the hot, dry tubes caused a tube rupture. The reactor coolant flashing to steam resulted in a code safety valve lifting and sticking open. The release to the environment began at 2003 hours. Dose projections showed 0.3 R/hr whole body and 10 R/hr child thyroid at the site boundary.

At 2005 hours, operators began to slowly feed the B steam generator for cool down. By approximately 2010 hours, a General Emergency (GE) was declared based on EPP/IP I-1, Tab 6, Criterion A. The protective action recommendation to the offsite agencies was for a 10-mile, 360 degree evacuation.

By 2021 hours, the safety injection accumulators began to discharge into the Reactor Coolant System and within three minutes they were empty. The core exit temperature was 838 degrees F with the reactor vessel level less than 40 percent. The core exit temperature continued to rise with level remaining less than 40 percent. By 2130 hours, the temperature increased to 932 degrees F. At that time, the code safety valve closed and the environmental release ended. By 2133 hours, the A charging pump had been repaired and was put into service supplying water to the core. The reactor vessel level began to rise and temperatures to fall. The onsite exercise terminated at 2200 hours.

D. Time Line of Key Events

<u>Key Events</u>	<u>Actual Time Declared By Utility</u>	<u>Time Received At State EOCs</u>
<u>Emergency Classification Levels</u>		
Notification of Unusual Event	1515	1535
Alert	1528	1535
Site Area Emergency	1805	1810
General Emergency	2010	2010
<u>Plume Phase Protective Actions</u>		
Air traffic is restricted within three miles and 10,000 feet around BVPS.		1651
Hancock County, West Virginia is advises to shelter animals, such as dairy cattle and laying hens, within the 10-mile EPZ and feed animals only stored feed and well water.		1946
Pennsylvania recommends sheltering livestock and covering all feed within the 5-mile EPZ		2020
River traffic in Pennsylvania and West Virginia on the Ohio River stopped.		2025
Evacuate all population in Pennsylvania and West Virginia within 10-miles and 360 degrees of the BVPS.		2037
Pennsylvania Secretary of Health determines no need to release potassium iodide (KI) to emergency workers.		2102

Siren and EBS Activation

<u>Action</u>	<u>Decision Time</u>	<u>Sirens</u>	<u>EBS Msg.</u>
General Announcement	1840	1850	1853
Evacuation	2037	2046	2049

Ingestion Phase Protective Actions

West Virginia recommends sheltering animals to 50-miles and maintaining 10 mile evacuation. 1200

West Virginia recommends a ban on the consumption, sale, transport, and processing of produce, honey, livestock, and poultry. 1300

Pennsylvania recommends that milk and dairy products will held in storage on an extended basis. 1310

Pennsylvania recommends that milk from dairy farms located in and around the restricted area be embargoed. 1320

Hunting and trapping season is closed in West Virginia. 1345

E. Exercise Objectives

1. Commonwealth of Pennsylvania - There was no extent-of-play agreement between the Commonwealth of Pennsylvania and the Federal Emergency Management Agency, Region III. However, there was agreement that the basis for the evaluation would be the objectives cited in the Interim Use Exercise Evaluation Methodology, dated May 25, 1988.

GROUP A - CORE OBJECTIVES

Emergency Classification Levels

1. Demonstrate the ability to monitor, understand, and use emergency classification levels (ECLs) through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario. The four ECLs are: Unusual Event, Alert, Site Area Emergency, and General Emergency.

Mobilization of Emergency Personnel

2. Demonstrate the ability to fully alert, mobilize, and activate personnel for both facility and field based emergency functions.

Direction and Control

3. Demonstrate the ability to direct, coordinate, and control emergency activities.

Communications

4. Demonstrate the ability to communicate with all appropriate locations, organizations, and field personnel.

Facilities, Equipment, and Displays

5. Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

Emergency Worker Exposure Control

6. Demonstrate the ability to continuously monitor and control emergency worker exposure.

Field Radiological Monitoring

7. Demonstrate the appropriate equipment and procedures for determining field radiation measurement.

8. Demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10 (-7) microcurie per cc in the presence of noble gases.

9. Demonstrate the ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses.

Plume Dose Projection

10. Demonstrate the ability, within the plume exposure pathway, to project dosage to the public via plume exposure based on plant and field data.

Plume Protective Action Decision-Making

11. Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates, and other relevant factors.

Alert, Notification, and Emergency Information

12. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate state and/or local official(s).

13. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.

14. Demonstrate the ability to brief the media in an accurate, coordinated, and timely manner.

15. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion.

GROUP B - SCENARIO DEPENDENT OBJECTIVES

Use of KI

16. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioactive releases.

Implementation of Protective Actions

18. Demonstrate the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special need populations, handicapped persons, and institutionalized persons).

Traffic Control

20. Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

Relocation Centers (Registration, Monitoring, Congregate Care, and Decontamination)

21. Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees.

22. Demonstrate the adequacy of facilities, equipment, and personnel for congregate care of evacuees.

Medical Services (Transportation and Facilities)

23. Demonstrate the adequacy of vehicles, equipment, procedures, and personnel for transporting contaminated, injured, or exposed individuals.

24. Demonstrate the adequacy of medical facilities equipment, procedures and personnel for handling contaminated, injured, or exposed individuals.

Decontamination

25. Demonstrate the adequacy of facilities, equipment, supplies, procedures, and personnel for decontamination of emergency workers, equipment, and vehicles, and for waste disposal.

GROUP C - OTHER OBJECTIVES: TO BE DEMONSTRATED AT LEAST ONCE EVERY SIX YEARS

SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)

26. Demonstrate the ability to identify the need for and call upon Federal and other outside support agencies' assistance.

INGESTION EXPOSURE PATHWAY

27. Demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).

29. Demonstrate the ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, Food and Drug Administration (FDA) PAGs and other relevant factors.

30. Demonstrate the ability to implement both preventive and emergency protective actions for ingestion pathway hazards.

RECOVERY, REENTRY AND RELOCATION

32. Demonstrate the ability to determine the appropriate measures for controlled reentry and recovery based on estimated total population exposure, available Environmental Protection Agency (EPA) PAGs and other relevant factors.

33. Demonstrate the ability to implement appropriate measures for controlled reentry and recovery.

2. State of West Virginia - There was an extensive extent-of-play agreement between the State of West Virginia and the Federal Emergency Management Agency, Region III. The basis for the evaluation was the objectives cited in the Interim Use Exercise Evaluation Methodology, dated May 25, 1988.

(The following text is quoted.)

GROUP A - CORE OBJECTIVES - SCENARIO-INDEPENDENT

EMERGENCY CLASSIFICATION LEVELS

1. Demonstrate the ability to monitor, understand and use ECL through the appropriate implementation of emergency functions and activities corresponding to ECL's as required by the scenario. The four ECL's are: NOUE, Alert, SAE, and GE.

EXPECTED DEMONSTRATION:

State of West Virginia: NOTE: Scenario begins at NOUE.

Hancock County: Actual demonstration.

Ingestion Counties: N/A

MOBILIZATION OF EMERGENCY PERSONNEL

2. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.

EXPECTED DEMONSTRATION:

State of West Virginia: State EOC; Joint Public Information Center will be fully staffed in accordance with plans. State field teams will be pre-positioned in the County.

Hancock County: State and County EOC's; Joint Public Information Center; full staffing in accordance with plans. Other facilities (reception and mass care centers, emergency worker decontamination station) and field activities (field teams, access/traffic control): number of activated personnel specified under associated objectives.

Ingestion Counties: The ingestion counties will partially activate their EOC's with appropriate staff to demonstrate their requirements.

DIRECTION AND CONTROL

3. Demonstrate the ability to direct, coordinate and control emergency activities.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: Actual demonstration.

Ingestion Counties: Actual demonstration.

COMMUNICATIONS

4. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: Actual demonstration.

Ingestion Counties: Actual demonstration, no limits on communications.

FACILITIES, EQUIPMENT AND DISPLAYS

5. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: Actual demonstration.

Ingestion Counties: Actual demonstration.

EMERGENCY WORKER EXPOSURE CONTROL

6. Demonstrate the ability to continuously monitor and control emergency worker exposure.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: Dosimetry at storage locations, to verify quantity; Briefing by Radiological Officer on equipment use; Simulated TLD's and KI to be used.

Ingestion Counties: N/A

FIELD RADIOLOGICAL MONITORING

7. Demonstrate the appropriate equipment and procedures for determining field radiation measurements.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: N/A

Ingestion Counties: N/A

8. Demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10 to -7 mCi per cc in the presence of noble gases.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: N/A

Ingestion Counties: N/A

9. Demonstrate the ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses.

EXPECTED DEMONSTRATION:

State of West Virginia: Transport of sample to laboratory will be simulated, but procedure will be documented with transportation provider and laboratory.

Hancock County: N/A

Ingestion Counties: N/A

PLUME DOSE PROJECTION

10. Demonstrate the ability, within the plume exposure pathway to protect dosage to the public via plume exposure, based on plant and field data.

EXPECTED DEMONSTRATION:

State of West Virginia: Calculations will be performed in Hancock County by State personnel from data received from BVPS. Information is then communicated to the State EOC.

Hancock County: N/A

Ingestion Counties: N/A

PLUME PROTECTIVE ACTION DECISION MAKING

11. Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAG's, availability of adequate shelter, evacuation time estimates and other relevant factors.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: County may adjust decision based on local constraints.

Ingestion Counties: N/A

ALERT, NOTIFICATION AND EMERGENCY INFORMATION

12. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate State and/or local officials.

EXPECTED DEMONSTRATION:

State of West Virginia: The Protective Action Recommendation is made at the State EOC. Implementation of PAR is done by the county.

Hancock County: The fifteen minute capability will be demonstrated upon the initial Alert and Notification System activation, and possibly for the initial protective action decision; The siren and EBS activations will be coordinated with Beaver and Columbia Counties to achieve simultaneous activations throughout the EPZ; Preparation of an appropriate EBS message, with information pertinent to the scenario events, will be demonstrated; distribution of the message will be simulated. The

CPCS-1 EBS station will be notified but not activated; Siren activation will be simulated in the County EOC; Route Alerting

capability will be demonstrated by two Route Alert teams and through discussions in the County EOC for all hearing-impaired residents to demonstrate siren-backup capability.

Ingestion Counties: N/A

13. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.

EXPECTED DEMONSTRATION:

State of West Virginia: At least two EBS messages will be generated.

Hancock County: EBS messages containing appropriate information and instructions will be prepared in the EOC for each change in emergency classification and/or protective action, including any updates; The CPCS-1 EBS Station will be notified but not activated.

Ingestion Counties: Staff briefings will be demonstrated. Instructions to the public will be demonstrated in a tabletop format.

14. Demonstrate the ability to brief the media in an accurate, coordinated and timely manner.

EXPECTED DEMONSTRATION:

State of West Virginia: Media briefings will be conducted at the State EOC and at the Joint Public Information Center (JPIC).

Hancock County: Actual demonstration.

Ingestion Counties: There will be no media briefings conducted at the counties. Media procedures will be discussed in a tabletop format.

15. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: Actual demonstration.

Ingestion Counties: Rumor Control will be demonstrated in a tabletop format.

GROUP B - SCENARIO-DEPENDENT OBJECTIVES

USE OF POTASSIUM IODIDE (KI)

16. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.

EXPECTED DEMONSTRATION:

State of West Virginia: A decision by the appropriate State officials as to whether to authorize the use of KI by emergency workers will be demonstrated.

Hancock County: Both parts of this objective will be demonstrated: A decision by appropriate State officials as to whether to authorize the use of KI by emergency workers; The availability of an adequate supply of KI, and the distribution procedure. Demonstration of Part B of this Objective will include: Supply of KI at County storage location (to verify quantity); Delivery procedure, in real time, if required. This includes transfer of (simulated) KI from the storage location to the distribution site, during the exercise, according to the plans; Distribution procedure to emergency workers, including briefing; Emergency workers in the field and monitors at mass care and emergency worker decontamination centers will have simulated KI and be fully knowledgeable of the procedures for its administration; The use of KI in West Virginia is limited to emergency workers, not institutionalized persons.

Ingestion Counties: N/A

17. Demonstrate the ability to make the decision, if the State Plan so specifies, to recommend the use of KI for the general public, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.

EXPECTED DEMONSTRATION: Not applicable in West Virginia.

IMPLEMENTATION OF PROTECTIVE ACTIONS

18. Demonstrate the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons and institutionalized persons).

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: Lists of people with special needs will be reviewed in the EOC and at the fire department performing Route Alerting; Calls will be made in the EOC to providers of buses, ambulances, and other vehicles to verify availability (vehicles will not be dispatched); Calls to hospitals and nursing homes for patient census will be made in the EOC, including arrangements for host health care facilities.

Ingestion Counties: N/A

19. Demonstrate the ability and resources necessary to implement appropriate protective actions for school children within the plume EPZ.

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: Will not be demonstrated due to schools' summer recess, however, EOC discussions will take place.

Ingestion Counties: N/A

20. Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: The requirements for establishing traffic and access control for the entire evacuated area will be addressed administratively at the County EOC, in accordance with the plans. Actual field demonstration will be one Traffic/Access Control Point, performed out-of-sequence (between 7 and 8 p.m.).

Ingestion Counties: N/A

RELOCATION CENTERS (REGISTRATION, MONITORING, CONGREGATE CARE AND DECONTAMINATION)

21. Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees.

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: One Mass Care Center and one Reception Center will be established. Centers will be fully staffed, including monitoring/decontamination personnel. Reception Center procedures call for vehicle monitoring only; decontamination is a Mass Care Center team responsibility.

Ingestion Counties: N/A

22. Demonstrate the adequacy of facilities, equipment and personnel for congregate care of evacuees.

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: One Mass Care Center will be established. Center will be fully staffed, including monitoring and decontamination personnel.

Ingestion Counties: N/A

MEDICAL SERVICES (TRANSPORTATION AND FACILITIES)

23. Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured or exposed individuals.

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: To be demonstrated during the Annual MS-1 Exercise on September 1, 1992.

Ingestion Counties: N/A

24. Demonstrate the adequacy of medical facilities, equipment, procedures and personnel for handling contaminated, injured or exposed individuals.

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: To be demonstrated during the Annual MS-1 Exercise on September 1, 1992.

Ingestion Counties: N/A

DECONTAMINATION

25. Demonstrate the adequacy of facilities, equipment, supplies, procedures and personnel for decontamination of emergency workers, equipment and vehicles and for waste disposal.

EXPECTED DEMONSTRATION:

State of West Virginia: N/A at State level.

Hancock County: One emergency worker decontamination center will be established; Center will be fully staffed; FEMA Objectives #4 (Communication), #6 (Exposure Control) and #16 (Use of Potassium Iodide) will be evaluated in conjunction with this objective.

Ingestion Counties: N/A

**GROUP C - OTHER OBJECTIVES: TO BE
DEMONSTRATED AT LEAST ONCE EVERY SIX YEARS**

SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)

26. Demonstrate the ability to identify the need for and call upon Federal and other outside support agencies' assistance.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: N/A for the County.

Ingestion Counties: N/A

INGESTION EXPOSURE PATHWAY

27. Demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).

EXPECTED DEMONSTRATION:

State of West Virginia: Two (2) teams will be dispatched.

Hancock County: N/A for the County.

Ingestion Counties: N/A

28. Demonstrate the appropriate lab operations and procedures for measuring and analyzing samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).

EXPECTED DEMONSTRATION:

State of West Virginia: Laboratory will discuss procedures for analyzing samples.

Hancock County: N/A for the County.

Ingestion Counties: N/A

29. Demonstrate the ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, FDA PAG's and other relevant factors.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: N/A for the County.

Ingestion Counties: N/A

30. Demonstrate the ability to implement both preventative and emergency protective actions for ingestion pathway hazards.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: N/A for the County.

Ingestion Counties: Preventative and emergency protective actions are recommended at the State level. Implementation is accomplished at the County level. These actions will be demonstrated in a tabletop format.

RECOVERY, REENTRY AND RELOCATION

31. Demonstrate the ability to estimate total population exposure.

EXPECTED DEMONSTRATION:

State of West Virginia: Requirement waived for exercise.

Hancock County: N/A for the County.

Ingestion Counties: N/A

32. Demonstrate the ability to determine appropriate measures for controlled reentry and recovery based on established total population exposure, available EPA PAG's and other relevant factors.

EXPECTED DEMONSTRATION:

State of West Virginia: Actual demonstration.

Hancock County: N/A for the County.

Ingestion Counties: N/A

33. Demonstrate the ability to implement appropriate measures for controlled reentry and recovery.

EXPECTED DEMONSTRATION:

State of West Virginia: Decision will be made at State level. Implementation will be demonstrated at the County level.

Hancock County: County activities will be based upon decisions made at the State.

Ingestion Counties: N/A

MOBILIZATION OF EMERGENCY PERSONNEL (24-HOUR CONTINUOUS BASIS)

34. Demonstrate the ability to maintain staffing on a continuous 24-hour basis by an actual shift change.

EXPECTED DEMONSTRATION: N/A in this exercise.

EVACUATION OF ON SITE PERSONNEL

35. Demonstrate the ability to coordinate the evacuation of on site personnel.

EXPECTED DEMONSTRATION: N/A in this exercise.

UNANNOUNCED AND OFF-HOURS

36. Demonstrate the ability to carry out emergency response functions (i.e., activate EOC's, mobilize staff that report to the EOC's, establish communications linkages and complete telephone call down) during an unannounced off-hours drill or exercise.

EXPECTED DEMONSTRATION: N/A in this exercise.

F. EXERCISE GRID

1992 BEAVER VALLEY POWER STATION
6R EX-3 OBJECTIVES EVALUATED

DAY 1 - PLUME PHASE

SITE/ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	UN	AH	
COMMONWEALTH OF PENNSYLVANIA																																					
EMERGENCY OPERATIONS CENTER	Y	Y	Y	Y	Y						Y	Y	N			Y									Y												
PUBLIC INFORMATION ACTIVITIES													Y	N	Y																						
SITUATION ANALYSIS (BRP - STATE EOC)										Y	Y																										
ACCIDENT ASSESSMENT (BRP - FULTON BUILDING)	Y	Y		Y						Y																											
EMERGENCY OPERATIONS FACILITY	Y	Y	Y	Y	Y					Y																											
TRAFFIC AND ACCESS CONTROL							Y												Y																		
JOINT PUBLIC INFORMATION CENTER						Y	Y					Y	Y	Y																							
FIELD AIR SAMPLING TEAM A	Y	Y	Y	Y	Y	Y	Y	Y	Y																												
FIELD AIR SAMPLING TEAM B	Y	Y	Y	Y	Y	Y	Y	Y	Y																												
INDIANA AREA EOC, PENNSYLVANIA	Y	Y	Y	Y	Y																																
RISK COUNTY (BEAVER)																																					
EOC	Y	Y	Y	Y	Y	Y	Y				Y	N	N	Y	Y																						
EMERGENCY WORKER DECONTAMINATION STATION	Y	Y		Y			Y																		Y												
RISK MUNICIPALITIES																																					
ALTOUIPPA BOROUGH	Y	Y	Y	Y	Y	Y					Y				Y	Y	Y		Y																		
BEAVER BOROUGH	Y	Y	Y	Y	Y	Y					Y				Y	Y	Y		Y																		
BRIDGEWATER BOROUGH/FALLSTON BOROUGH	Y	Y	Y	Y	Y	Y					Y				Y	Y	Y		Y																		
BRIGHTON TOWNSHIP	Y	Y	Y	Y	Y	Y					Y				Y	Y	Y		Y																		
CENTER TOWNSHIP	Y	Y	Y	Y	Y	Y					Y				Y	Y	Y		Y																		

NOTES: Met Objective: Y = Yes; N = No; ND = Not Demonstrated Objective 17 not applicable to Region III Objective 36: UN = Unannounced Exercise; AH = After Hours Exercise

1992 BEAVER VALLEY POWER STATION
 SM EX-3 OBJECTIVES EVALUATED

DAY 1 - PLUME PHASE

SITE/ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	UN	AH		
RISK MUNICIPALITIES (Continued)																																						
CHIPPEWA TOWNSHIP	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
GEORGETOWN BOROUGH/GREEN TOWNSHIP/HOOKSTOWN BOROUGH	X	X	X	Y	Y	Y						Y			Y	Y	Y		Y																			
HARVOR TOWNSHIP/FRANKFORT BOROUGH	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
HOPEWELL TOWNSHIP	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
INDEPENDENCE TOWNSHIP	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
INDUSTRY BOROUGH	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
MIDLAND BOROUGH	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
ROMACA BOROUGH	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
PATTERSON HEIGHTS BOROUGH/PATTERSON TOWNSHIP	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
POTTER TOWNSHIP	Y	Y	Y	Y	Y	Y						Y			ND	Y	Y		Y																			
RACCOON TOWNSHIP	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
SHIPPINGPORT BOROUGH	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
SOUTH BEAVER TWP/GLASGOW BOR/ONIOVILLE BOR	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
SOUTH HEIGHTS BOROUGH	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
VANPORT TOWNSHIP	Y	Y	Y	Y	Y	Y						Y			Y	Y	Y		Y																			
SUPPORT COUNTIES																																						
ALLEGHENY COUNTY EOC	Y	Y	Y	Y	Y																																	
RECEPTION/MASS CARE/DECONTAMINATION CENTERS	Y	Y	Y	Y	Y															Y	Y				Y													
BUTLER COUNTY EOC	Y	Y	Y	Y	Y																																	
RECEPTION/MASS CARE/DECONTAMINATION CENTERS	Y	Y	Y	Y	Y																Y	Y			Y													

NOTES: Met Objective: Y = Yes; N = No; ND = Not Demonstrated Objective 17 not applicable to Region III Objective 36: UM = Unannounced Exercise; AH = After Hours Exercise

1992 BEAVER VALEY POWER STATION
6R EX-3 OBJECTIVES EVALUATED

DAY 1 - PLUME PHASE

SITE/ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	UN	AH
SUPPORT COUNTIES (Continued)																																				
LAWRENCE COUNTY EOC	Y	Y	Y	Y	Y																															
RECEPTION/MASS CARE/DECONTAMINATION CENTERS	Y	Y	Y	Y	Y	Y													Y	Y			Y													
WASHINGTON COUNTY EOC	Y	Y	Y	Y	Y																															
RECEPTION/MASS CARE/DECONTAMINATION CENTERS	Y	Y	Y	Y	Y	Y													Y	Y			Y													
STATE OF WEST VIRGINIA																																				
EMERGENCY OPERATIONS CENTER	Y	Y	Y	Y	Y							Y				Y																				
PUBLIC INFORMATION CENTER												Y	Y	Y																						
ACCIDENT ASSESSMENT										Y	Y																									
FIELD AIR MONITORING TEAM	Y	Y	Y	Y	Y	Y	Y	Y	Y																											
RISK COUNTY (HARDOCK)																																				
EMERGENCY OPERATIONS CENTER	Y	Y	Y	Y	Y	Y						Y	Y	Y	Y	Y																				
ROUTE ALERTING	Y	Y	Y	Y	Y	Y						Y																								
TRAFFIC/ACCESS CONTROL	Y	Y	Y	Y	Y	Y													Y																	
EMERGENCY WORKER DECONTAMINATION/RECEPTION CENTERS	Y	Y	Y	Y	Y	Y													Y	Y			Y													
MASS CARE CENTER	Y	Y	Y	Y	Y	Y														Y	Y															

NOTES: Met Objective: Y = Yes; N = No; ND = Not Demonstrated Objective 17 not applicable to Region III Objective 36: UN = Unannounced Exercise; AH = After Hours Exercise

1992 BEAVER VALEY POWER STATION
6M EX-3 OBJECTIVES EVALUATED

DAY 2 - INGESTION PHASE

SITE/ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	UN	AH			
COMMONWEALTH OF PENNSYLVANIA																																							
EMERGENCY OPERATIONS CENTER	Y	Y	Y										Y			Y										Y		Y	Y										
PUBLIC INFORMATION ACTIVITIES												Y	Y	Y																									
SITUATION ANALYSIS																																							
ACCIDENT ASSESSMENT																																							
FIELD SAMPLING TEAM A	Y			Y	Y	Y	Y																			Y													
FIELD SAMPLING TEAM B	Y			Y	Y	Y	Y																			Y													
FIELD SAMPLING TEAM C	Y			Y	Y	Y	Y																			Y													
JOINT PUBLIC INFORMATION CENTER												Y	Y																										
INGESTION COUNTIES																																							
ALLEGHENY	Y	Y	Y																																				
ARMSTRONG	Y	Y	Y	Y	Y																																		
BEAVER	Y	Y	Y	Y	Y																																		
BULTER	Y	Y	Y	Y	Y																																		
CLARION	Y	Y	Y	Y	Y																																		
FAYETTE	Y	Y	Y	Y	Y																																		
GREENE	Y	Y	Y	Y	Y																																		
LAWRENCE	Y	Y	Y	Y	Y																																		
MERCER	Y	Y	Y	Y	Y																																		
VENANGO	Y	Y	Y	Y	Y																																		

NOTES: Met Objective: Y = Yes; N = No; M = Not Demonstrated Objective 17 not applicable to Region III Objective 36: UM = Unannounced Exercise; AH = After Hours Exercise

1992 BEAVER VALLEY POWER STATION
6R EX-3 OBJECTIVES EVALUATED

DAY 2 - INGESTION PHASE

SITE/ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	UN	AH	
INGESTION COUNTIES (Continued)																																					
WASHINGTON	Y	Y	Y																																		
WESTMORELAND	Y	Y	Y	Y																																	
STATE OF WEST VIRGINIA																																					
EMERGENCY OPERATIONS CENTER	Y	Y	Y														Y																				
ACCIDENT ASSESSMENT																																					
PUBLIC INFORMATION												Y	Y	Y																							
FIELD SAMPLING CENTER	Y		Y	Y	Y																																
FIELD SAMPLING TEAM A			Y	Y	Y	Y																															
FIELD SAMPLING TEAM B			Y	Y	Y	Y																															
INGESTION COUNTIES																																					
HANCOCK	Y	Y	Y											Y	Y	Y																					
OHIO/BROOKE	Y	Y	Y	Y										Y	Y	Y																					
MARSHALL	Y	Y	Y	Y										Y	Y	Y																					

NOTES: Met Objective: Y = Yes; N = No; ND = Not Demonstrated Objective 17 not applicable to Region III Objective 36: UN = Unannounced Exercise; AH = After Hours Exercise

1992 BEAVER VALLEY POWER STATION
 6M EX-3 OBJECTIVES EVALUATED

DAY 3 - REENTRY/RECOVERY PHASE

SITE/ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	UN	AH	
COMMONWEALTH OF PENNSYLVANIA																																					
EMERGENCY OPERATIONS CENTER																																					
PUBLIC INFORMATION ACTIVITIES													Y	Y	Y																						
SITUATION ANALYSIS																																					
ACCIDENT ASSESSMENT																																					
RECOVERY AND REENTRY COUNTY																																					
BEAVER COUNTY EOC																																					
SUPPORT COUNTIES																																					
ALLEGHENY																																					
BUTLER																																					
LAWRENCE																																					
WASHINGTON																																					

MC/ES: Met Objective: Y = Yes; N = No; ND = Not Demonstrated Objective 17 not applicable to Region III Objective 36: UN = Unannounced Exercise; AH = After Hours Exercise

III. Narrative Summary

A. Plume Phase

1. Commonwealth of Pennsylvania

(a) State Entities and Functions

(1) State Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The State EOC was notified of the ECLs by the utility over a dedicated telephone line directly from the utility to the State EOC. ECLs were received within one minute or less of declaration time. ECLs were verified through the BRP, and appropriate notifications and verifications were made. The current ECL was displayed in the emergency operations room and a random questioning of staff members within the EOC indicated that the staff members were aware of the current ECL.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The State EOC maintains a 24 hour, seven day a week staff which was in place at the time of the NOUE and Alert notifications. Other PEMA and State staff members were notified through a variety of communications systems using current call lists and requested to report to the EOC to provide operational support. More than 50 individuals reported in a timely manner and the EOC was declared operational. Additional staff members were dispatched to other facilities or locations.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. During the exercise, the Lieutenant Governor of the Commonwealth of Pennsylvania, the Director of PEMA, the Executive Officer, and the Operations Center Manager worked in concert to provide excellent direction and control. The PEMA Director was effectively in charge of all emergency activities. As ECLs changed, an announcement was made by the Director in the EOC and the ECL was promptly and visibly posted. Appropriate staff members were consulted and directly involved in the decision-making process. Incoming and outgoing messages were received and distributed, both electronically and in hard copy, to staff members for action or information, as appropriate. A log of incoming and outgoing messages was maintained on the Emergency

Information System (EIS). The entire staff was knowledgeable of their responsibilities as prescribed in the plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations, organizations, and field personnel was adequately demonstrated. The primary communication system interlinking the three State EOCs, utility, county EOCs, and the Western Area Office was a dedicated telephone line. The Pennsylvania Emergency Management Agency Radio System (PEMARS), Electronic Communication Module of EIS (ECOMM), facsimile, FEMA National Teletype System (FNATS), Radio Amateur Civil Emergency Services (RACES), FEMA National Radio System (FNARS) were alternative communication systems that were available to the State EOC staff to use to communicate with various combinations of local, State, and Federal organizations. Also, the State EOC had radio equipment that was programmable to reach the five State agency offices or field personnel. All systems were operational during the exercise.

Issue: None.

Objective 5: The adequacy of the facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated. The 5,376 square foot facility was designed to be self-contained and to support an extended emergency operation. The Emergency Preparedness Liaison Officers (EPLO) were given work spaces, separated by sound-absorbing partitions, allowing them to concentrate on their activities. Each agency work area had a computer terminal. Five large front-projection video screens in the emergency operations room displayed computer data. These screens provided an adequate display area for appropriate maps, location of facilities, equipment and supplies, response action checklists and status, and significant events logs. To accent the display screens in the operations room, ceiling lights were curtailed in the EOC and all workers used desk lamps. These desk lamps provided less than desirable lighting for reading maps and other large documents in the EPLO work areas. The 55-station computer network, EIS software, and other electronic equipment was state-of-the-art. Access to the EOC was controlled by a security officer and a staff member. An identification and sign-in procedure was required.

Issue: To accent the display screens used for maps and status boards in the EOC operations room, ceiling lights were curtailed and all workers used desk lamps. These desk lamps provided less than desirable lighting for reading maps and other large documents in the EPLO work areas. (BVX92-1I)

Objective 11: The ability to make appropriate action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates, and other relevant factors, was adequately demonstrated. The PAGs were developed by the joint efforts of the Department of Agriculture, BRP and the Department of Environmental Resources staff and the dissemination of this information was coordinated through the office of the PEMA Director. The PA for evacuation was ordered by the Governor and developed by the Lieutenant Governor and PEMA staff. There was effective coordination demonstrated among the key decision makers and their technical staff. All PAs were promptly developed in accordance with the State plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate State and/or local officials was adequately demonstrated. Following the notification of the SAE and assessment of plant conditions, the Lieutenant Governor of Pennsylvania directed PEMA to develop an informational message and initiate the alert and notification sequence for the public in the 10-mile EPZ. The PEMA Director conferenced with appropriate State agencies on this decision (1840) and the EOC operations staff coordinated the siren sounding (1850 hours) and EBS (1853 hours) with Beaver County, and, with Hancock County, West Virginia and Columbiana County, Ohio as well as with the State EOCs in Ohio and West Virginia. Coordination occurred over a dedicated telephone line with facsimile verification of the siren and EBS message time sent to Beaver County and Western Area EOC of the Commonwealth of Pennsylvania. PEMA operations urged the risk counties to adhere to the designated times and implement their procedures for activating EBS stations.

Issue: None.

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and notification has occurred was not adequately demonstrated. The PEMA staff disseminated general information about the incident to the public after the first alert and notification sequence. Accurate and timely information was available. The second alert and notification sequence was triggered by the protective action to evacuate the population 360 degrees within 10 miles of the plant. A Deficiency resulted when the State failed to properly coordinate the dissemination of the appropriate prescribed EBS evacuation message with the Beaver County EOC. The State's message transmitting the evacuation order to Beaver County was just a brief announcement and did not reference the detailed, prescribed evacuation message contained in the plans. Thus,

Beaver County disseminated an inadequate EBS evacuation message which did not contain pertinent information such as geographic landmarks, the names of municipalities within the 10-mile EPZ, the names, locations of, and evacuation routes serving the municipalities, instructions for special needs populations, and items to be taken when evacuating. Logs were maintained and copies of releases were kept on file. Radios and televisions were available for monitoring broadcasts of messages. All staff members were aware of the information.

Issue: The Deficiency resulted when the Commonwealth of Pennsylvania's EOC staff failed to properly coordinate the dissemination of an appropriate EBS message with the Beaver County EOC staff. Thus, adequate information was not contained within Beaver County's EBS message concerning the Governor of Pennsylvania's order to evacuate the public within 10 miles of the BVPS. Specifically, the EBS Announcement 2 released by the Commonwealth of Pennsylvania's EOC staff to the Beaver County EOC staff was not the detailed sample General Evacuation EBS Announcement located on page E-16-11 of Attachment D to Appendix 16 to Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan. Consequently, the Beaver County EOC staff merely used EBS Announcement 2, instead of the detailed General Evacuation EBS Announcement specific to Beaver County located on page E-4-9 of Attachment D to Appendix 4 to Annex E of the Beaver County Emergency Operations Plan. EBS Announcement 2 did not contain pertinent information such as: the names of municipalities within the 10-mile EPZ; geographic landmarks including rivers, roads, railroad tracks, towns and villages, or any combination thereof to delineate the area to be evacuated; a reference to the Beaver County Emergency Information Brochure; the names and locations of, and evacuation routes to, the reception centers servicing the municipalities; instructions for special needs populations; and suggested items to be taken when evacuating. (BVX92-1D)

Objective 16: The ability to make decisions to recommend KI and to distribute and administer KI once the decision is made, was adequately demonstrated. The State EOC technical and administrative staff discussed procedures for making the decision to use KI and the risks defined by the scenario. The EOC participant concluded that KI would not be recommended and the Secretary of Health released a message at 2102 hours that KI would not be advised for emergency or non-emergency persons within the 10-mile EPZ.

Issue: None.

Objective 26: The ability to identify the need for and call upon Federal and other outside support agencies was adequately demonstrated. Following the declaration by the utility of an SAE at 1805 hours, the Commonwealth BRP EPLO notified the U.S.

Department of Energy (DOE) through Brookhaven National Laboratory to apprise DOE of the situation and determine the availability of assistance available. After the release of radioactive materials from the plant and the declaration of a GE at 2010 hours, the Department of Environmental Resources (DER) EPLO contacted DOE to request an aircraft, monitoring equipment, and personnel for an aerial monitoring survey of the affected area. BRP provided aerial coordinates for the aircraft crew and was ready to receive and analyze the monitoring data from DOE. The simulated DOE response was to order a monitoring aircraft to provide the requested assistance, with equipment and personnel from Andrews Air Force Base, Maryland. The simulated aerial monitoring activity was initiated within an hour of the request. The activities associated with this objective were conducted in accordance with Appendix 6, Annex E of the Commonwealth Radiological Emergency Response Plan.

Issue: None.

(2) Public Information Activities

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. Two alert and notification sequences (sirens/EBS) were initiated by PEMA. The first alert and notification was an informational message. The second sequence was triggered by an evacuation PAR. Following consultations with the BRP, the Lieutenant Governor, and the utility liaison, the PEMA Director dictated an EBS notification message, in anticipation of a decision on the evacuation PAR. Immediately after the Lieutenant Governor's approval of the PAR, the second sequence was initiated. At that time, the Beaver County EMC was advised that the sirens should be sounded at 2046 hours and the appropriate EBS message should be broadcast at 2049 hours. Simultaneously, PEMA operations staff sent the EBS notification message, containing situation data and the recommendation for evacuation of all persons within ten miles of the BVPS, via the ECOMM, to the Beaver County EMC. Receipt of the message was confirmed over the telephone by the EMC. Following this second siren/EBS sequence, PEMA conducted one media briefing and issued news releases which provided additional and appropriate information on the event and PARs. The preparation, approval, coordination, and dissemination of the news releases and media briefing material was conducted in a professional and responsible manner by members of the Commonwealth Emergency News and Information Center (CENIC) and members of the Commonwealth's Department of General Services. All activities were conducted in accordance with Appendix 16, Annex E of the Commonwealth's Radiological Emergency Response Plan.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was not adequately demonstrated. Two media briefings were held, at 1930 hours and 2135 hours. An opening statement by the PEMA Press Secretary was followed by the presentation of situation reports by the Lieutenant Governor and Director of PEMA. Additional information was presented by representatives of the BRP and Department of Agriculture. All speakers were articulate, informative, and addressed their topics in easily understandable language. Speakers responded properly to questions from mock media both in the Commonwealth Media Center in Harrisburg and, via satellite teleconference, at the Utility Media Operations Center in Coraopolis, Pennsylvania. During the first media briefing, a State official incorrectly referred to the SAE ECL as a "Site Emergency." Additionally, the effectiveness of the media briefing presentation was questionable because the spokesperson failed to employ maps and charts to provide an in-depth visual perspective of the locations affected and activities occurring to mitigate the incident. Thirteen news releases were prepared, coordinated, and issued by the staff of the CENIC at the State EOC. Copies of these releases were posted for CENIC staff information and were distributed to EOC agency liaisons, rumor control, and the mock media. PEMA news releases were also sent via the ECOMM to all risk and support county EOCs and via facsimile to the PEMA liaison officers at the Utility Media Center. A staff member within the Commonwealth of Pennsylvania emergency management structure overlooked sending a media release concerning the evacuation order to the JPIC. A previous issue (BVX90-5R) which involved contradictory and conflicting information resulting from an editing error by the computer word processing operator was not successfully resolved. PEMA News Release 7 contained a header indicating a release time of 1956 hours, but the lead sentences concerned actions which followed the declaration of the GE ECL at 2010 hours. This resulted from the practice of listing the release time as the time of the preparation of the draft news release. After the draft was prepared, it may have been modified with newer information before approval and release. News releases issued by Duquesne Light were received by CENIC via telephone facsimile, copied, posted, and distributed to appropriate locations. CENIC staff provided an additional service to broadcast media which involved pre-recorded news bulletins via telephone. The ability to provide accurate and current information to the media, and thereby the affected population, was demonstrated in a professional and responsible manner by members of the CENIC and members of the Commonwealth's Department of General Services. All activities were conducted in accordance with Appendix 16, Annex E of the Commonwealth's Radiological Emergency Response Plan.

Issue: PEMA News Release 7 contained a header indicating a release time of 1956 hours, but the lead sentences concerned actions which followed the declaration of the GE ECL at 2010 hours. This resulted from the practice of listing the release time as the time of the preparation of the draft news release. Subsequent to this initial preparation time, the draft may have been modified with newer information before approval and release. (BVX92-1R)

Issue: During the first media briefing, a State official incorrectly referred to the SAE ECL as a "Site Emergency." Because of the possible conflict with terms used in the emergency brochure distributed within the plume EPZ, all spokespersons should use exact terminology with respect to the ECLs. (BVX92-2R)

Issue: The effectiveness of the media briefing presentation was questionable because the spokesperson failed to employ maps and charts to provide an in-depth visual perspective of the locations affected and activities occurring to mitigate the incident. (BVX92-3R)

Issue: A staff member within the Commonwealth of Pennsylvania emergency management structure failed to send a media release concerning the evacuation order to the JPIC. (BVX92-4R)

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The rumor control function utilized personnel, facilities, and telephone numbers of the Commonwealth Information Center (Governor's Action Center) which is located one floor above the State EOC, and which performs a similar function during a non-radiological emergency. A total of eight incoming telephone lines were staffed by eight operators. Two lines were available for call-backs and other outgoing calls. Unless inquiries required research by the rumor control liaison prior to response, responses were made immediately. Rumor control staff members were provided with copies of all news releases and EBS messages issued by PEMA and the utility. The rumor control operators received nine calls from the exercise controller. Rumor control activities were conducted in a professional and responsible manner by members of the Commonwealth Department of General Services. All activities were conducted in accordance with Appendix 16, Annex E of the Commonwealth's Radiological Emergency Response Plan.

Issue: None.

(3) - Situation Analysis (BRP - State EOC)

Objective 10: The ability, within the plume exposure pathway, to project dosage to the public via plume exposure based on plant

and field data was adequately demonstrated. At the State EOC, members of the BRP were provided technical data by their colleagues at the Fulton Building. Plant status information was provided promptly by the utility to the BRP staff located at the State EOC. As the plant status changed and technical information was provided to the BRP staff located at the State EOC from the BRP at the Fulton Building, PARs were discussed. A map of the affected area was utilized during the discussions, to better address geographic, environmental, and population concentration factors. BRP consulted the Pennsylvania Department of Agricultural on agricultural-industrial concerns of the area, and utilized meteorological data to address the possibility of contamination spreading to other areas. DOE Federal Radiological Monitoring and Assessment Center (FRMAC) assistance was requested. DOE provided aerial monitoring and field monitoring teams. Based on the aerial monitoring data, a plume was plotted. The plume plot was distributed on Day 2 of the exercise. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 11: The ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates, and other relevant factors was adequately demonstrated. PAGs were used as the technical basis for the development of PARs and were provided by the EPA Manual of Protective Action Guides and Protective Actions, EPA-520/1-75-001, Chapter 2. PAGs for both the public and emergency workers were referenced in this manual and in Attachment E, Appendix 6 of the Pennsylvania Radiological Emergency Preparedness Plan. Throughout the plume phase of the exercise, as events progressed, the utility maintained close contact with the BRP and communicated its PARs to the BRP. This flow of information served to keep the BRP well informed, and assisted them in the development of the PARs. Factors other than projected dose were considered during the PA decision-making process, including: plant conditions, population concentrations around the plant, agricultural-industries, meteorological conditions, and environmental and geographic factors. Appropriate PAs were discussed as plant status changed. Protective action decisions were formulated expeditiously, based on the status of the plant, aforementioned factors, and discussions with PEMA. Relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

(4) Accident Assessment (BRP - Fulton Building)

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Personnel were notified in a timely manner, using a current call list. The State EOC was declared operational at 1630 hours. The BRP was located in the Fulton Building and the members of the BRP were already in place at the time of the NOUE.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary communication systems used at the BRP were dedicated telephone lines and a radio base station. The dedicated lines were used to communicate with the State EOC and the utility EOF. The radio base station was used to communicate with the field monitoring teams. No communication delays due to equipment or system failure were experienced.

Issue: None.

Objective 10: The ability to project dosages to the public within the plume exposure pathway based on plant and field data was adequately demonstrated. No "what if" calculations were performed; however, the BRP fully discussed the potential environmental impact of each change in plant status. Projected dose calculations were made and discussed. The group discussion of the projected dose calculations enabled the group to challenge an incorrectly reported noble gas to iodine ratio from the EOF. The ratio caused an erroneous dose projection. A correct assumption was made based on plant conditions. The use of the correct noble gas to iodine ratio produced a correct dose projection. The BRP's field monitoring teams were properly directed by the BRP staff who were aware of the utility's field monitoring teams locations. The BRP directed its teams in a way which maximized plume coverage. The utility's field team monitoring data was received and compared with BRP field team data and projected doses. The BRP field teams confirmed the plume exposure pathway and provided confirmatory measurements for dose projection calculation. Dose projections were done for various distances between 0-5 miles and for 30 miles. The projections were used for initial PAs.

Issue: None.

(5) Emergency Operations Facility

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was

adequately demonstrated. After arrival in the EOF, State representatives adequately demonstrated the ability to monitor and understand ECLs. The ECL scheme was associated with degrading events recognized by the utility. The basis for the SAE and GE was thoroughly discussed by the Beaver Valley Emergency Response Manager with the State representatives. In addition, at 1920 hours, the utility placed an administrative hold on the exercise due to the Emergency Response Manager's recognition of a multitude of serious operational problems within the plant, thereby justifying an GE. Plant conditions and the event sequence were explained to State personnel, who understood the rationale behind the decision.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Mobilization of Department of Environmental Resources personnel from the local field office to the EOF was in accordance with the plan. Other Pennsylvania and West Virginia representatives were pre-staged in the Pittsburgh area, since mobilization of these personnel from their State EOCs was not an exercise objective. Each State's emergency response function within the EOF was adequately filled. These included engineering and technical support (BRP), radiological and field team coordination, and liaison for evaluation of PAs (PEMA and West Virginia Office of Emergency Services [OES]). Interface among representatives of the Pennsylvania organizations was actively pursued.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Five commercial telephones were available for Pennsylvania and West Virginia personnel to communicate information. In addition, a direct ring-down telephone was in place for Department of Environmental Resources representatives to obtain information from the Fulton Building on field team locations and measurements. Although the number of available telephone lines was adequate, information flow between the BRP and DER representatives in the EOF and their State EOC counterparts was not efficient. Every time plant parameters and conditions needed to be transmitted from the EOF, EOF personnel had to make a separate call. On occasion, delays were encountered during attempts to place these calls. An open line was not maintained since staff members cannot carry out communicator and technical evaluator roles concurrently.

Issue: Delays were encountered in the flow of information between the BRP staffs in the EOF and the State EOC Accident Assessment Center. (BVX92-5R)

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Facilities, space, and equipment were sufficient for State representatives to use. Area maps of the 10-mile and 50-mile EPZs were prominently displayed. Status boards were updated as soon as changes in plant conditions were noted. Plant status, key scenario events, staffing of State and utility personnel, and field team status boards were available for information. Since this facility was located onsite, it maintained habitability via a separate ventilation envelope. The map in the radiological assessment area clearly identified the monitoring points. Department of Environmental Resources and utility staff used this map to discuss locations of field teams and were cognizant of the position of teams as they moved to different locations. However, the display on the map showed only the position of the utility teams. A visual display of all field team locations (Department of Environmental Resources and utility) would be helpful in comparison of field measurements and plume definition.

Issue: The EOF field team map showed the location of utility field teams only. For ease of plume definition and comparison of field team measurements on the map, Department of Environmental Resources team positions should also be shown. (BVX92-2I)

Objective 10: The ability, within the plume exposure pathway, to project dosage to the public via plume exposure based on plant and field data was adequately demonstrated. Evaluation of plant conditions for inclusion in dose projections and calculation of radiological dose was not designated as a State function in the EOF. Department of Environmental Resources personnel in the EOF functioned well to compare information provided by State and utility field monitoring teams. Projected dose rates from both utility and Department of Environmental Resources Environmental Assessment and Dose Projection staffs were also used to confirm field team measurements. Radiological release information was appropriately tracked throughout the exercise.

Issue: None.

(6) Traffic and Access Control

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The State Police, using a current roster, alerted and notified the Beaver District State Police by telephone to start briefing and deploying the troopers to TCPs in a timely manner. There were no significant events or changes during traffic control operations. ACPs and TCPs were established at two major roads and two bridges. All relevant functions and activities were implemented in a manner that was consistent with the organization's emergency plan and procedures.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Telephones and computers were the primary and back-up communication systems used. There were no breakdowns or delays. The operators were very professional and there was excellent coordination between the district police station and the traffic managers. All relevant functions and activities were implemented in a manner that was consistent with the organization's emergency plan and procedures.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The District Police Officer's orientation and instructions on the purpose and use of exposure devices was excellent. Troopers dispatched to ACP's and TCPs were issued simulated dosimeters, a TLD, an exposure record, and a simulated supply of KI. A comprehensive briefing was given on the use of all dosimetry instrumentation, the use of KI, and appropriate use of external clothing as protective measures. The briefing was very thorough and included information on how often individual dosimeters were to be read and recorded by the trooper. All personnel were knowledgeable on the mission exposure and procedures to follow if an individual exceeded the upper limits. Additionally, dosimeter chargers were available for use and zeroed prior to issuance. All relevant functions and activities were implemented in a manner that was consistent with the organization's emergency plan and procedures.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. The State troopers were dispatched to two TCPs and two ACPs in Beaver County outside the 10-mile zone during the demonstration window. The troopers had adequate knowledge of access control, evacuation routes, and relocation centers. An orientation on these subjects was provided by the coordinator during his briefing at the Beaver District State Police Office. Additionally, troopers were in contact with the county EOC through the PSP communications system. All relevant functions and activities were implemented in a manner that was consistent with the organization's emergency plan and procedures.

Issue: None.

(7) Joint Public Information Center

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. By prior agreement, some staff members from PEMA were pre-positioned and did not deploy from Harrisburg. The West Virginia representative departed Charleston prior to the NOUE. Otherwise, all staff and county staff were notified by telephone, in real time, by their respective duty officers, and arrived shortly after the JPIC was declared operational. A full complement of staff was present, along with six individuals representing print and broadcast media.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The staff of the center was able to utilize commercial telephones, facsimile (one dedicated line assigned to each of the three States involved), conferencing capabilities, and the audio-visual satellite link with the Harrisburg EOC. The primary systems of telephone and facsimile handled transmissions to and from the JPIC without undue delay and with no system breakdowns experienced. All three State EOCs and the affected 10-mile EPZ counties of Beaver, Pennsylvania, Columbiana, Ohio, and Hancock, West Virginia, as well as utility facilities and the EOF, were in direct contact via these systems.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The JPIC was located in Building 3 of the Airport Industrial Park on Spring Run Extension in Moon Township. This facility was a modified warehouse building which had been converted into a spacious office which was well ventilated, and heated and cooled by modern equipment. Access to the facility was controlled by a sign-in and badge system, with separate entrances for government representatives and the media. There was additional security in the parking lot at the entrance to the media presentation area. Space, furnishings, lighting, and restrooms were adequate. Office equipment to support the production of media information included a variety of word processors (with printers) and copiers. Displays were numerous in both the government work area and media presentation area, and included 10- and 50-mile EPZ maps covering the affected States and evacuation routes by county. Plume trajectory overlays which would have aided the media's understanding were not used at the JPIC. A status board was maintained and regularly updated in the government work room. ECLs and weather data, as well as the plant status were posted on the board.

Issue: A spokesperson's failure to use plume trajectory overlays or similar visual aids resulted in several additional media questions attempting to gain a fuller understanding of the emergency situation. (BVX92-3I)

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. The Commonwealth of Pennsylvania issued two PAs news releases covering the protection of livestock, and these releases were sent to the JPIC. However, the news release covering the ordered evacuation of the EPZ in Pennsylvania did not reach the JPIC prior to termination of the exercise. (See ARCA BVX92-4R.) The evacuation decision was reported to the media present in the JPIC during the 2130 hours briefing and the West Virginia State EOC did facsimile its EBS evacuation announcement to the JPIC. Copies of all news releases were available to the media in the presentation area, and logs of news releases were maintained. Radio and television were monitored (in a special monitoring room) to keep track of information provided to the public. The coordination of information among all parties (utility and State and county governments) was generally very good.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. The demonstration was accomplished through five briefings, four of which involved all the affected States as well as the utility, and two briefings of which were linked with the State EOC briefing room in Harrisburg by satellite to provide two-way and one-way visual communications. These briefings were televised by closed circuit to all operational areas of the JPIC to ensure that the information being transmitted could be noted and certified as correct by operations personnel. The utility, Director of Nuclear Communications, organized and chaired the briefings. He approved dissemination of the 11 utility news releases. The nine news releases from Pennsylvania and 14 releases from Hancock County, West Virginia were approved at their respective points of origin. All spokespersons had access to current, accurate, and timely information. The briefing room was spacious and would be adequate for up to 100 media representatives without overcrowding. Approximately 20 telephone lines were available for media use. Actual broadcast media representatives (some retained by the utility) provided incisive questioning and good media play. Radio and television were monitored to preclude the dissemination of false information.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The utility successfully demonstrated its public rumor and media misinformation control function. Seven telephone lines (three for the general public and four for the media) were used in this operation. Rumor control numbers for the utility, the Commonwealth of Pennsylvania, and risk counties in Pennsylvania and West Virginia were publicized in public information brochures, EBS messages, and press releases. The staff had access to current, timely information and generally corrected phoned-in public and media misperceptions by calling back in an expeditious fashion. When necessary, the staff conferred with technical specialists either in person or through the use of runners. Release of information to the public was authorized by the media center manager (utility Director of Nuclear Communications) and was accomplished without delay.

Issue: None.

(8) Field Air Sampling Team A

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The State Department of Environmental Resources, BRP, and the State Area EOC at Indiana, PA was contacted by the BRP Chief by a telephone call from the EOC in Harrisburg. The staff reported promptly at the Alert ECL. The technicians were directed to check all equipment in their emergency response vehicles in preparation for deployment. The two teams followed their procedures for checking each item listed on the emergency equipment checklist and by 1825 hours the vehicles had left the regional office parking lot.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The BRP State field monitoring team A performed a radio check prior to departing from its regional office. The primary communications system was the vehicle-mounted, multi-channel State radio system. This system enabled the team to maintain contact with the other team, as well as with the BRP EOC in Harrisburg, via a microwave relay station. The system was able to handle all traffic flow without any delays. Excellent communication protocol was followed by the team members when communicating with the BRP EOC staff. The back-up communication system was designated as commercial telephone through the team members' use of their telephone credit cards.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each

member of the State BRP field monitoring team A was issued a TLD, direct-reading dosimeters (0-500 mR, 0-20 R, and 0-100 R), an exposure record form, and appropriate instructions on the use of dosimetry and the frequency for reading the dosimeters. The dosimeters were zeroed, a dosimeter charger was available in the team's emergency response kit, and the initial readings were recorded. While the team was in the field, the dosimeters were meticulously read and exposures were recorded every 30 minutes in accordance with procedures. The individual team members were knowledgeable of their mission exposure limit of 5 Rem and whom to contact (BRP EOC) for authorization to exceed the EPA PAGs for the general public and what to do if they received an exposure higher than authorized.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. BRP State field monitoring team A was issued a recently calibrated (March 1992) low-range beta-gamma and a high-range gamma survey instrument (calibrated April 1992), as specified in procedures. The instruments were operationally checked through the use of an electrical and/or radioactive check source. The dual-channel analyzer which was set up prior to departure into the field, was checked through the use of a Barium 133 source. Survey instrument spares were available in the vehicle and additional equipment, e.g., air sampling pumps, was located in the regional office. The detectors on the survey instruments were enclosed in thin plastic in accordance with procedures. While en route to the three assigned monitoring points, the survey instruments were turned on and readings were observed. The team was able to promptly locate all monitoring points. Upon arrival at the points and the receipt of instructions from the BRP EOC, plume verification was accomplished using gamma only and beta gamma readings. These readings were taken at waist and near ground level in accordance with procedures. These results of measurements taken were promptly transmitted to the BRP EOC. Both team members were very knowledgeable in the use of instrumentation and radiological health physics procedures.

Issue: None.

Objective 8: The ability to demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} (.0000001) microcuries per cc in the presence of noble gases was adequately demonstrated. BRP State field monitoring team A used monitoring equipment identified in its procedures for conducting airborne radioiodine sampling. The team was instructed to acquire an air sample at its first monitoring point. The team used a 120 volt

air sampling pump (calibrated January 1992) which was connected to an inverter connected to the vehicle's battery. Silver zeolite cartridges were available for use and a charcoal (simulated silver zeolite) cartridge was placed into a tandem holder attached to the air sampler. The air sample was taken in accordance with procedures at a flow rate of 3 cfm, the lowest rate at which the pump would operate, and a sample duration of 4 minutes. Although less than the recommended total volume of 25 cubic feet was acquired, the sample volume was sufficient. The team was instructed to leave the plume and go to a low background area for counting the air sample media. The team traveled to the low background area and removed the air sample media from the tandem holder on the air sampler. The sample was then removed, bagged, and labeled with the location, date, time, total air volume passing through the media, names of individuals collecting the sample, and the determined activity. An Eberline Model SAM II dual-channel analyzer was used for the analysis. The team members followed their procedures and counted both a background cartridge and the air sample media using a shielded Eberline Model RD-19 gamma scintillation probe connected to the dual-channel analyzer. The analysis was conducted using a reproducible fixed geometry between the detector and sample. The results of the analysis were promptly reported to the BRP EOC.

Issue: None.

Objective 9: The ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses was adequately demonstrated. BRP State field monitoring team A followed procedures and conducted the acquisition of particulate activity in the plume at its first assigned monitoring point. This was conducted in conjunction with radioiodine sampling when the team placed a filter paper into the tandem holder connected to the air sampler. The team counted the sample at the location where the air sample media was counted. The paper was carefully removed from the holder, and placed into a plant type holder (Eberline Model SH-4), and the sample was counted using a Geiger scaler (calibrated January 1992) attached to an Eberline Model E-120 rate meter with an Eberline Model HP-210 probe. After the sample was counted for one minute, it was bagged and properly labeled. The results were promptly transmitted to the BRP EOC. Approximately one hour later, the team was instructed by BRP EOC staff to rendezvous with the other team and simulate the transfer of the samples to one vehicle for transport to the Pittsburgh Airport. The samples were to be flown to Harrisburg where they would be taken to the State laboratory for further analysis.

Issue: None.

(9) Field Air Sampling Team B

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The Department of Environmental Resources BRP in Harrisburg notified the Department of Environmental Resources BRP, Pittsburgh, of the emergency by telephone. Field team members were notified by telephone within a few minutes by the BRP, Pittsburgh team leader. The call-down list used was current and accurate. The team was activated and equipment, which was already in their vehicles, was checked. The team was deployed toward the direction of the BVPS. There were two separate teams consisting of two BRP members each. All activities were consistent with the plan. The BRP field monitoring team was exceptionally knowledgeable and demonstrated a high level of skill. It was a finely organized team whose members performed well together. The team members paid keen attention to detail. It should be noted that they participate in quarterly emergency response drills (within BRP) which enhances their capabilities.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary system was a mobile two-way radio (microwave system). The back-up system was commercial telephone and was not demonstrated. The field teams had communication links with each other, Department of Environmental Resources Pittsburgh, Department of Environmental Resources Harrisburg, and the EOF. The primary communication system was able to handle the communication flow with no delays. There were no communication breakdowns during this exercise. Relevant functions and activities were implemented in a manner consistent with the plans and procedures.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker was issued three dosimeters (0-500 mR, 0-20 R, and 0-100 R) and a TLD. The TLD was returned to Department of Environmental Resources in Harrisburg for processing. Appropriate instructions were issued with the dosimetry. Each team member had an exposure log sheet and read his/her dosimetry every 30 minutes. Team members were aware of their exposure limit of 5 R, and knew to contact their BRP supervisor for authorization to incur exposures in excess of the authorized mission exposure limit. The team had a dosimeter charger, and dosimeters were zeroed prior to deployment. Activities demonstrated were consistent with the plan and procedures.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. The team had low-range and high-range survey instrumentation consisting of a GM-E-120 (calibration date of March 1992), a PIC 6-A (calibration date of May 1992), and a Victoreen Radector (calibration date of March 1992). Spare instruments were available in the team's vehicle. A full back-up kit was available in the BRP Pittsburgh Office. It is important to note that field team B determined that the third kit would be more useful if taken to the EOF by the team leader because of its central location. Then, if either of the field teams needed spare equipment, it could be picked up from the EOF. Battery and source checks were performed, and the instruments were found to be operable. The probes were covered with plastic to protect them from radioactive contamination. Both gamma and beta-gamma readings were made at one meter and at ground level. All readings were logged and properly transmitted. All relevant functions and activities were implemented in a manner consistent with the plan and procedures.

Issue: None.

Objective 8: The ability to demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} (.0000001) microcuries per cc in the presence of noble gases was adequately demonstrated. The team members used the equipment as specified in the plan. They used the SAIC Radeco for air sampling. Within a few minutes of the start of the air sampling, the Radeco (calibration date June 1992) stopped functioning. The air sampling was begun again, using the old back-up (Radeco H-809 V) system. This back-up unit involved using the inverter to switch current from the car battery. Procedures were followed, and the air sampling was successfully completed. The sample was counted in the field with the SAM II computer with RD-19 probe and shield. Reproducible geometry was used. The silver zeolite filters were available, but charcoal filters were used for demonstration purposes. A Barium 133 check source was used to calibrate the SAM II. Proper flow rate and sampling duration were used. Samples were properly bagged and labeled. The team traveled to a low background area to count the sample and the readings were promptly reported. The functions and activities were implemented in a manner consistent with the plan and procedures.

Issue: None.

Objective 9: The ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses was adequately demonstrated. The performance of laboratory analysis was not required on the first day of this

exercise. The field team properly sampled and packaged the filter media for transport. At 2200 hours, the field team simulated a transfer of samples to a runner who would have taken the samples to the Department of Resources Bureau of Laboratories in Harrisburg by airplane. The functions and activities were implemented in a manner consistent with the plan and procedures.

Issue: None.

(10) State Area EOC (Indiana, Pennsylvania)

Objective 1: Personnel at the Indiana EOC adequately demonstrated the ability to monitor and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario. The current ECL was prominently displayed at the front of the operations room. At each ECL change, the old ECL was removed and replaced with a new ECL. This posting could easily be seen by all participants in the operations room and the staff members were aware of the current ECL. The relevant functions and activities of this objective were implemented in a manner consistent with the organization's emergency plans and procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The Indiana Area EOC notified all associated support counties of the Alert declaration by telephone. In accordance with the plan, emergency response personnel and organizations were alerted and mobilized by name and title using up-to-date written call lists (which were available for both shifts). Personnel were alerted in a timely manner. All relevant functions and activities were implemented in a manner that was consistent with the organization's emergency plan and procedures.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. During the course of the exercise, the Indiana Area EOC Operations Officer provided effective leadership which enhanced EOC operations. Staff briefings were conducted at all ECL changes, significant event occurrences, and on an hourly basis. During the hourly briefings, each staff section or functional area reported on the status of its areas of responsibility and advised other staff members of important issues which might affect the activities of other county agencies. All incoming and outgoing messages were recorded on a master log. The current plan was available and used for reference. The director frequently discussed the current status of the emergency with the secretary and other staff members. The relevant functions and activities of this

objective were implemented in a manner consistent with the organization's emergency plans and procedures.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The EOC was equipped with a sophisticated communications system connecting all of the risk and support counties in the Western Region as well as the State. Also, the Indiana Area EOC had the necessary equipment for communicating with law enforcement, fire protection, and other response agencies. The communication systems in place at the Indiana EOC consisted of commercial telephones, radio, RACES, and facsimile machines. Commercial telephones with 15 lines were used during the exercise. High and low band radio frequencies were available if needed. All of the communication systems demonstrated during the exercise operated properly, and communications was carried out as described in the plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The Indiana Area EOC was located in the basement of an Indiana University campus building. There appeared to be sufficient space, lighting, furniture, restrooms, ventilation, telephones, computers, and facsimile and copy machines to support emergency operations. Back-up power consisted of a generator equipped with battery packs which did not function. Additional back-up power was available through the Indiana University (cable and wiring in place) generating system. The large well-lighted operations room was equipped with a status board, intercom system, and satellite communications. Tables were set up and labeled for representative agencies assigned to this facility. Maps and displays were available in the operations room for displaying the status of major events. The relevant functions and activities of this objective were implemented in a manner consistent with the organization's emergency plans and procedures.

Issue: EOC back-up generator was not working and required repair. (BVX92-4I)

(b) Risk County - Beaver County

(1) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated by the Beaver County Emergency Management Agency. Staff members were notified of ECLs by BVPS and PEMA simultaneously. The County EOC was notified of ECLs using the following methods: the NOUE via commercial telephone and the Alert, SAE, and GE via PEMARS. ECLs were prominently displayed on an emergency status board which was centrally located for all to see. Staff members were made aware of the current ECL by the following methods: status board updates, EOC briefings, ECL signs, and ECL color-coded lights located in the EOC. All activities were implemented in a manner consistent with the Beaver County Emergency Plan.

Issue: None.

Objective 2: The ability to fully alert, mobilize, and activate personnel for facility emergency functions was adequately demonstrated at the Beaver County EOC. County EOC staff members and municipal EOCs were notified of the BVPS situation at the Alert ECL. Calls and contacts were made by the EOC administrative staff using tone alert pagers and commercial telephone. Telephone calls were made from an accurate call-down list. The staff was alerted and deployed to the EOC in a timely manner. All pertinent staff listed in the Beaver County Plan were present at the EOC. For the most part, municipal EOCs were activated in a timely manner with the exception of three municipalities whose staffs were involved in real-life fire fighting situations. However, the municipalities were completely activated after the fire fighting activity was completed. No EOC staff members were dispatched to other facilities. All activities were implemented in a manner that was consistent with the Beaver County Plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was effectively demonstrated by the Beaver County EMC. EOC briefings were held after each ECL escalation, after updates from PEMA, and after protective action decisions from PEMA. When appropriate, specific staff members were involved in EOC decision making. Additionally, staff members were supplied with a copy of the Beaver County Emergency Plan. All incoming and outgoing messages were logged by an Operations Officer and distributed, if appropriate. The facility used an internal message-handling system which utilized a three-copy, carbon message form. A log was maintained for all internal

messages. Protective action decisions and their implementation were coordinated in an effective manner. All activities were implemented in a manner consistent with the Beaver County Plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated at the Beaver County EOC. The communications systems demonstrated during the exercise included: commercial telephone, cellular telephone, radio systems (Radio Emergency Association Citizens' Team (REACT), Police/Fire-911), RACES, PEMARS, EIS, and a facsimile machine. The Beaver County staff had the ability to communicate with the BVPS, all municipal EOCs within Beaver County, the PEMA, and appropriate support counties. The primary communication system (telephone) was able to handle communication flow without delays. The back-up communication system (radio) was demonstrated during the exercise and they functioned properly. All activities and functions were implemented in a manner consistent with the Beaver County Emergency Plan.

Issue: None.

Objective 5: The adequacy of facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated at the Beaver County EOC. The EOC was located in an old railroad station basement. The three rooms comprising the EOC included: a 911 communications center, a RACES/REACT radio room and an operations room. Space, furnishings, lighting, and ventilation were adequate to support emergency operations. An actual demonstration of the emergency back-up generator occurred during the exercise. The available equipment at the EOC included a typewriter, a computer, two copy machines, cots, a facsimile machine, and message lights. Access to the facility was controlled at all times. Appropriate maps and displays were present in the EOC Operations Room. Status boards were used in the EOC to record pertinent information for all the staff to see. All status boards were updated in a timely manner. All relevant functions and activities were implemented in a manner consistent with the Beaver County Emergency Plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The use of dosimetry was simulated. Each emergency worker was assigned a TLD and two direct-reading dosimeters (0-20 R and 0-200 R) with instructions for how to use and record the readings for the dosimeter. The emergency workers had access to a direct-reading dosimeter charger. The RO officer was knowledgeable on emergency worker exposure control. All relevant functions and activities

were implemented in a manner consistent with the Beaver County Emergency Plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate officials(s) was adequately demonstrated. Within minutes of notification of an alert and notification sequence, the EMC directed the 911 operator to activate the sirens; the sirens were actually sounded; and the radio station broadcast an actual EBS test. This public notification was coordinated among Beaver County, Pennsylvania, Hancock County, West Virginia, and Columbiana County, Ohio. The timing of the alert signal and the instructional message was coordinated to ensure that the alert signal came first, followed by the initiation of the instructional message within a few minutes. The relevant functions and activities were implemented in a manner consistent with the Beaver County Emergency Plan and Procedures.

Issue: None.

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification was not adequately demonstrated. After the first alert and notification sequence, the staff disseminated instructions to the public, concerning an evacuation PAD, a second time. PEMA and Beaver County were responsible for this function. The Beaver County staff secured the second EBS message via facsimile machine from PEMA. However, the protective action areas were not described in terms of familiar geographic landmarks and boundaries and other key items were missing from this EBS message. Beaver County disseminated this inadequate EBS message to the public. A log of EBS messages was maintained and copies of releases were accessible to all staff. All press releases and their content were discussed with the Beaver County representative at the JPIC via telephone.

Issue: See BVX92-1D, Commonwealth of Pennsylvania, EOC.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was not adequately demonstrated. Two simulated media briefings and one table-top briefing occurred at the EOC. Three staff members would have been utilized for media briefings if briefings were actually conducted. The staff had access to current and accurate information through the EOC briefings, State news releases and information from PEMA. A log noting information released to the media was kept by the PIO; however, county news releases were not accessible to the EOC staff. Staff members monitored the radio station for EBS

messages. PIO staff did not develop or provide media kits to the media. All functions and activities were not implemented in a manner consistent with the Beaver County Emergency Plan and Procedures.

Issue: Throughout the course of the exercise, the PIO did not provide the staff copies of or access to news releases and did not prepare or provide information kits to media representatives (real or simulated). (BVX92-6R)

Objective 15: The ability to establish and operate rumor control in a coordinated and timely manner was adequately demonstrated by the Beaver County EOC. A rumor control system was activated and the PIO was responsible for providing this function. The telephone number used for rumor control was (412) 775-0344 and was provided to the public in EBS messages and radio station announcements. One telephone line was available for both incoming and outgoing calls. Three staff members were utilized for the rumor control operation. The rumor control staff had access to accurate and timely information through news releases and EOC briefings. The rumor control staff received five rumor control calls which it was able to handle effectively. The PIO was responsible for the authorization of public information releases. All functions and activities were implemented in a manner that was consistent with the Beaver County Emergency Plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision was made, if necessitated by radioiodine releases, was adequately demonstrated. The decision was made not to recommend the use of KI. However, the Beaver County EOC distributed KI to municipalities in accordance with the county plan. The Beaver County RO had an ample supply of KI on hand and provided instructions on the ingestion of KI. The relevant functions and activities were implemented in a manner consistent with the Beaver County Emergency Plan.

Issue: None.

(2) Emergency Worker Decontamination Station

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The Beaver County emergency worker decontamination station was co-located at the South Beaver Township EOC on Pennsylvania Route 251. The demonstration of this objective was accomplished out-of-sequence in a demonstration window between 1900 to 2100 hours. The staff arrived at the decontamination center prior to 1900 hours. The participants were composed of three radiological monitors, three

registration officials, and a supervisor. No staff members were dispatched to any other locations. The relevant functions and activities were implemented in a manner consistent with the organization's emergency plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Since the Beaver County emergency worker decontamination station was co-located with the South Beaver Township EOC, the emergency worker decontamination team had access to all communication channels available to the EOC. Due to the out-of-sequence play of this objective, few communication links with other organizations were required. The relevant functions and activities were implemented in a manner consistent with the organization's emergency plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The Beaver County emergency worker decontamination station staff and monitors had simulated dosimetry. Each monitor was issued simulated dosimetry of one 0-20 R and one 0-200 R dosimeter and one TLD with a dosimeter/KI record form. A charger was available at the station. All dosimetry was zeroed and readings recorded as the dosimetry was distributed. Instructions were given to all workers on how to read their dosimeters and to record the reading every 30 minutes. Individual radiological monitors were questioned as to their knowledge and understanding of dosimetry and emergency worker exposure control. All monitors exhibited a thorough knowledge of the radiological program. All relevant functions and activities were implemented in a manner consistent with the organization's emergency.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment and vehicles, and for waste disposal was adequately demonstrated. The facility used as a decontamination center was a fire station; the front half operated as an EOC and the back half was the emergency worker decontamination center. The two operations were not separated by any wall or structure. Consequently, the movement of individuals from the EOC to the decontamination station or vice versa was uncontrolled, thus increasing the potential for the spread of contamination. Containers for contaminated clothes and equipment were strategically located near the monitoring areas. Monitors were aware of the trigger level (0.1 mR/hr) for contamination above background. Monitoring was accomplished

using the CD V-700 meter. Monitors were conscious of their speed in monitoring and accomplished the procedure within an appropriate time frame. Records were kept of each emergency worker monitored and each vehicle. The decontamination of contaminated emergency workers was done according to the plan. Registrars were aware of the need to send contaminated individuals on for further assistance. All relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: The EOC and the emergency worker decontamination facility were co-located. However, the two operations were not separated by any structure; thus, there was considerable potential for the spread of contamination by individuals routinely moving between the two operations. (BVX92-7R)

(c) Risk Municipalities

(1) Aliquippa Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Aliquippa EOC staff used the ECLs that were received from the Beaver County EOC to initiate emergency response activities. All the ECL changes were received in a timely manner and promptly posted in a prominent location within the EOC. Shortly after the verification of each ECL change, the change was announced to the staff by the EMC, thus ensuring that each staff member was aware of the current ECL.

Issue: None.

Objective 2: The ability to fully alert, mobilize, and activate personnel for both facility and field-based emergency functions was adequately demonstrated. Using telephones and radios, the EMC and his deputy contacted the EOC staff in a timely manner. A current telephone call down list of staff members was available for use. The staff responded to the emergency situation quickly and the EOC was declared operational by 1550 hours. During the course of the exercise, no staff members were required to be dispatched to any other location.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was effectively in charge of the Aliquippa EOC and encouraged all staff members to utilize their plan to effectively execute their responsibilities. He ensured that his staff was informed through round-robin briefings during the emergency. Selected staff members posted critical information as it was received for the benefit of all concerned. Incoming and outgoing messages were logged and recorded on a multi-copy, pressure sensitive paper which served as the internal message system. Protective action decisions and their implementation were effectively coordinated with the appropriate staff specialist.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Aliquippa EOC personnel used commercial telephones, the Beaver County Fire and Police Radio Network, the EOC radio, RACES 2-meter radio, and Radio Emergency Association Citizens' Team (REACT). The EOC personnel had communication links with the Beaver County EOC, city police, and city fire and rescue. The primary communication system, the telephone system, experienced

no delays. The back-up systems, such as REACT and the recently installed EOC emergency radio were also demonstrated.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The Aliquippa EOC was a dual use room within the city fire station. This facility met the requirements in the context of this exercise as to space, furnishings, lighting, restrooms, ventilation, back-up power, cooking, showers, and cots. The facility was equipped with a 5 KW generator capable of serving the needs of the building; however, since this was an operating city fire station, the city chose not to risk disruption to the fire service by running the generator. Typewriter, computer, and copier facilities were available at the city building. Maps showing the plume EPZ, evacuation routes, population, relocation centers, and radiological monitoring points were posted as were status boards showing ECLs, PAs, and weather data. Prominently displayed status boards were continuously updated as current emergency information became available.

Issue: The facility was equipped with a 5 KW generator capable of serving the needs of the building; however, since this was an operating city fire station, the city officials chose not to risk disruption to the fire service by running the generator.
(BVX92-5I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker entering the plume zone was issued (simulated) a TLD badge, two dosimeters with ranges of 0-20 R and 200 R, and an exposure record chart. The RO provided each emergency worker instructions for the zeroing and use of the instruments. A charger was provided for the workers to zero their dosimeters. The authorized exposure was 5 R and emergency workers were briefed and knew the procedure for requesting authorization to incur higher exposures for lifesaving operations. Additionally, the RO briefed the emergency workers on the need to report to an emergency worker decontamination center should they receive an exposure higher than authorized.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Aliquippa Borough EOC was notified of simulated siren activation and EBS broadcast by Beaver County. Route alert teams demonstrated their route alerting procedures up to the point of actually being dispatched.

The EMC and RO briefed the emergency workers on their duties and responsibilities. Maps were provided that divided the city into sectors and showed the actual routes. Current lists of the hearing-impaired and special needs persons were available for each team. A copy of the route alert checklist and message for the hearing impaired was provided. In the event of an emergency, the Aliquippa fire and police personnel are assigned the mission of performing the actual route alerting.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The Aliquippa EOC provided rumor control through two telephones located at the Beaver County EOC. In the event a call did come directly to the borough EOC, the Communications Officer would respond with current and accurate information provided by the county emergency staff and approved by the Aliquippa EMC. The Communications Officer monitored radio broadcasts as appropriate. The rumor control numbers were disseminated through route alerting.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision was made, if necessitated by radiiodine releases, was adequately demonstrated. The use of KI was not authorized for Aliquippa emergency workers based on the projected dose to the thyroid. The RO had sufficient quantities of KI available for emergency workers. Additionally, the officer briefed the EOC staff on the proper use of KI and maintained the required KI ingestion record for each individual.

Issue: None.

Objective 18: The ability and resources necessary to impleme + appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The Medical Service Officer and the Transportation Officer were responsible for the implementation and coordination necessary to provide transportation for transit-dependent, special-needs, and handicapped persons within the city. The staff proceeded to contact these individuals and coordinate this effort at the Alert stage and continued until the exercise terminated. The special groups were notified primarily by telephone and by route alerting teams. The Transportation and the Medical Officers worked together to determine the exact transportation requirements and made the necessary telephone calls to the transportation

providers to confirm the availability of transportation resources.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas was adequately demonstrated. The manning of TCPs was simulated by the Police Chief and members of the city police present in the EOC. The borough plan designated three TCPs as the borough's responsibility and planned for a sufficient number of police officers to staff these locations. The PSP were responsible for manning the other two TCPs required by the plan. The TCPs were manned during the SAE. The Police Chief and police officers demonstrated their knowledge of the PAs, evacuation routes, location of relocation centers, and access control. The police officers had contact with both the borough EOC and county EOC via radio to receive instructions. The demonstration did not involve any simulated impediments or response to impediments.

Issue: None.

(2) Beaver Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Beaver Borough EOC staff was immediately informed of all changing emergency conditions by the Beaver County EOC staff. The use of the ECLs was evidenced by the EMC's staff briefings at each ECL upgrade. The current emergency condition was posted quickly and prominently for all key staff members to read and initiate their respective implementation procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. All key EOC staff and fire/police volunteer emergency teams were notified by the Beaver Borough EMC via a current and accurate telephone call-down list. Within minutes of the Alert notification by the Beaver County EOC, the Beaver Borough EOC was fully staffed and operational. In addition to the required staffing outlined in the Borough Plan, five members of the Law Enforcement Explorers alternated with adult staff members in performing emergency duties. The explorers' participation was part of their ongoing training in the community involvement program which was part of an approved training program between the Beaver Borough Police and Troop 474 Explorer Post. Two additional explorers served on the 'TCPs' staff and were accompanied by senior police officers. Route alerting for the hearing impaired was demonstrated by the Fire Department.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC gave situation briefings at each ECL upgrade, protective action decision, and at each 30 minute interval. Staff members were aware of all activities in progress and shared in key decision making activities. The staff had copies of all relevant individual assignment procedures and the overall approved borough plan. Logs of all incoming and outgoing radio messages were kept and an internal message control system was used to ensure proper distribution and tracking of messages. All instructions on protective action decisions were received, confirmed, and implemented immediately. All emergency information and directions by the EMC were coordinated effectively with the appropriate response organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communication systems used during the exercise included commercial telephone lines, portable cellular telephones (back-up), hand held radios, Police/Fire Band Radio System, Beaver County Radio System, and PEMARS. REACT was also available and demonstrated during exercise play. All systems functioned properly and were able to handle the communications traffic without delay. Back-up systems were available but were not required to be used. The Police and Fire Department Communication Center (911) also occupied the EOC building and served as another independent communication system.

Issue: None.

Objective 5: The facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, restrooms, ventilation, communication systems, and back-up generator power were available to support emergency operations for extended periods of time. The gas powered back-up generator was demonstrated. A maintenance log was kept and showed that the generator was tested every Monday morning for 15 minutes. Kitchen facilities were available and cots could be placed in the open bays of the EOC. Maps which showed the plume EPZ with planning areas, evacuation routes, TCPs, relocation centers, and radiological monitoring points identified were hung in strategic locations for the staff to refer to, if necessary. Status boards were used and constantly updated to reflect changes in ECLs and protective action decisions, weather data, relocation center opening times, etc. The Beaver Borough EOC had charts on the wall depicting message handling procedures and radiological information on dosimetry and the use of KI. Additionally, KI authorization procedures and exposure limits were posted.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker who entered the plume EPZ had a non-self-reading permanent dosimeter and two direct-reading dosimeters (0-20 R and 0-200 R). The Borough RO had access to chargers and ensured that all dosimetry was charged prior to its distribution to the TCP staff and the route alerting team members. All dosimeters were zeroed and initial readings were logged. Each emergency worker had an exposure record and instructions on its use. EOC personnel knew how often to read the dosimeters (every 15-30 minutes). All emergency staff members were knowledgeable about the exposure limits and when and where to report, if they exceeded the limits.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. On several occasions, the Beaver County EOC staff contacted the Beaver Borough EOC staff by radio and notified them of the simulated siren and EBS activation times. The Beaver Borough staff had a route alerting team for the hearing impaired and two TCP teams on standby. All emergency workers on the teams were adequately trained and briefed and were knowledgeable of their mission and responsibilities. When the teams were deployed by the EMC, the route alerting team actually proceeded to complete its mission by running the route in Zone 2. Copies of all instructional messages were available and the protective action decisions were appropriate given the exercise play.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The EMC and the Communications Officer had direct access to accurate and timely information, and were aware that, per the borough plan, all information requests were to be promptly referred to the county EOC for resolution. No calls concerning public information or rumor confirmation were handled by the staff during the exercise. However, sufficient incoming and outgoing telephone lines were available for use in rumor control.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. KI was not authorized for this exercise. If the decision authorizing the ingestion of KI by emergency workers had been made, then the decision would have been based on projected dosage to the adult thyroid. The affected emergency workers would have been notified in a timely manner, since all emergency workers had communications with the EOC. The personnel responsible for the administration and use of KI in the borough were knowledgeable about the SOPs and briefed the emergency workers accordingly. Simulated KI was included in the dosimetry kits provided to all the emergency workers. If the order had been received, the administration of KI would have been simulated and recorded by date, time, and dose for each emergency worker.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The staff members at the EOC were responsible for ensuring that the protective action decisions received from the Beaver County EOC were implemented. Lists of special needs groups, including hearing, visual, or mobility impaired and institutionalized persons, and were up-to-date, and contained addresses and telephone numbers. These individuals would have been contacted by either telephone calls or route alerting teams. One route alerting team for the hearing impaired was actually demonstrated during the exercise. Adequate transportation resources for the transportation dependent population were identified and secured, with additional buses and ambulances placed on standby. The PAR received required the borough to simulate an evacuation.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Traffic controllers were deployed by the EMC to establish two TCPs at Beaver Street and Third Street along Main Street. The teams consisted of one Beaver Borough Police Officer and two Law Enforcement Troop Explorers. Predetermined TCPs were set up in accordance with the plan. The TCP staff had a thorough knowledge of its mission. Additionally, the TCP team had the capability to receive and send communications via Police/Fire Radios.

Issue: None.

(3) Bridgewater Borough/Fallston Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. Staff members were notified by briefings and status board updates. The EOC Coordinator briefed the staff as ECL escalations occurred and repeated the ECLs when other informational briefings were held. The Borough EOC Coordinator received notification of the ECLs via the primary communication system from the Beaver County EOC. ECLs were prominently displayed on a status board, and staff members were fully aware of the current ECL at all times.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC contacted the staff by telephone and a pager system. Within minutes after the contacts were completed, the staff began reporting to the EOC and the EOC was declared operational shortly thereafter. The EMC was notified of all ECL changes and protective action decisions by the Beaver County EOC staff through the primary communication system.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The individual effectively in charge of the emergency response was the EMC. He held periodic briefings to update the staff on the situation. These briefings provided the staff members with an opportunity to be involved in the decision making process. Copies of the plan were available to the staff for reference and the staff demonstrated knowledge of the plan and procedures. Logs were kept for all incoming and outgoing messages, and a pre-printed three-part form was utilized for internal message control and proper distribution to the staff in a timely manner. File copies of all messages were kept. Protective action decisions and the implementation of these decisions were coordinated effectively with all appropriate organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communication systems, identified during the exercise, included a commercial telephone with one line, the primary communications between the Beaver County EOC and the Borough; an FM radio system; and two RACES operators with two radio systems. One RACES operation functioned as back-up communications with the Beaver County EOC. The primary communication system was able to

handle the communications flow without delay. Back-up communications systems were demonstrated and functioned properly.

Issue: None.

Objective 5: The adequacy of the facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated. Space, furnishings, lighting, restrooms, ventilation, and back-up power for the Borough EOC were adequate to support emergency operations. The generator was in operation for three hours during the exercise. EOC security was operational throughout the exercise. Kitchen supplies were adequate to support the operation. Borough sector maps that were displayed on the walls were also given to the staff as part of a reference package. These maps were also in plan manuals. Maps included the plume EPZ with planning areas identified, evacuation routes, TCPs, relocation centers, and radiological monitoring points. The status boards were utilized and positioned so that the staff could view information at all times. Information on the status boards included ECLs, protective action decisions, weather data, and EOC activation times. The Borough EOC also had charts on the wall depicting radiological information, instructions on dosimetry, and exposure limits.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The RO gave an in-depth briefing to all emergency workers at the time of issuance of dosimetry and simulated KI. Each emergency worker had the required TLD and two different range dosimeters (0-20 R and 0-200 R). The briefing included the use of dosimeters and KI dosage control and reporting. An instruction chart was used by the RO to emphasize the information furnished. The briefing also stressed that KI was to be taken only when so directed from the EOC; dosimeters should be read once every 30 minutes; and that the authorized exposure for the mission was 5 R. The availability of chargers for direct reading dosimeters was noted, and all dosimeters were zeroed prior to the equipment's issuance.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Route alerting in the borough was the responsibility of the Fire Department. The route alerting team received a radiological briefing, a current listing of individuals to contact, a route map, and the instructional message. The team demonstrated the ability to initially alert the public as a back-up to the primary siren system and EBS message; provide an accurate instructional message via the public

address system on fire vehicles; and provide written messages for the hearing impaired.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The Bridgewater and Fallston Boroughs EOC referred rumors directly to the county EOC for further action. Activities and functions were carried out in a manner that was consistent with the Bridgewater and Fallston Boroughs Emergency Operations Plan and Procedures. Rumor control activities were assigned to one staff member who had sufficient incoming and outgoing telephone lines to effectively perform this function.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The decision to take or not to take KI was the responsibility of Secretary of Health of the Commonwealth of Pennsylvania. Although emergency workers were not required to ingest KI, the RO briefed all the emergency workers on the procedures for ingesting KI and demonstrated the system used to record the date, time, and dose for each individual. The staff was well supplied with KI and well versed in its responsibilities.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The staff at the Bridgewater and Fallston Boroughs EOC were responsible for ensuring that the protective action decisions received by the Beaver County EOC staff were implemented. There were up-to-date lists of special needs groups, including hearing impaired and institutionalized persons, on hand at the EOC. Methods used by the Borough EOC to contact these groups included telephone calls (both demonstrated and simulated) to a retirement house and route alerting teams, for the hearing impaired, which were on standby at the EOC. Transportation resources were secured and provided for retirement house residents who did not have their own transportation. The PAs implemented included evacuation (simulated). The Bridgewater and Fallston Boroughs EOC

demonstrated appropriate and timely actions, measures, and support for special groups.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. There were five TCPs/ACPs established. The traffic controllers had accurate knowledge of their role in the emergency response, with respect to PA implementation, and the location of mass care centers and emergency worker decontamination centers. The controllers had the capability to receive instructions from the Bridgewater and Fallston Boroughs EOC staff via police/fire radios. The traffic controllers demonstrated the capability to respond appropriately and in a timely manner to protective action decisions.

Issue: None.

(4) Brighton Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Brighton Township EOC was notified by the Beaver County EOC of the three ECLs: Alert, SAE, and GE. The EOC staff acted in compliance with the current ECL status; however, there was no status board and the EOC action status board sheets were not utilized. There was no communications verification back to the county on the ECLs.

Issue: During the course of the exercise, the current ECL was not prominently displayed nor were the action status board sheets utilized as required in the Brighton Township Plan. (BVX92-8R)

Objective 2: The ability to fully alert, mobilize, and activate personnel for both facility and field-based emergency functions was adequately demonstrated. The EMC and Communications Officer were notified by the Beaver County EOC of the Alert by the County Police/Fire Radio. They were the first individuals to arrive at the EOC and the Communications Officer began notifying the remainder of the staff by telephone from a current call list. The EOC was operational within the prescribed time frame. Organizations represented were Police, Communications Services, Radiological Protection, Fire and Rescue, Transportation, and Public Works. One of the Township Supervisors acted as the PIO. Police officers were dispatched to the Beaver County EOC to pick up radiological equipment.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was in charge of all emergency responses. He held periodic briefings with his staff members to update them on the current status and had them appropriately involved in decision-making. Each staff member had his/her own copy of the plan available for reference. Logs were kept for all messages, and information was provided to the staff in a prompt manner. Protective action decisions and their implementation were coordinated with appropriate organizations. The only exception was when the Brighton Township EOC staff received the message concerning siren and EBS system activation for the evacuation of the municipality. The staff became involved in route alerting activities and did not remember to confirm the message content with the Beaver County EOC staff.

Issue: When the Brighton Township EOC staff received the message concerning siren and EBS system activation for the evacuation of the municipality, the staff became involved in route alerting

activities and did not remember to confirm the message content with the Beaver County EOC staff (Brighton Township EOP, SOP-B, page 10). (BVX92-9R)

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The initial communications link was with the Beaver County EOC through the County Police/Fire radio network, with several commercial telephone lines serving as back-up. The primary communications link, which was quickly established, was the RACES/REACT system. All communications systems were able to handle communication traffic without any delays. The back-up systems were demonstrated and functioned properly. There were no breakdowns in any of the communications systems.

Issue: None.

Objective 5: The adequacy of the facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated. The EOC was located in the Township Building and there were sufficient office supplies available for use. Space, furnishings, lighting, restrooms, ventilation, etc. were adequate. A back-up generator was available; however, officials chose not to operate the generator. Access to the facility was controlled by the Township Police and a security log was maintained. All of the appropriate maps were posted and used as required by the EMC.

Issue: The facility was equipped with a generator, capable of serving the needs of the EOC; however, officials chose not to operate the generator. (BVX92-6I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The RO was well-informed about his duties and performed in an outstanding and enthusiastic manner. Each emergency worker was issued a TLD, a CD V-730 (0-20 R) dosimeter, and a CD V-742 (0-200 R) dosimeter. Chargers and records were available, and the dosimeters were zeroed. Appropriate instructions were given to the emergency workers on the use of the dosimeter, how often to read the dosimeter, and initial readings were recorded. Also, instructions were issued on the mission exposure limits and the location and procedures for reporting to the decontamination station.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Beaver County EOC contacted the Brighton Township EOC to notify it of siren

activation (simulated). Four route alerting teams were dispatched to notify special needs groups that an evacuation had been directed. All the teams were fully knowledgeable of their responsibilities. Copies of all instructional messages were kept on file, and the content of the protective action decisions was appropriate.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. A Brighton Township Supervisor acted as the EOC PIO. He was given the rumor control number at Beaver County and told by the EMC to refer all inquires to the county. There were several telephone lines available for simultaneous incoming and outgoing calls. However, the EOC staff did not remember to monitor the local EBS station to ensure the staff's access to current and accurate information.

Issue: Throughout the exercise, the EOC staff did not remember to monitor the local EBS station to ensure the staff's access to current and accurate information and to ensure that timely and accurate information was being disseminated. (BVX92-10R)

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The Brighton Township RO briefed the emergency workers on who could recommend the ingestion of KI, ensured there was sufficient KI available for use, and maintained the charts used to record the date, time, and dose for each individual taking KI.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The staff at the Brighton Township EOC was responsible for making sure that the protective action decisions received from Beaver County EOC were followed. There were up-to-date lists of special needs groups on hand at the EOC. The methods used by the EOC staff to contact these groups included telephone calls and route alerting teams from the Township Fire Department. The PA implemented was evacuation (simulated). The Brighton Township EOC demonstrated appropriate and timely actions, measures, and support for special groups.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Traffic controllers simulated deployment to predetermined TCPs/ACPs in accordance with Section D of the Brighton Township Emergency Operations Plan. There were three TCPs established. The township police had accurate knowledge of their role in the emergency response and were cognizant of the evacuation routes, mass care centers, and emergency worker decontamination centers. They had the capability to receive instructions from the Brighton Township EOC via Police Radio. The traffic controllers demonstrated the capability to respond appropriately and in a timely manner to protective action decisions. Relevant functions and activities were implemented in a manner that was consistent with the Brighton Township Emergency Operations Plan and Procedures.

Issue: None.

(5) Center Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Beaver County EOC was in communication with Center Township. All ECL notifications were received in a timely manner, prominently posted on status boards, and included in briefings for the benefit of the staff. Each staff member was aware of the current ECL and implemented the appropriate emergency response actions.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC was activated via a pager system by the Beaver County staff. The Center Township EOC staff members were notified in a timely manner by pager and/or telephone using an updated call-down list. There was excellent participation by the community in that 18 staff members were present at the EOC when the EOC was declared operational. The route alerting team was alerted and available for dispatch, and the team simulated departure.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Center Township Executive Commissioner was notified and participated in the exercise. The EMC controlled emergency activities. Briefings were held in accordance with the township plan and the staff was updated on current situations with ample opportunity to participate in the decision making process. Copies of the plan were available and used by the staff to implement emergency response actions. Logs were maintained for all incoming and outgoing messages. This system maximized the internal message control and expedited message distribution to the staff. Protective action decisions were coordinated and the staff interacted with all emergency responders effectively.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Center Township EOC staff was in communication, via commercial telephones, with its counterparts at the Beaver County EOC, the County Police and Fire Departments, and the Commonwealth of Pennsylvania Department of Transportation (DOT) by commercial telephones. The RACES operator was immediately dispatched to the EOC at the Alert classification and RACES served as a back-up communications system. The other back-up system, PEMARS, was

demonstrated and functioned properly. All communications systems operated without delays and no equipment malfunctions occurred.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The EOC complex had adequate facility components and equipment available to support sustained emergency operations. Access to the EOC was monitored and controlled by the Township Police Department. All necessary maps were posted and used throughout the exercise. Evacuation routes, the location of the emergency worker decontamination center, and the wind direction were posted. Weather information was verified by contacting the Weather Bureau. Rumor control numbers were posted within the EOC, as well as in entryways and on the outside windows. All status boards and displays were updated in a timely manner by a responsible staff member. The emergency generator was available for demonstration and an activity log indicated it was tested each week for one hour. However, the generator was not tested during the exercise.

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (BVX92-7I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The RO distributed TLDs and direct-reading dosimeters (0-20 R and 0-200 R) to all emergency workers, including the route alerting team members and TCP personnel. Additionally, all teams had access to a charger for their direct-reading dosimeters. Dosimeters were zeroed and initial readings were logged on each individual's exposure record. Emergency workers knew the mission exposure limits and what to do if they received exposures higher than authorized.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Beaver County EOC announced the sounding of sirens (simulated) and the of activation of the EBS (simulated) with a message for PAs. The Township EMC then promptly dispatched the township's route alerting teams to notify the hearing impaired. In Center Township, route alerting was the responsibility of the Township Police. The Emergency Medical Services Officer provided a listing and locator map to the route alerting teams.

The teams consisted of two persons equipped with route maps and copies of the instructional message.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The EMC was responsible for rumor control and posted the Beaver County rumor control number throughout the EOC. There were several telephone lines available for incoming and outgoing telephone calls. During the course of the exercise, an individual was assigned an additional duty of monitoring the local EBS station to ensure that accurate and timely information was being announced.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The County RO received dosimetry kits and four chargers. KI was issued to emergency workers, along with dosimetry. They were briefed on its use and restrictions. Workers were advised of the one day dosage with instructions to call the EOC periodically with readings on dose exposure. KI records were issued to emergency workers. The emergency workers were aware of the procedure of taking KI when instructed by the Secretary of Health through the County EOC.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The Medical Services Officer and Transportation Officer were responsible for implementing PAs for the special population. The procedure for contacting this group was through either route alerting or telephone calls. The special needs list was up-to-date. There were no unmet needs throughout the drill regarding the special population. All requests were answered promptly and accurately by the Medical Services Group. Adequate buses, vans, and ambulances were available to evacuate the special needs groups, if necessary. The staff was aware of the appropriate relocation centers for the evacuated groups. The EOC staff demonstrated appropriate and timely actions, measures, and support for the special groups. The Medical Services Officer was in contact with the emergency workers responsible for transporting special needs

populations. Calls to providers of buses and ambulances were made regularly.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. The Police Chief deployed five TCPs/ACPs teams (simulated). Information was disseminated by hand-held radio contact with the Center Township EOC. Police officers were briefed on dosimetry and KI as appropriate and were knowledgeable on the current PA, evacuation routes, and mass care centers.

Issue: None.

(6) Chippewa Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to the ECLs was adequately demonstrated. The Beaver County EOC notified the Township EMC of ECL upgrades in a timely manner. In turn, ECLs were announced by the EMC, posted on the status board within two minutes of notification, and announced again during the status briefings. All the status boards were prominently displayed and the staff was aware of the current ECL. Appropriate emergency actions were instituted at each level. Each staff member had immediate access to the township plan.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. All essential staff members were alerted and mobilized within 20 minutes of the Alert notification by Beaver County. The EOC was declared operational shortly thereafter. The REACT Operator who was responsible for back-up communications, arrived minutes after notification to report to the EOC. A call-down list with current names and telephone numbers was used to notify the EOC staff. EOC support staff members were dispatched to obtain dosimetry kits from the county EOC and returned with the kits within 40 minutes.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was effectively in charge of the emergency response. He conducted briefings at each ECL and protective action decision upgrade and provided an atmosphere in which all staff members were encouraged to provide input. A log of all incoming and outgoing messages was maintained by the Communications Officer, as required by the plan. The compact size of the EOC made message copying generally unnecessary, but copying capability existed and was used when needed. The message-handling system consisted of the message log, copies of messages as requested, and the posting of key message information on the status board. Protective action decisions and their implementation were effectively coordinated with all appropriate organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations, organizations, and personnel was adequately demonstrated. All plan-required communications systems were present. Two isolated communication difficulties were experienced. First, the PEMARS radio antenna had not been connected prior to activation of the EOC for the exercise (the

PEMARS had just been installed earlier in the week), and second, the internal antenna of the REACT radio malfunctioned (this was a volunteer's radio). However, to the credit of the Communications Officer, both problems were identified and quickly corrected. The primary communications system was able to handle communication traffic without difficulty. Communications were established and maintained with the county EOC and municipal and county services (fire, police, transportation, etc.). Back-up communications systems were demonstrated (REACT and municipal service radio communications).

Issue: None.

Objective 5: The adequacy of facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated. Space, furnishings, lighting, restrooms, and ventilation were adequate. Administrative and service support equipment was adequate and included typewriters, a copier, telephones with three incoming and three outgoing lines, kitchen facilities and supplies, a computer, and other office equipment. Maps with appropriate planning areas were visibly displayed. Maps of the plume EPZ population planning areas are maintained by the Fire Department, which is in charge of route alerting. A status board was effectively used and positioned for viewing by all EOC staff. ECLs, PAs, weather data, and other operations information were displayed and updated in a timely manner. Initially, the back-up generator would not start due to batteries being devoid of electrolyte. However, back-up batteries were installed and the generator operated for 20 minutes.

Issue: Initially, the back-up generator would not start due to batteries being devoid of electrolyte. However, back-up batteries were installed and the generator operated for 20 minutes. The maintenance log consisted of a small sheet of paper pinned to a wall in the generator room. The paper contained a notation that the generator had last been tested on September 27, 1991. Additionally, although the back-up generator operated on natural gas, the fumes were not vented to the outside of the generator room. (BVX92-8I)

Objective 6: The ability to continuously monitor and control emergency worker exposure control was adequately demonstrated. The emergency workers were each issued a TLD, two direct-reading dosimeters (0-20 R, 0-200 R), and an exposure record form in accordance with the township plan. The RO issued the appropriate instructions concerning dosimetry equipment, KI, and reporting requirements to all emergency workers. The direct-reading dosimeters were zeroed, and the initial readings were recorded. Emergency workers read their dosimeters every 30 minutes and recorded their exposure. The authorized exposure was known and

individuals knew whom to contact for authorization to exceed the general public EPA PAGs.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate State and/or local official(s) was adequately demonstrated. Activation of the alert and notification system was a county EOC function. The township was responsible for providing four route alerting teams, and this activity was simulated. The teams were briefed on the message content and provided with route maps, a copy of the written message, and a public address system. Team members were aware of the location of the mass care centers and decontamination centers.

Issue: None.

Objective 15: The ability to operate rumor control in a coordinated and timely fashion was adequately demonstrated. The township EOC staff referred all rumor control calls received to the rumor control number at the Beaver County EOC. One township staff person was assigned to receive rumor calls and give the caller the correct county number for rumor control operations.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The decision was made not to issue KI based upon the concentration of radioiodine within the radioactive plume. The RO explained the use of KI to the emergency workers and the need to record the time, date, and dose whenever the EOC was advised of the decision to ingest KI. The KI was acquired along with the dosimetry kits from the Beaver County EOC.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population were adequately demonstrated. The EOC had a current list of special needs individuals living within the community that included the names and addresses and special needs of each individual. The EOC simulated conducting route alerting for these special needs individuals at the SAE. At receipt of the GE notification, the EOC provided transport for non-ambulatory individuals and evacuated them to the appropriate mass care center. Since additional resources were needed for the

transport of these persons, a request was made to the county EOC for three buses and two ambulances.

Issue: None.

Objective 20: The ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Although traffic control was not a responsibility in this township, the township police were familiar with PA being implemented, the location of the reception and mass care centers, and the evacuation routes. According to the township plan, traffic control was the responsibility of the PSP.

Issue: None.

(7) Georgetown Borough/Green Township/
Hookstown Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The demonstration was in accordance with the Georgetown Borough/Green Township/Hookstown Borough plan. The EMC received notification of the ECLs from the Beaver County EOC by the primary communication system, the high band county radio frequency. At each change in ECL, the EMC held briefings with the EOC staff. The staff was aware of the current ECL and the ECLs were prominently displayed by placards above the events status board. All relevant functions and activities associated with this objective were fully demonstrated.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The required staff members were alerted in a timely manner from a current list and were fully mobilized within 15 minutes. The EOC was declared activated within 40 minutes. Issue BVX90-16R concerning the shift change of the RO was resolved by the presence of two ROs and the successful demonstration of radiological PAs. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was in control of the operations and coordinated emergency activities at the EOC. The staff members were given periodic briefings on the situation and their input was solicited to assist in decision making. Copies of the county and local emergency plans were available for reference, and each staff member had a position checklist of actions to be taken. Logs were kept for all incoming and outgoing messages. The messages were completed on a four-part form which allowed distribution to appropriate staff members and provided file copies. Internal message traffic was accomplished with the same four-part form. PAs were effectively coordinated with all appropriate organizations. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations, organizations was adequately demonstrated. The communication systems consisted of three commercial telephone lines with conference capability; RACES dual band UHF/VHF radio with two operators; FM fire band; and Beaver County ultra high frequency radio with a six-channel tie-in. The primary communications link between the EOC and the Beaver County EOC was the ultra high frequency radio. The EOC had communication links with the Beaver County EOC, fire department vehicles, emergency medical services vehicles, local police units, the county fire department, and the PSP. There was no identified delay in the communication systems. All systems were demonstrated, functioned properly, and experienced no break-downs. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, restrooms, ventilation, and back-up power for this EOC were adequate to sustain and support emergency operations. A 15 KW generator was demonstrated and had no problems powering the entire facility. Displays included a board listing the alternate EOC, decontamination center, reception center, host school, and transportation pick-up points; an events status board; route alerting, evacuation routes, and a siren location map; radiological exposure information; and KI information. The status boards were updated in a timely manner with each change in ECL, weather condition, and PA. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The RO briefed emergency workers prior to their dispatch and explained how and when to read their dosimeters, how to record the readings, what the exposure limits were, and whom to contact if they received an exposure higher than authorized. Also, the RO issued KI and explained what the drug was for and that it would not be taken unless the EMC received authorization from the Secretary of the Department of Health for the Commonwealth of Pennsylvania. Each emergency worker was issued proper dosimetry consisting of a non-self-reading permanent record dosimeter in the form of a simulated TLD along with 0-200 R and a 0-20 R self-reading dosimeters. The dosimeters were zeroed and the readings, unit number, recipient, and worker's social security number were properly recorded. All relevant functions and

activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. This was accomplished by an actual demonstration of route alerting and telephone calls to institutions, special needs, and handicapped persons. The route alerting teams had proper dosimetry, route maps, and a written message with the proper PA. The sirens and EBS messages were controlled by the Beaver County EOC. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. There were three telephone lines for incoming calls. One staff member, the message coordinator, was responsible for this function. When a rumor call was received, the caller was referred to the county rumor control number. A total of 10 rumor control calls were received during this exercise. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases was adequately demonstrated. The decision to take or not take KI was the responsibility of the Pennsylvania Secretary of Health and the decision was made to not take KI. However, the emergency workers at the EOC were cognizant of the procedures to ingest KI. Simulated KI was distributed to the staff.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The special needs, handicapped, and institutionalized persons lists were current. The nursing home, special needs home, and the three handicapped

persons in the area were notified at the Alert to inform them of the situation and give them time to prepare in case further actions were needed. Transportation for these groups was secured and consisted of 26 school buses, each holding 65 persons, three wheel chair vans, and six ambulances. Also, a list of volunteer local residents with vans was available to transport persons from the pre-designated pick-up points to the relocation center. These resources were adequate and their timely use was simulated when the evacuation recommendation was received. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. There were two TCPs established during this exercise. The first TCP was at the Hookstown EOC parking lot, which was one of the pre-designated pick-up points for residents, and was staffed with Hookstown Fire Police. The second TCP was at the intersection of Routes 168 and 30, and would be staffed by the PSP. The Hookstown Fire Police were on standby at the fire station and also manned access control to the Hookstown EOC. They had accurate knowledge of their role in the emergency response and understood the PAs, facilities to be evacuated, evacuation routes, and location of the relocation center. The traffic controllers were in contact with the Hookstown EOC and were updated at each change of event. Also, the EOC contacted the TCPs every 30 minutes to get an update of the officers' dosimeter readings. There were no impediments presented to the traffic or access controllers so no corrective action could be observed. All relevant functions and activities were implemented in a manner consistent with the Georgetown Borough/Green Township/Hookstown Borough Plan.

Issue: None.

(8) Hanover Township/Frankfort Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The EMC received timely notice from the Beaver County EOC on each ECL/PA change. He immediately briefed his staff on these changes in ECLs and PAs. Also, the staff was aware of the current ECL via the status board which was kept up-to-date and prominently displayed.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The Township EMC was notified of the Alert status by Beaver County via radio, the primary communication system. After the Alert notification was received, the EMC promptly made the telephone calls and activated the pager system to alert and activate the staff. All EOC staff members were notified in a timely manner and reported quickly to their emergency assignments. There were 19 staff members present throughout the entire exercise with additional Township Supervisors located next door, if needed. Staff were deployed for route alerting and returned after completion within the required time.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The individual in charge of emergency response was the EMC of the combined Hanover Township/Frankfort Borough EOC. Periodic briefings were held to update staff on the current situation and staff members were involved in the decision-making process. Copies of the plan were available to all staff members and the staff demonstrated knowledge of the plan and procedures. Logs were kept for all incoming and outgoing messages, and the three-part message forms utilized for internal message control aided the distribution of the messages to the staff in a timely manner. Copies of all messages were kept for file purposes. Protective action decisions and the implementation of PAs were effectively coordinated with appropriate organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communications systems available during the exercise included one commercial telephone line, a pager system, RACES, and a radio system which was utilized as back-up communications with Beaver County. The back-up systems were demonstrated and functioned properly. None of the communications systems failed and the

primary and back-up systems were able to handle all communication adequately.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, restrooms, ventilation, and back-up power for Hanover/Frankfort EOC were adequate to support emergency operations. The portable generator was available and was demonstrated. Kitchen supplies were adequate to support operations. Township maps were prominently displayed on the wall and in Standard Operating Procedures (SOP) manuals. Maps included the plume EPZ with planning areas identified, evacuation routes, route alerting routes, TCP/ACPs, and relocation centers. Status boards were located and utilized so that the staff had an unobstructed view at all times. Information on the status board included ECLs, PA decisions, weather data, and EOC activation times. The status board was regularly updated as information and instructions came in from Beaver County's EOC. Also, the Hanover/Frankfort EOC had information posted depicting radiological information with instructions about dosimetry, KI units and when they should be taken, and the use of logs for maintaining dosimetry record. The EOC also had charts showing other emergency handling procedures, the addresses of mass care and decontamination centers, and EBS stations. Access to the facility was controlled at all times.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker who entered the plume EPZ had a TLD and two direct-reading dosimeters with ranges from 0-20 R and 0-200 R. The RO had access to the direct-reading dosimeter chargers and ensured that the dosimetry was charged prior to distribution to the route alerting teams. Each worker had exposure records and complete instructions regarding the use of dosimeters and how and when they should be read. Dosimeters were zeroed and initial readings were logged. Emergency workers were knowledgeable of exposure limits and knew what to do if exposures were higher than authorized. The RO and staff should be commended for the knowledge and skill they exhibited during the exercise.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Involved organizations demonstrated the capability to disseminate an alert signal and initiate instructional messages to the public within 15 minutes

for the plume EPZ. The Beaver County EOC contacted the Township EOC and notified it of the siren activation times (simulated) and EBS messages disseminated (simulated). The Hanover/Frankfort EOC had four route alerting teams on standby for back-up route alerting, although there are currently no hearing impaired within the township. The route alerting teams, equipped with maps and the instructional message, were actually deployed to simulate route alerting. They completed their tasks within the recommended time requirement. Copies of all instructional messages were kept on file. The content of the protective action decisions was appropriate.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. Because there was an accidental siren sounding as the result of the operator accidentally pressing the siren sounding button, one farmer came to the EOC/Firehouse to see if anyone needed help. The farmer thought there might have been a truck accident. The EMC told the farmer what had happened and explained about the exercise. No other rumors were received at the EOC; however, the EMC was aware of proper procedures for handling rumor control in accordance with the Hanover/Frankfort Plan. Any calls that came in would have been routed to the Beaver County EOC. During the exercise, the staff monitored an AM radio tuned to the EBS station at all times.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radiiodine releases, was adequately demonstrated. The projected dose to the thyroid did not require emergency workers to take KI. However, the RO demonstrated the knowledge and skill required to assist staff members if KI had been utilized. Additionally, the RO maintained records for individuals that might be required to ingest KI.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The staff at the Hanover/Frankfort EOC was responsible for making sure that PA decisions received from Beaver County were followed. The township had an up-to-date list of transit dependent people and transportation resources were secured and provided for them.

Methods used by the township EOC to contact these people included telephone calls, siren/EBS messages, and route alerting. The PAs implemented included simulation of evacuation. The Hanover/Frankfort EOC demonstrated appropriate and timely actions, measures, and support for special groups.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Primary TCP/ACP staffing was by the PSP. The township was responsible for staffing the secondary TCP/ACPs. Secondary TCP/ACP activation was not an exercise objective; however, interviews with appropriate officials indicated that there were sufficient resources to perform this function.

Issue: None.

(9) Hopewell Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Beaver County EOC notified the township of all ECL and PA changes in a timely fashion. The current ECL was prominently displayed and EOC staff members initiated appropriate actions as each ECL change was announced. The EMC frequently reminded staff members to review their functional checklists to ensure that all required actions were being accomplished. All relevant functions and activities were implemented in accordance with the township's emergency plan and procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC was notified by the Beaver County EOC via beeper. The EMC then verified the Alert ECL by telephone. The EOC Communications Officer (Assistant Township Manager) immediately began staff recall from up-to-date rosters. The EOC was activated as members began to arrive and was operational in a timely manner.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC displayed notable leadership and directed staff activities effectively and efficiently. Through periodic briefings, the EMC ensured that the staff members were up-to-date and reminded them to review their SOP checklists to ensure that all appropriate actions were being implemented. Messages were recorded on pressure sensitive standard forms which facilitate distribution and record keeping. The EOC staff functioned extremely well as a team and showed resourcefulness in resolving unmet needs. All three commissioners were contacted at the SAE and came to the EOC, monitored proceedings, and participated in PA decision-making. The EMC and EOC staff were a well-trained team capable of responding to emergencies in Hopewell Township. Also, the continued participation of the commissioners demonstrated the dedicated support of the community and its leaders.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Capabilities included the telephone (including cellular) as the primary system, two-way radio to the Beaver County EOC, REACT links to other EOCs located in the EPZ, and radio to local police, fire/rescue, and public works. No breakdowns, delays, or problems were noted in either the primary or back-up systems operation.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The EOC was located in the municipal building and had sufficient space, furnishings, lighting, restrooms, and ventilation plus typewriters, computers/word processors, a copier, and kitchen facilities. The back-up power generator was at the Police Department next door and was adequate for emergency operations in both locations. However, the generator was not demonstrated. The number of cots was limited; however, additional cots were available from the American Red Cross (ARC). Access to the EOC was controlled by police and a sign-in/out form was used. Plume/ingestion EPZs, evacuation maps, and ECL status were displayed. Status board entries included weather data, requirements for aid/support, unmet needs, and PAs. All were updated promptly.

Issue: Although an adequate back-up generator was available, it was not demonstrated for 30-90 minutes. (BVX92-9I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Emergency workers' kits contained a TLD, two dosimeters (0-20 R and 0-200 R), simulated KI, instructions, and record forms. A demonstration briefing was given by the RO at the time that kits would have been issued. Instructions included dosimeter reading and recording procedures, reporting requirements, and authorized exposure for the mission. Staff members frequently simulated radio reminders to emergency workers to check readings and report as required.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Fire Department simulated performing route alerting. The route alerting teams were briefed on the instructional message and provided route maps and the addresses and names of individuals to notify. The EOC staff contacted the hospital and nursing homes to alert those facilities to the evacuation (simulated) and obtain their requirements, if any. Additionally, police cruisers were instructed to check the recreational areas.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. This function was accomplished by the Township Manager, acting as the PIO. Local radio broadcasts were monitored during the exercise. Several calls came in on the telephone numbers published in the public information brochure and the telephone book. As a member of EOC staff, the PIO was able to provide current information in most cases; some telephone calls were discussed by the EOC staff before response and/or referral to the county rumor control team. All relevant functions and activities were implemented in accordance with the township's emergency plan and procedures.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radiiodine releases, was adequately demonstrated. Since the decision was made to not distribute KI, all procedures were outlined and discussed in a briefing format. The RO and emergency workers were knowledgeable of requirements and restrictions on KI usage.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. Responsibilities included notifying hospital and nursing homes and arranging transportation for the handicapped, specialized needs, and transit-dependent residents. The EOC staff was able to direct resources for the timely accomplishment of all required movement. Route alerting by the Fire Department included delivering special messages to hearing impaired residents identified by Township Health Services Officer. Other notifications and confirmations of transportation needs would be by telephone. Designated public pick-up areas would be monitored by law-enforcement personnel.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. A total of 16 TCPs were identified in the township. Two TCPs, near State Route 60, would be maintained by the PSP and 14 others would be manned by the township police/crossing guards. One of the 14 was activated in sequence with the scenario. Instructional folders are routinely maintained in all police cruisers so that positions can be activated spontaneously.

Issue: None.

(10) Independence Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. Staff members were notified via briefings and board updates. The EOC EMC briefed staff as escalations occurred and repeated the ECLs when other informational briefings were held. The Township EMC received the NOUE over the County Fire Management Radio. All subsequent ECL notifications were received via PEMARS. ECLs were prominently displayed on a status board and staff members were fully aware of the ECLs at all times. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC began contacting his staff immediately by telephone and radio. The Communications Services Chief was one of the first of the staff to arrive and she began to immediately notify other staff members. Also, the Fire and Rescue Services Chief arrived quickly and helped with the notification of the staff, including the notification of standby personnel of the status of the exercise and advising them to be available. All EOC staff members were alerted in a timely manner. All positions were staffed in accordance with the Independence Township Plan. Staff members were dispatched to demonstrate route alerting, including simulating alerting for the transit-dependent, special-needs, and handicapped groups. A staff member was dispatched to simulate acquiring KI and dosimeters from the County EOC. Relevant activities and functions were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The individual effectively in charge of emergency response was the Independence Township EMC. Periodic briefings were held to update the staff on evolving situations, and staff members were involved in decision-making. Copies of the EOP were available to all staff for reference and the staff demonstrated knowledge of the plan and procedures. Logs were kept for all incoming and outgoing messages, and three-part forms were used for internal message control and proper distribution to the staff in a timely manner. File copies of all messages were kept. PA decisions and the implementation of these decisions were coordinated effectively with all appropriate organizations, principally the Independence Township Fire Department. Relevant functions and activities were

implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Communications systems identified during the exercise included a commercial telephone with two telephone lines, PEMARS, seven hand-held low-band radios, and 10 radio monitors in vehicles. PEMARS was the primary communications link with the County EOC. A RACES operator with an FM radio system was present. The RACES operator relied primarily on a hand-held radio. The primary communications system was able to handle the majority of the communication flow without delay. Also, the telephone (back-up communications system) was used several times to confirm communications. All communications systems functioned adequately. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, restrooms, and ventilation for the Township EOC were adequate to support emergency operations. Two back-up generators for the Township EOC were available and might have been adequate to support emergency operations; however, the generators were not demonstrated. A typewriter and kitchen supplies were adequate to support operations. Access to the facility was satisfactory. Township maps were prominently displayed on the walls and in the Independence Township EOP. Maps, including the plume EPZ with appropriate planning areas labeled, evacuation routes, TCPs, and pick-up points, were also located on the walls and in the plan. The location of the relocation center was provided on a bulletin board. Status boards and displays, positioned so that the staff could view information at all times, were updated in a timely manner. Information presented on the status boards included ECLs, protective action decisions, and weather data. The EOC also had charts on the walls depicting message handling procedures and radiological information concerning proper dosimetry and exposure limits. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: Although an adequate back-up generator was available, it was not demonstrated for 30-90 minutes. (BVX92-10I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each EOC staff member received a simulated TLD, two direct reading dosimeters with a range of 0-20 R and 0-200 R, and a charger for the direct-reading dosimeters. Each emergency worker had exposure records and complete instructions regarding the use, proper reading, and logging of dosimeters. Dosimeters were zeroed, and initial readings were logged. Emergency workers knew exposure limits and what to do if they received exposures higher than authorized. The RO was knowledgeable and answered questions from emergency workers effectively. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Independence Township EOC dispatched three route alerting teams. The route alerting teams were composed of fire trucks and private vehicles. Copies of all instructional messages were kept on file and the content of the protective action decisions was appropriate. Route alerting functions were conducted within specified time frames. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The Beaver County EOC was responsible for rumor control. The appropriate telephone numbers were publicized by the Beaver County EOC through press briefings, EBS messages, public information brochures, including the development and distribution of a calendar, and postings. The Independence Township EOC public information staff was available to assist with rumor control if called upon. Radios were available; however the monitoring of EBS messages was not accomplished because the radios in the EOC were not turned on. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: Throughout the exercise, the AM/FM radio which was available for the monitoring of EBS messages was not turned on. (BVX92-11R)

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and

administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. Instructions for the proper use of KI were included with the personal dosimeter logs distributed to emergency workers. KI was received from the Beaver County EOC and controlled by the Radiological Protection Services Chief. If the proper authorizing official (Secretary of the Department of Health) had recommended the use of KI, the Independence Township EOC Radiological Protection Services Chief was prepared to distribute KI appropriately. The authorizing official did not recommend use of KI. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. There are no institutionalized persons in Independence Township. Staff members at the Independence Township EOC were responsible for making sure that the PAs received from the Beaver County EOC were followed. There were up-to-date lists of special needs groups, including hearing-impaired and handicapped, on hand at the EOC. Methods used by the Independence Township EOC to contact these groups included route alerting teams and telephone calls, demonstrated and simulated. Unmet transportation needs were communicated to the Beaver County EOC, which confirmed available transportation. One bus and five ambulances were requested and made available by the county. PAs for special groups were simulated. The Independence Township EOC demonstrated appropriate and timely actions, measures, and support for the special groups. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. The responsibility for the township's two TCPs was the PSP, according to the Independence Township plan. The request for the PSP to staff the TCPs was forwarded to the PSP officer assigned to the EOC staff in Beaver County EOC during the exercise. The PSP officer forwarded the request to local PSP troop headquarters for assignment of PSP officers.

Issue: None.

(11) Industry Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Borough EOC staff utilized the ECLs throughout the drill. The Borough EOC was notified of changes in the ECLs by the Beaver County EOC communications center via PEMARS. All notifications of a change in status were verified by the EMC. EOC staff members were continually made aware of the current ECL by the EMC via staff briefings and status board updates. Relevant functions were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC was contacted, via a pager system, by the Beaver County EOC. The EMC, upon arriving at the Industry Borough EOC, telephoned the primary EOC representatives as required in the borough plan and requested that they report to the EOC. An accurate call-down list was used to activate the Borough EOC staff. There were no requests to dispatch staff members for support at any other facilities. Relevant functions and activities were implemented in a manner that was consistent with the borough's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. Briefings were held by the EMC to update the borough staff at each ECL change and staff members were involved in the decision-making process. All EOC staff members were able to reference the plan, since copies were available to all members. Message and action logs were kept by all service representatives, as appropriate, and distributed accordingly. The protective action decision and implementation of this decision were coordinated effectively with all the appropriate organizations in a manner which reflected the borough's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The borough's communications system included two commercial telephone lines, high-band police and PEMARS radio systems, and support from two REACT operators. The Borough EOC maintained contact with the Beaver County EOC communications center, all municipal police departments in Beaver County, and all local fire departments. The primary communications system, commercial telephone, was able to handle the communications flow without

delay. There were no communications breakdowns. REACT operators were used as back-up communications systems and experienced no delays or breakdowns. Relevant functions and activities were implemented in a manner that was consistent with the borough's plan. This resolves prior issue BVX90-19R, concerning communications at the Industry Borough EOC.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, restrooms, ventilation, and back-up power were all sufficient to support emergency operations. Access to the facility was controlled by a security officer at the main door to the EOC with a sign-in and sign-out sheet. Maps depicting the plume EPZ with planning areas, evacuation routes, relocation centers, TCPs, and pick-up points were prominently displayed on the walls of the EOC. Status boards, including an event log, were used and positioned so that the staff could reference current ECLs and information at all times. ECL changes, protective action decisions, and weather data were updated in a timely manner. The relevant functions and activities addressed were implemented in a manner that was consistent with the borough's plan and procedures. Although a back-up generator was available to power the EOC, the borough chose not to operate it.

Issue: Although an adequate back-up generator was available, it was not demonstrated for 30-90 minutes because the generator was not integrated into the EOC's electrical system. (BVX92-11I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker who entered the plume EPZ was issued a TLD and two direct-reading dosimeters with different ranges (0-20 R and 0-200 R). Each team had access to a charger, and each emergency worker was issued an exposure chart and instructions on the use of dosimeters and how often to read the dosimeters. The RO ordered dosimeters to be read at least once every 30 minutes. Only 5 R exposure was authorized. The RO zeroed the dosimeters and recorded initial readings before issuing the dosimetry kits. The emergency workers knew to contact the county RO for authorization to incur excess exposure. All relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Industry Borough was

responsible for the primary route alerting of special needs and transit-dependent individuals within the borough. Industry Borough Police and the Industry Volunteer Fire Department were responsible for carrying out the route alerting. The teams were notified to initiate route alerting via radio contact from the fire service representative at the Borough EOC to the Industry Volunteer Fire Department. Fire Department vehicles were used to complete this task in a timely manner. The route alerting teams had route maps and a written message to read over the public address system, the contents of which were accurate based on the recommended PAs. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. A rumor control system was activated and the EMC served as the contact for rumor control at the Industry Borough EOC. Two commercial telephone lines were available for incoming and outgoing calls. A radio station was monitored for public information. Since the EMC was updated on the activities of the various services represented at the EOC, the EMC had access to accurate and timely information. The EMC knew to direct concerned individuals to the Beaver County EOC. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The decision was made not to recommend the use of KI. The Borough EOC's RO had an ample supply of KI on hand and provided administrative instructions on possible ingestion. The relevant functions and activities were implemented in a manner that was consistent with Industry Borough's plan and procedures.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EP2 population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The EOC staff worked with transit-dependent, special needs, and handicapped individuals in implementing PAs. Up-to-date lists of these individuals were available from the Emergency Medical Services Representatives.

Telephone calls and route alerting were the methods used to contact these groups. One school bus and two ambulances were secured for assisting in the implementation of PAs for these groups. The groups were transported to the appropriate relocation center as named in the plan. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Three TCPs were established and manned by the Industry Borough Police staff. The TCIs were manned and staffed in a timely manner and personnel were briefed at the EOC concerning PAs, planning areas, evacuation routes, the location of relocation centers, and ACPs. The traffic controllers all carried hand-held radios and therefore could receive instructions from the Borough EOC via radio. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

(12) Midland Borough

Objective 1: The ability to monitor, understand, and use the ECLs through implementation of emergency functions and activities was adequately demonstrated. The staff was notified of ECLs by the Beaver County EOC via briefings and ECL status-based updates. The EMC briefed the staff as ECL and PA changes occurred. The Borough EOC received notification of ECLs via the PEMARS two-way FM Radio. ECLs were always prominently displayed on a status board and all members of the EOC were fully aware of the current ECL at all times.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Telephone calls were made to the staff and completed in a timely manner. The EMC made the calls via commercial telephone and two-way radio. All EOC staff members were alerted in a timely manner. A total of 11 members of the EOC staff were present at the EOC. No staff members were dispatched to other locations, but a route alerting team dispatch was simulated to deliver a PA message to the hearing impaired.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The individual in charge of emergency response, the EMC, conducted periodic briefings to update the staff on the current situation, ECL, and PA and involved the staff in the decision-making process. Copies of the plan were available to the staff for reference and the staff demonstrated knowledge of the plan and procedures. Logs were kept for all incoming and outgoing messages. Special message forms (three-carbon) were used for internal message control and proper distribution. File copies of all messages were kept. Protective action decisions were coordinated with all appropriate staff and organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Communication systems used and exercised were the commercial telephone, Police and Fire FM Band (four channels) radios, and a computer interface system. The primary communications systems (telephone and radio) were able to handle the flow of communications without delay. Back-up systems, including the Police and Fire FM Band radios, were demonstrated. The borough was equipped with a communications interface system consisting of a radio link (PEMARS) to the Beaver County EOC. This system was a two-way radio system. RACES was activated and personnel

reported to the EOC. No communication systems experienced breakdowns.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Furnishings, lighting, restrooms, ventilation, and back-up power were adequate to support emergency functions. Actual demonstration of the generator was not witnessed. Adequate kitchen supplies and cots were available, if needed. Borough sector maps were displayed on the walls and made available, through copies, to each staff member. Maps, including plume EPZ evacuation routes, TCPs, relocation centers, and radiological monitoring points, were also located in manuals maintained at the EOC. Status boards were utilized and positioned so the entire staff could view information at all times. Information on the status boards included ECLs, PAs, weather data, relocation centers data, and EOC activation. The board was updated regularly as information came in over the Borough's Police Radio. The borough displayed flow charts explaining the EOC's message flow procedures.

Issue: The facility was equipped with a back-up generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (BVX92-12I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker entering the plume EPZ had a non-self-reading, permanent dosimeter and two direct reading dosimeters with a range of 0-20 R and 0-200 R. The RO had access to the chargers and ensured that the dosimeters were charged prior to distribution to the traffic/access and route alerting teams. Each emergency worker had exposure records and instructions regarding procedures for dosimeter use and readings. Dosimeters were zeroed and initial readings were logged. Emergency workers were knowledgeable of their exposure limits and aware of the procedures and steps to take when they received a higher reading than authorized.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Involved organizations demonstrated the capability to disseminate an alert signal and instructional message to the public. The Midland Borough EOC confirmed the siren activation with the Beaver County EOC via the PEMARS radio system. The borough had route alerting teams which were dispatched at the request of the Beaver County EOC. The

teams were fully knowledgeable of their responsibilities and simulated departure for their routes. The Borough EOC staff properly briefed and outfitted a route alerting team with route maps and a written message and conducted a simulated run. The team was dispatched after notification from the Beaver County EOC.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The Midland Borough rumor control system was activated. The Midland Borough EOC Coordinator was responsible for this function. There was one incoming and one outgoing commercial telephones line used for this function. The number was publicized in press briefings (simulated), through an EBS message (simulated), and in public information material distributed throughout the borough. The rumor control staff was prompt in referring the telephone inquires to the Beaver County EOC.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The Secretary of the Department of Health was responsible for the decision not to use KI. The borough had an ample supply of KI on hand and provided instructions on the use of KI. The RO maintained a record on each emergency worker detailing the date, time, and dose that each worker might take, if authorized.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The staff at the EOC was responsible for making sure that protective action decisions received from the Beaver County EOC were followed. There were current lists of special needs groups, including hearing impaired and individuals in institutions, at the EOC. Methods for contacting these groups included telephone calls, and route alerting teams for the hearing impaired (simulated). Transportation resources were secured and provided for individuals who did not have their own transportation

(simulated). The PAs implemented included simulated evacuation. The borough demonstrated timely actions and support for special groups.

Is None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Traffic controllers simulated deployment to predetermined TCPs/ACPs in accordance with their EOP. Traffic controllers were knowledgeable of their role in emergency response. They received instructions and information via the Midland Borough Police and Fire Radio Network. Traffic controllers demonstrated the capability to respond appropriately and in a timely manner to protective action decisions.

Issue: None.

(13) Monaca Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. Staff members were notified via timely briefings and accurate status board updates. The Monaca Borough EOC received notification of ECLs via PEMARS from the Beaver County EOC. ECLs were prominently displayed on a status board and on a table. Staff members were fully aware of ECLs at all times with relevant activities being implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Telephone calls to the Monaca Borough EOC staff and elected officials were made and completed within minutes of the Alert. Staff activation was completed by the EMC via telephone. The Monaca Borough EOC staff arrived at the EOC in an expeditious manner. Route alerting was conducted at the appropriate times and TCP staff simulated their dispatch as required by the plan. Relevant function and activities were implemented that were consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC had emergency response responsibilities and provided outstanding leadership. Timely briefings were held to update the staff on situations and appropriate staff members were involved in the decision-making process. Copies of the plan were available and staff members displayed and demonstrated a knowledge of procedures. Message logs were kept for inbound, outbound, and internal communications. Four-part forms were utilized for enhanced message flow and control. Protective action decisions and the implementation of these decisions were coordinated effectively with all appropriate Monaca organizations and the Beaver County EOC.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Communications systems identified during the exercise included: commercial telephones with two lines, RACES, and PEMARS (the

primary communications between the Beaver County EOC and Monaca Borough EOC). Back-up systems were demonstrated. None of the communication systems failed. All relevant functions and activities were implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The appropriate primary infrastructure was in place to support emergency operations. The EOC had adequate space, furnishings, lighting, restrooms, ventilation, and back-up power. However, operation of the back-up generator was not demonstrated. Maps, including evacuation routes and TCPs, were prominently displayed. Status boards were utilized and positioned so that the staff could view information at all times. Status board information included ECLs and PAs and was updated frequently. The Monaca Borough EOC had appropriate charts on walls depicting radiological information, ECL actions, and radio procedures.

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (BVX92-13I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Dosimetry was picked up at the Beaver County EOC (simulated). A dosimetry kit was available for demonstration purposes. This kit included a TLD, a charger, 0-200 R and 0-20 R dosimeters, and exposure record cards. Dosimeters were zeroed for demonstration purposes. The RO and staff members were trained, knowledgeable, and answered questions effectively. Emergency personnel gave timely readings to the RO. They knew their exposure limit of 5 R for this mission and what to do if this limit was exceeded. Relevant functions and activities were implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Monaca Borough EOC had a route alerting team for the hearing impaired on standby for simulated route alerting. The staff was fully knowledgeable of

its responsibilities for alert and notification and were provided applicable route maps and message cards. The relevant functions and activities were implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The Monaca EMC provided staff members with instructions on rumor control. Most rumor control activities were referred to the Beaver County EOC. A telephone phone number was posted. The relevant functions and activities for rumor control were implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The Secretary of the Department of Health was responsible for the decision not to use KI. Personnel responsible for direct administration and use of KI followed the Monaca Borough RO's instructions, which included when it was appropriate to take KI and by whose authority. Relevant functions and activities were implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. There were up-to-date lists of special needs groups on hand at the EOC. Telephone calls and route alerting were simulated to contact these people. Transportation resources were secured (simulated). One additional ambulance was requested. The PA implemented was a simulated evacuation. The Monaca Borough EOC demonstrated

appropriate and timely actions, measures, and support for special groups. Relevant functions and activities were implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. This was evident with a request to the Beaver County EOC for the PSP to provide an additional ACP on both sides of the Rochester-Monaca Bridge because of bridge construction. There were eight TCP/ACPs established (simulated). Relevant functions and activities were implemented in a manner that was consistent with Monaca Borough's Plan and Procedures.

Issue: None.

(14) Patterson Heights Borough/Patterson
Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The EMC used the ECLs at all briefings. The ECLs were prominently displayed and the display board was updated promptly. The EMC briefed the staff at each ECL change. The SAE and the GE ECLs were received via the primary communication system (radio) from the Beaver County EOC. All relevant functions and activities were fully implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC was notified by commercial telephone (via pager) of the Alert by the county EOC. All EOC staff members were alerted and arrived in a timely fashion. The EOC was fully operational less than half an hour from the original notification. A total of 24 staff members was present. Staff members were dispatched to other locations, mainly the Fire Department, where they continued their mission of route alerting for hearing/vision impaired and manning of TCPs. Relevant functions and activities were fully implemented in a manner that was consistent with the plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was in charge of all activities and worked well with his staff at the EOC. The EMC gave periodic briefings to update the staff. He clearly directed his staff to implement the various functions, and staff members were involved in the decision-making process. Copies of the plan were available and used frequently. The EMC and the staff demonstrated a knowledge of the plan and procedures. Logs were kept of all incoming and outgoing messages. Three-part message forms were utilized for internal message control and distribution to the staff was made in a timely manner. All protective action decisions and implementation of the decisions were coordinated efficiently with the appropriate organizations. Relevant functions and activities were implemented in a manner that was consistent with the plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The EOC was well equipped with three telephone lines, a variety of low-

and high-band two-way radios (which were the primary communication system), and a UHF radio, and a REACT system. All equipment performed flawlessly. Radio signals, both incoming and outgoing, were clear and operators were knowledgeable and used the systems effectively. Back-up systems, including commercial telephone and REACT, were demonstrated and functioned properly. Also, the EOC was equipped with a facsimile machine and radio and television sets for broadcast monitoring. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, restrooms, ventilation, and back-up power for the EOC were adequate to support emergency operations. The back-up portable generator was operated successfully for over 75 minutes. The EOC operated on generator power for approximately five minutes. Kitchen supplies were adequate. Relevant maps were prominently displayed on the wall. Status boards were utilized and placed in prominent positions to be visible to the entire staff. The EOC was equipped with a typewriter, computer with word processing software, and a copier. Maps, including the plume EPZ, evacuation routes, TCPs, relocation centers, and radiological monitoring points, were available. The ECLs were clearly visible on the display boards along with protective action decisions and weather data. Boards were updated promptly. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker who entered the plume EPZ had a non-self reading, TLD type of permanent dosimeter and two direct-reading dosimeters with ranges of 0-20 R and 0-200 R. The emergency workers had access to the direct-reading dosimeter chargers and ensured that the dosimetry was charged and zeroed. Each emergency worker was issued an exposure record chart and complete instructions on how and when to read dosimeters, how to record the readings every 30 minutes, and whom to contact when mission authorized limits of 5 R exposure were reached. The RO and emergency workers were very knowledgeable of their assigned mission and answered all questions properly. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Beaver County EOC contacted the EOC to notify it of the activation time and EBS message (simulated). The EMC deployed five route alerting teams for the hearing and vision impaired and three additional TCP teams. The route alerting teams were fully knowledgeable of their responsibilities and completed their rounds successfully within the time period allowed. Copies of all instructional messages were kept on file. The content of the protective action decisions was appropriate. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. According to the EOC plan, the Communications Officer was assigned rumor control duties. All telephone calls from the public were directed to the PIO of the Beaver County EOC for further information. The Patterson Township EOC received about a dozen telephone calls from individuals requesting information about the plant or asking for personal help. The staff acted properly according to its plan and procedures in providing assistance whenever possible.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radiiodine releases, was adequately demonstrated. KI was not authorized for use during the course of this exercise. However, every emergency worker at the EOC knew that the only individual who could authorize the use of KI was the Secretary of the Department of Health of the Commonwealth of Pennsylvania. Also, they knew that they should take KI only after the decision was made by the Secretary of Health and authorization was given by the RO for the EOC. Each emergency worker was given a simulated KI pill container with all the appropriate instructions and record forms to be filled out in case KI was administered. KI was distributed in sufficient quantities. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special

needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The EOC maintained up-to-date lists of special needs groups, including hearing and vision impaired. The method used to contact these special groups was route alerting. The PA implemented was evacuation. Transportation resources required were secured from the Beaver County EOC upon request. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Traffic controllers were deployed by the EOC to three predetermined TCP/ACPs. Traffic controllers were well trained emergency workers and were issued their dosimetry kits which contained a non-self reading, TLD type of permanent dosimeter and two direct-reading dosimeters with ranges of 0-20 R and 0-200 R. Additionally provided was KI along with instructions, relevant records, maps, and communications equipment (2-way radios). Traffic controllers had an accurate knowledge of their role in the emergency response. They demonstrated the capability to respond appropriately and in a timely fashion to protective action decisions. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

(15) Potter Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The EOC received notification and verified the ECLs via the primary communication system radio (REACT). However, the EMC and EOC staff used the term "Site Emergency" rather than the correct designation of "Site Area Emergency". ECLs were prominently displayed on the wall and the status board. EOC staff members were made aware of the ECLs at all times. Relevant activities were implemented in a manner that was consistent with the Potter Township Plan and Procedures.

Issue: At the time of the declaration of the SAE and throughout the rest of the exercise, the EMC and EOC staff used the term "Site Emergency," rather than the term "Site Area Emergency."
(BVX92-12R)

Objective 2: The ability to fully alert, mobilize, and activate personnel for both facility and field-based emergency functions was adequately demonstrated. The EMC was notified via radio from the county EOC at the Alert status. The EMC telephoned the EOC staff and elected officials in order to alert and activate the EOC staff in a timely manner. All EOC personnel were at the EOC within one hour of the EMC's notification. The Deputy RO was dispatched to the county EOC to pick up dosimetry equipment and KI. Three route alert teams were dispatched after the siren sounding (simulated).

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was in charge of the emergency response. Briefings were held by the EMC at every ECL and PA. Appropriate staff members were involved in the decision-making process. Each EOC staff member had a copy of the plan and staff members displayed and demonstrated a knowledge of procedures. Message logs were kept for all incoming and outgoing messages as well as internal communications. Four-part message forms were used for control. The PA decision and the implementation of this decision was coordinated effectively with the County EOC.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Communication systems identified during the exercise included two commercial telephone lines, one cellular telephone, the fire network, and REACT. A direct radio line, PEMARS, for the transmission of ECLs and the protective action was used to

communicate with the county EOC. Additionally, a telephone was used to demonstrate back-up communications. According to the EOC, REACT was the primary communications link between the county EOC and the Potter Township EOC. The primary and back-up communications systems were able to handle all communications traffic.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The layout/set-up of the EOC differed from the floor plan shown in the Potter Township EOP (page A-10). Access to the EOC was controlled by a police officer posted at a locked door. Evacuation routes and relocation maps were posted in the EOC. A status board was used to record items which included ECLs, the dispatch of route alerting teams, back-up power, releases, and PAs. The back-up generator was not demonstrated for the 30 to 90 minutes.

Issue: As observed, the physical layout or set-up of the EOC was not in accordance with the floor plan shown in the Potter Township plan (page A-10). (BVX92-14I)

Issue: Although an adequate back-up generator was available, it was not demonstrated for 30-90 minutes. (BVX92-15I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker who entered the plume EPZ had a non-self-reading, TLD type, permanent dosimeter (simulated) and two direct-reading dosimeters with ranges of 0-20 R and 0-200 R. Dosimeters were zeroed and initial readings were logged. The RO briefed all emergency workers regarding dosimetry. The RO had access to the direct reading dosimeter chargers and ensured the dosimetry was charged prior to distribution to the route alerting teams. Each emergency worker had exposure records and complete instructions regarding the use of and how and when dosimeters should be read. The RO set a timer to go off every 30 minutes and notified emergency workers to check their dosimeters. Emergency workers knew their maximum exposure limit was 5 R, and what to do if they received exposures higher than they were authorized. The RO and Assistant RO were knowledgeable and answered questions from emergency workers effectively.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. After the siren sounded and the EOC received an affirmation from the county EOC, three

route alerting teams made up of individuals from the Potter Township Fire Department were dispatched. The teams had information for hearing impaired individuals. The teams were fully knowledgeable of their responsibilities. Route alerting was demonstrated; however, direct contact with hearing impaired individuals was simulated. Copies of all instructional messages were kept on file. The content of the protective action decisions was appropriate.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was not demonstrated. The Potter EOC staff did not establish a rumor control function.

Issue: Throughout the exercise, the rumor control function was not assigned to a specific individual, nor were rumor control activities addressed. (BVX92-13R)

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The use of KI was not authorized by the Secretary of Health. The RO was knowledgeable regarding the decision and authorization of the ingestion of KI for emergency workers and briefed the emergency workers accordingly. Additionally, he was prepared to record the date, dose, and time of KI ingestion had it been authorized.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The staff at the Potter Township EOC was responsible for making sure that protective action decisions received from the Beaver County EOC were followed. There were up-to-date lists of special needs groups on hand at the EOC. Methods used by the Township EOC to contact these groups included telephone calls, both demonstrated and simulated, and route alerting teams for the hearing impaired, which was demonstrated. Transportation resources were secured and provided for individuals with special needs. The PA

implemented was evacuation (simulated). The Potter Township EOC demonstrated appropriate and timely actions and support for special needs groups.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Three TCPs were pre-established in the Potter Township plan. The staffing of those points was the responsibility of the PSP. The PSP were alerted and put on standby by the Potter EOC staff.

Issue: None.

(16) Raccoon Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. A status board with ECLs was prominently displayed and updated as required. The EMC briefed the staff as escalations occurred and repeated the ECLs when other briefings were held. The township EOC received notification of the ECLs via both PEMARS and RACES/REACT. Relevant functions and activities were implemented in a manner that was consistent with the township's plan and procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. A telephone call received at the EOC over the county 911 system notified the EOC that the drill had begun. The Communications Officer, who normally works at the Municipal Building EOC, took the call and began calling the elected officials (Supervisors). The EMC also received a call at his home via the county 911 system. A telephone "tree call out" procedure was used to notify the EOC staff members and to tell them to report to the EOC. The EOC was operational less than 40 minutes from the beginning of the calling. Route alerting teams consisting of volunteer firemen were dispatched later in the exercise, but not from the EOC. They assembled at the fire hall and had radio communication with the Fire Chief at the EOC. From the list in the plan, there were sufficient personnel to cover all EOC positions on a 24-hour basis. However the RO at this exercise was neither the primary or deputy person specified in the plan. Prior to the exercise, the primary and back-up radiological officers trained two of the Township Supervisors to perform RO duties during the exercise.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was new to the job; however, he performed the duties very well. He was effectively in charge of the emergency response at the EOC. Briefings were held at each ECL change and periodically at other points in the exercise in order to keep the staff fully informed. Two of the three elected officials (Commissioners) were present during the exercise and the EMC consulted with them for all decision making. Each staff member had a copy of the SOPs for his position and consulted them continually. The Communications Officer did an excellent job of message handling. Message logs were accurately kept and messages were copied and distributed to appropriate staff members in a prompt manner.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Communication systems identified during the exercise included the PEMARS (primary), five commercial telephone lines, cellular telephone, RACES/REACT (back-up), high-band police radio, fire radio, and public works radio system. All communication systems functioned well with no failures. Relevant functions and activities were implemented in a manner consistent with the township's plan and procedures.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, restrooms, and ventilation were sufficient to sustain extended emergency operations. A back-up generator was available, but not tested during the exercise. Also, maintenance and testing logs for the generator were not available. A map showing evacuation routes was posted. The two TCPs and the relocation center were posted on an information board. A status board was utilized and positioned so that all staff could view the information at all times. Information on the status boards included ECLs, protective action decisions, weather data, and EOC activation times. The board was regularly updated as information and instructions came in from the Beaver County EOC. Relevant functions and activities were implemented in a manner consistent with the township's plan and procedures.

Issue: Although an adequate back-up generator was available, it was not demonstrated for the 30-90 minutes. In addition, maintenance and testing logs were not available for the back-up generator. (BVX92-16I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker, including the EOC staff, would have been issued two direct-reading dosimeters and a TLD. There was one sample dosimetry kit at the EOC; other kits would be obtained from the Beaver County EOC at the Alert level. The sample kit contained 0-20 R and 0-200 R direct-reading dosimeters and a TLD. The RO briefed the staff on the use of dosimetry and how and when dosimeters should be read. Records would be kept when the dosimeters were issued to each emergency worker. Emergency workers knew exposure limit of 5 R, and what to do if they received exposures higher than they were authorized. Since the route alerting teams were deployed from a separate location, dosimetry would be delivered to them and they would then zero the dosimeters and record exposures. If any questions arose, they could contact the RO directly via the fire radio. The RO determined that the EOC would need 50 dosimetry kits. This was a much larger quantity than the 23 kits were listed in the plan.

This discrepancy continues to be an issue from a previous exercise.

Issue: The quantity of dosimetry kits requested by the EOC (50 kits) was different from that listed in the Raccoon Township Emergency Plan (23 kits). (BVX92-14R)

Objective 12: The ability to alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Route alerting, including personal notification of the hearing impaired in the township was the responsibility of the Fire Department. The Medical Officer provided a listing and locator map to the route alerting teams. The teams demonstrated their ability to initially alert the public as a back-up to the primary siren system, provide instructional messages via the public address systems on fire vehicles, and provide written messages for the hearing impaired. The route maps for the teams identified the locations at which a written message was required. The route alerting teams had dosimetry delivered to them and had instructions for its use. They could contact the RO at the EOC if they had any questions. A special written message was provided by the Medical Officer for the hearing impaired. Three route alerting vehicles were actually deployed.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. Although, for the most part, rumor control was handled from the Beaver County and State EOCs, one person at the Raccoon Township EOC staffed the EOC telephone for rumor control calls into the EOC. The township staff primarily referred the callers to the two rumor control numbers set up by the county. In some cases, good, common sense information was given to a caller along with the numbers to call. One particular case was a call (simulated) from a little girl at home alone with her brother. The EOC staff member reassured the girl and told her to stay inside and not open the door to strangers. The girl's name and address were taken and she was also told that if an evacuation was ordered, a fireman with identification would come and pick them up. The EOC also had an AM/FM radio turned on in order to monitor EBS messages.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radiiodine releases, was adequately demonstrated. The use of KI was not authorized by the Secretary of Health. At the municipal

level, vials of KI would have been distributed when the dosimetry kits were obtained from the county. The emergency workers were instructed in the use of KI. Relevant functions and activities were implemented in a manner consistent with the township's plan and procedures.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. The special needs and handicapped persons lists were current. Institutionalized people in the township included handicapped persons living in group homes. These homes had their own transportation, but the EOC kept the homes informed at each ECL change and at the evacuation order. The EOC staff determined that 120 people would need bus transportation during an evacuation and that two ambulances were needed for two other special needs individuals. These needs were called into the Beaver County EOC so that arrangements could be made to provide the two buses and ambulances.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Two TCPs that were set up (simulated) in Raccoon Township. During an actual emergency, each TCP would be manned by one police officer. The township has three full-time and two part-time police officers which would be sufficient to cover the two TCPs as well as perform regular duties. At the SAE, the officers would be put on standby at the TCPs according to the plan. Before deployment to the TCPs, they would be issued dosimetry and KI at the EOC and briefed on its use. Radio contact with the TCPs would be via police radio, and they would be informed of changes in ECLs and PAs.

Issue: None.

(17) Shippingport Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Alert ECL was received by the Borough Warning Point located in the municipal building. The Borough Secretary telephoned the EMC to inform him of the Alert message and the EMC reported to the EOC. Upon his arrival, he began to by telephone the members of the EOC staff. After alerting the EOC staff, the EMC began to ready the EOC, which included the posting of the Alert ECL. As the exercise progressed, each ECL was prominently displayed so that all staff members were aware of the ECL changes. At the change of each ECL, the EOC staff would review their checklist which had been furnished to each position. The EOC staff was knowledgeable of the ECLs.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EOC staff was alerted by the EMC beginning at 1630 hours and calls were completed at 1645 hours. The method of notification was telephone and a current call down list was used. Eleven EOC staff members were dispatched to other facilities or locations. The EOC was fully operational at 1745 hours in a timely manner.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. Briefings were held at each ECL change. At these briefings, the EOC staff members participated by explaining their roles and the status of their actions. The EMC was effectively in charge. A copy of the borough plan was available for reference. Messages were logged, distributed, and handled in a prompt manner. Two elected borough officials were present throughout the exercise. They, as well as the staff, took part in the decision-making and coordination of all PAs recommended by the Beaver County EOC.

Issue: None

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The borough municipal building had five telephones with five lines each and a call-back capability. The REACT operator reported in during the Alert ECL and demonstrated excellent communications skills. There were no breakdowns or undue delays with the

telephone system or the REACT radio system. The Borough Fire and Law Enforcement Department radio was linked with the EOC and the county 911 system.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The Shippingport Borough EOC was located in the municipal building which had ample space, lighting, furnishings, restrooms, and ventilation. Also, the Police Department and Fire Department were located within this building. The building had a generator for back-up power which was tested and operated for 95 minutes during the exercise. Appropriate maps and charts were positioned in full view of the EOC staff during the exercise. The status boards were kept current and posted in a timely manner.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The radiological kits were stored at the county EOC and available to the borough for pick-up. The borough RO dispatched a runner to the county EOC at 1725 hours for pickup of three chargers and 59 kits. Each emergency worker, including the EOC staff members was issued a kit which included KI, TLD, and two self-reading dosimeters with ranges of 0-20 R and 0-200 R. Also included in this kit were appropriate instructions and forms for recording exposure. At the time of issue, each team and the EOC staff members were briefed by the RO as to the use and purpose of the issued items. Prior to issue, the RO had zeroed all self-reading dosimeters using the charger. The exposure permitted for the emergency was a maximum of 5 R, with county authorization required for an exposure between 5 R and 25 R, and 75 R permitted should lifesaving be required. The EMC had set up a timer which sounded every 30 minutes. At that time, he requested all emergency workers to read their self-reading dosimeters.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The primary alert and notification system was not a Shippingport Borough responsibility. The fixed sirens positioned within the borough were activated by the Beaver County EOC. The borough did have the capability and resources to alert its citizens by route alerting if a siren failed or if the borough needed to alert its special needs population. The Borough Fire Department uses two pumps and one van equipped with public address systems. There

are three routes used; none requiring more than 15 minutes to complete. The borough was notified of siren sounding (simulated) which were followed by EBS messages (simulated). Two simulated route alerting were performed by the borough. The route alerting teams were furnished maps of their routes and message instructions with special emphasis placed on citizens with special needs.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The Shippingport Borough EOC instructed any callers to use the telephone numbers, (412) 775-1700 or (412) 728-2421. These telephone numbers were in the local telephone book as well as in the BVPS calendar. Shippingport Borough has the capability, staff, and resources to respond to calls regarding rumor control. The Police Chief, who was an EOC staff member, acted in a dual role as a law enforcement staff member and rumor control officer. During an interview, the Police Chief, stated that he would respond to local rumors, but advised that all technical rumor questions should be directed to the Beaver County or State EOC's rumor control telephone numbers stated above.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. Once the EOC was activated, the RO briefed the route alerting and traffic control teams on the use of KI, emphasizing that in no case was the emergency worker to take KI without specific instructions from his/her supervisor. The supervisor would have no authority to instruct the emergency worker to take KI before the decision was made by the Commonwealth of Pennsylvania's Secretary of Health. The use of KI was not authorized by the Secretary of Health. The RO also reviewed the form that should be used should KI was authorized.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. A current list of people with special needs which included telephone numbers of individuals and their needs was maintained at the EOC. To respond to the 12 borough citizens with special needs, the borough would require one van for four ambulatory persons, two

ambulances for non-ambulatory persons, and two cars or vans with a wheel chair lift for six citizens. These special needs persons were alerted by route alerting (simulated) for the hearing impaired. At 1758 hours, the Borough Medical Officer requested from the Beaver County EOC two ambulances and one wheel-chair equipped van.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Three TCPs/ACPs were established (simulated) by the Borough Fire Department. The TCP/ACP staff was dispatched during the Alert ECL. The traffic controllers were knowledgeable of their roles with respect to evacuation routes, relocation centers, ECLs, PAs. The TCP/ACP teams were kept informed by radio from the Fire Chief who was an EOC staff member. There were no simulated traffic impediments. If there had been simulated impediments, the TCP/ACP team members would have been aware of detours and re-routing options. Local tow trucks were available. This objective was evaluated by an interview with the Fire Chief. The three teams were actually dispatched during the exercise to staff their stations for training experience.

Issue: None.

(18) South Beaver Township/Glasgow
Borough/Ohioville Borough

Objective 1: The ability to monitor, understand, and use ECLs was adequately demonstrated. Notification of each ECL was received from the Beaver County EOC over RACES and PEMARS and confirmed by the EMC, who immediately briefed his staff on the current ECL. ECLs were promptly posted on the status board; however, at times the ECLs and other information were erased to make way for new information and the current ECL was not posted elsewhere in the EOC. In addition, correct ECL terminology was not used at all times. On the status board and in the event-action log, ECLs were listed as "Site Emergency" instead of "Site Area Emergency" and "General Alert" instead of "General Emergency."

Issue: Although the ECLs were promptly posted on the status board, when the board was filled old information was erased to make room for future data, thereby, at times, erasing the ECL, weather data, and protective action decisions. No other ECL listing or sign was available or prominently displayed to inform those already in or entering the EOC of the current ECL. Additionally, the correct terminology for the ECLs was not used at all times. On both the status board and in the event-action log, ECLs were referred to and listed as "Site Emergency" instead of "Site Area Emergency" and "General Alert" instead of "General Emergency." (BVX92-15R)

Objective 2: The ability to fully alert, mobilize, and activate personnel for both facility and field based emergency functions was adequately demonstrated. The EMC and Communication Officer promptly alerted all personnel, via commercial telephone and pager systems, and requested the staff to report to the EOC. Current and correct call lists were used to notify all staff members required by the plan and all staff members contacted reported to the EOC within one hour after notification. One staff member was deployed to the Beaver County EOC to pick up dosimetry.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was effectively in charge of all EOC operations. All messages, incoming and outgoing, were recorded in a message log, duplicated, and distributed to appropriate staff for handling in a prompt manner. All ECLs, siren activations, and PAs were announced by the EMC as these notices were received at the EOC. All appropriate-staff members were involved in decision making processes and good coordination was exercised by the EMC and all

agencies in implementing protective action decisions. A copy of the plan was available and all relevant functions and activities were implemented in a manner consistent with this plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations, organizations, and field personnel was adequately demonstrated. The EOC staff communicated with the Beaver County EOC, Fire Departments, Police Departments, and field vehicles. The primary communications system, RACES, functioned adequately and was able to handle all communication flow without any undue delay. Also available were two commercial telephones, two-way low band and high band hand-held radios, and radios located in two fire trucks, parked just outside the EOC. Some of these back-up systems were demonstrated and functioned properly without a breakdown in the communications system. The staff ensured that a battery operated AM/FM radio was operational for EBS monitoring at the Alert ECL and the radio was monitor.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. A security guard manned the main EOC entrance; however, the emergency decontamination center, communication center, and the EOC were located in the same building without a solid wall dividing the three major activities. Consequently, inadequate security and possible cross contamination between emergency workers, communications and EOC staff existed. The back-up power generator were not demonstrated as required by the exercise scenario. All other facility components and equipment were sufficient to support emergency operations. A white erasable writing board, visible to the EOC staff, served as the status board. As the board was filled, old information was erased to make room for future data, thereby, at times, erasing the ECL posting, weather data, and protective action decisions (See ARCA BVX92-15R). No other ECL listing or sign was available or prominently displayed to alert those in or entering the EOC of the current ECL. All other required maps and information, essential to exercise play at this location were displayed and updated within 10 minutes of notification.

Issue: During the course of the exercise, it was noted that the emergency worker decontamination center, communication center, and the EOC were co-located in the same building without a solid wall dividing the three major activities. This design gave rise to inadequate security and possible cross contamination between emergency workers and the communications and EOC staff.
(BVX92-16R)

Issue: The facility was equipped with a generator capable of servicing the needs of the facility. However, the EOC officials elected not to demonstrate the back-up power generator.
(BVX92-17I)

Objective 6: The ability to continuously monitor and control emergency workers exposure was adequately demonstrated. Each emergency worker entering the plume EPZ was provided with a TLD permanent record dosimeter (simulated) and two direct-reading dosimeters with ranges of 0-20 R and 0-200 R which were charged at the EOC prior to dispersement. Appropriate instructions were issued regarding the dosimeters' use and the interval for reading and reporting exposure levels. All emergency workers were instructed that a 5 R limit was authorized for the mission and told what to do should they receive an exposure higher than authorized. They also were aware that a higher than authorized level could be received under certain circumstances and knew whom to contact for such authorization. An exposure record report form was provided and emergency workers were instructed to forward both the form and dosimetry through emergency management channels to the BRP for reading. Dosimeters and KI were picked up by the municipality from the county EOC at the Alert ECL and were issued (simulated) to emergency workers at the SAE ECL.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate State and/or local officials was adequately demonstrated. The back-up route alerting teams were deployed from Borough Fire Departments (simulated) at the SAE ECL. A message was available for distribution to hearing impaired individuals and maps were provided to the teams.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. Correct rumor control telephone numbers were posted in the EOC. All incoming rumor calls were forwarded to the Beaver County EOC for reply, in accordance with the organization's emergency plan and procedures.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria, as well as to distribute and administer it once the decision was made, if necessitated by radioiodine releases was adequately demonstrated. Dosimeters and KI were picked up by the municipality from the county EOC at the

Alert ECL. As required by the plan, the RO distributed KI to emergency workers entering the plume EPZ at the SAE ECL. Records for each emergency worker were maintained to record the date, time, and quantity of KI ingestion.

Issue: None.

Objective 18: The ability to implement PAs for special needs populations, including transit-dependent, handicapped, and institutionalized persons, was adequately demonstrated. A current list of all affected persons who would require assistance in being evacuated from the plume EPZ was available. The EOC staff maintained contact with the providers of transportation to ensure that sufficient buses and ambulances were available to transport persons to appropriate mass care centers in a timely manner.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. According to the South Beaver/Glasgow/Ohioville plan, the PSP has the primary responsibility for manning all TCPs. No action was required by the municipal police. All relevant functions and activities were implemented in a manner consistent with the organization's emergency plan and procedures.

Issue: None.

(19) South Heights Borough

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated at the South Heights Borough EOC. ECLs were used by the staff to determine the appropriate actions to be implemented. The South Heights Borough EOC was notified of the ECLs by the Beaver County EOC. ECL messages were received and verified via RACES and the newly installed PEMARS that links the borough to the county. EOC staff members were aware of current ECLs, and the ECLs were prominently displayed. The relevant functions and activities were implemented in a manner consistent with the borough's plan and procedures.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC received notification of an Alert from the Beaver County EOC by telephone. The EMC contacted his staff by telephone utilizing an up-to-date call list. All required staff members were alerted in a timely manner. A transportation service staff member was dispatched to the county EOC to pick up the required dosimetry. Route alerting teams, consisting of fire and police personnel, were also dispatched from the EOC. The relevant functions and activities were implemented in a manner consistent with the borough's plan and procedures.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated at the South Heights Borough EOC. The EMC at the South Heights EOC was clearly in charge of EOC operations. The EMC demonstrated leadership with prompt decision making and disseminated instructions to his staff. Staff discussions were held. Message logs were kept for all incoming and outgoing messages, and incoming messages were distributed to all EOC staff members. Copies of the plan with individual staff procedures were available and utilized. The EMC directed his staff members to follow their procedures. The EOC was small and tables were set up in a square configuration. The configuration and size of the EOC, as well as the prompt updating of event logs, kept all staff members informed of ECLs and other changing actions. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated at the South Heights Borough EOC. The EOC staff communicated with the Beaver County EOC and local fire and police personnel. The communications systems available at the South Heights EOC consisted of RACES (primary), commercial telephone (one line), and a newly installed PEMARS that provided communications with the Beaver County EOC.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The South Heights Borough EOC was located in the fire department facility. This facility had adequate space, lighting, furnishings, restrooms, ventilation, kitchen facilities, and back-up power. Back-up power was demonstrated and the EOC operated on the back-up power for approximately 95 minutes without any interruptions or failures. Status boards were used to keep the EOC staff informed of ECLs and other changing events. Status boards were updated promptly. Maps depicting EPZ zones and evacuation routes were posted as outlined in the Borough's plan. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated at the South Heights Borough EOC. The South Heights Borough EOC staff, police, and fire personnel were issued one non-self-reading TLD (simulated), one 0-20 R self-reading dosimeter, and one 0-200 R self-reading dosimeter. A record of the dosimetry was made at the time it was issued. Instructions on the use, reading, and recording of dosimetry, as well as the use of KI, were also given at the time the dosimetry was distributed. KI was available, but was not authorized for distribution. The self-reading dosimeters were zeroed and the initial readings were recorded. Dosimetry chargers were available. Emergency workers read their dosimetry every 30 minutes, and were aware of their maximum exposure limit of 5 R, and whom to contact if this limit was exceeded. All radiological information was posted at the EOC. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated at the South Heights Borough EOC. Back-up route alerting was demonstrated in South Heights Borough even though there were no hearing impaired residents. The teams were issued dosimetry and maps and given an appropriate message to read. Teams were dispatched from the EOC. The borough had four route alerting sectors and two were actually demonstrated. The teams completed their routes in 15 minutes. The relevant functions and activities were implemented in a manner that was consistent with the borough's plan and procedures.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. Rumor control calls were received at the EOC and any calls that could not be handled were forwarded to Beaver County rumor control. The county rumor control phone number was posted on the wall of the EOC, as well as printed in the South Heights Plan. The AM/FM radio was continuously monitored in the EOC to ensure the accuracy of EBS messages had the messages actually been broadcast.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The use of KI was not authorized by the Secretary of Health. However, the emergency workers were aware of the procedures to follow if the use of KI was authorized.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons were adequately demonstrated. The Transportation Coordinator at the South Heights EOC simulated contacting the special needs population by telephone. At the sounding of the sirens and activation of the EBS, the route alerting teams were used to inform the special needs population. The Transportation Coordinator requested one bus and one ambulance from the Beaver

County EOC. The resources were acquired and were sufficient to meet the needs. Activities were demonstrated in accordance with the plan.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. The PSP exclusively provides traffic control for South Heights Borough as stated in the plan, Attachment D.1.2.

Issue: None.

(20) Vanport Township

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. All staff members were notified via a PEMARS tone alert repeater radio, which was located in the EOC. After confirmation of a ECL, the EMC briefed the staff on the current ECL and described the technical background which caused the classification. Additionally, ECLs were prominently displayed and the staff was aware of the current ECL status at all times.

Issue: None.

Objective 2: The ability to fully alert, mobilize, and activate personnel for the EOC facility and field-based emergency functions was adequately demonstrated. Telephone calls notifying the staff to report to the EOC were made by the Communication Officer within minutes of the Alert notification from the Beaver County EOC. The EOC was staffed by 14 members during the entire exercise and additional personnel assisted in various capacities, as requested. Staff members were not dispatched from the EOC. The Fire Department had personnel off site at its fire station to simulate route alerting. Only radio transmissions from the Fire Chief (EOC) to fire personnel (fire station) were observed in connection with route alerting and radiological monitoring of fire personnel. Police personnel simulated the manning of TCPs with active duty officers in patrol cars.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC effectively coordinated the emergency response and was totally in charge of all EOC operations. Briefings were given by the EMC to the staff in a timely matter providing information on ECLs, technical plant status, township response, and status updates. Staff members actively were involved in the decision making process. The EMC provided copies of the plan to all staff members. Staff members demonstrated their ability to execute their individual plans and procedures. Incoming and outgoing messages were logged. A three-part message form was prepared for internal message control. Distribution of all messages to staff was executed in a timely manner. File copies of all messages were kept. PAs and the implementation of decisions were discussed and acted upon by staff members and coordinated effectively with outside organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communication systems used during the exercise consisted of two commercial telephone lines, a county communications remote police base station, two-way radios for police and fire, PEMARS, and RACES. This gave EOC personnel the ability to communicate with local police, fire, highway department, and the Beaver County EOC. However, the location of the commercial telephones required EOC staff members to leave their work stations in order to initiate or receive telephone calls. All primary communications systems handled message flow without any delays or communication failures. The Communications Officer, along with the entire staff, monitored the EBS station. Back-up communications were demonstrated and functioned flawlessly.

Issue: One telephone was located at the reception desk and one telephone was located at the police desk in another room. This arrangement required EOC staff members to leave their work stations in order to either initiate or answer telephone calls. (BVX92-18I)

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. All facility components, i.e., space furnishing, lighting, restrooms, and ventilation, were sufficient to support emergency operation in the EOC. However, the portable 60 HZ single phase unit, 120/140 volt, 5000 W.A.C. generator was demonstrated for only five minutes and not under a full load. Appropriate maps indicating plume EPZ, evacuation routes, and relocation centers were posted, and status boards were used to indicate ECLs, protective action decisions, TCPs, pick-up points, siren locations, EBS stations, and rumor control numbers. The status boards were updated in a timely manner. All staff members were aware of all changes to these maps and status boards.

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials did not operate the generator for 30-90 minutes. (BVX92-19I)

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The RO received 24 dosimeters from the Beaver County distribution center. Each emergency worker received two dosimeters with ranges from 0 to 20 R and 0 to 200 R, and one TLD. The RO had access to the charger and ensured that all the dosimetry was charged prior to distribution to fire personnel (route alerting) and police personnel (TCP). Instructions were given to emergency workers on usage and when to read. Dosimeters were zeroed and

initial readings were logged. Every 30 minutes the RO requested emergency workers to read their dosimetry and report the findings. The RO was knowledgeable in answering questions from the staff.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Once the EMC and the township officials were notified of the siren activation and EBS message, route alerting teams were given instructions by the Fire Chief. Teams were given the route maps and the instructional message to be read to or given to those being notified. Two fire pumpers and one emergency vehicle simulated the route alerting.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. Rumor control responsibility was assigned to the EMC, the Communication Officer and police security. Telephone numbers for the Beaver County EOC were posted and instructions were given by the EMC. All information could be found in the telephone book, 1992 county calendar, and EBS messages on the radio. Rumor control questions were forwarded to the county. Two commercial telephones were available to handle rumor control. EOC security personnel assisted individuals who came to the EOC for information.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The RO was knowledgeable concerning the ingestion and distribution of KI to emergency workers should the need arise. The RO knew that the Secretary of Health must approve the administering of KI. Current logs were maintained on all emergency workers as to the date, time, and dose of KI ingested if it had been authorized.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) were adequately demonstrated. At 17:25 hours, the Vanport EMC requested transportation for 225 non-ambulatory

individuals should an evacuation be necessary. The EOC staff highlighted a population chart for the township and determined that a large percentage of the population was over 65 and without transportation. To its credit, the staff realized that the plan listed only 75 individuals without transportation with a requirement for two buses to provide this transportation. The staff agreed that 225 persons would require transportation and that nine ambulances and five buses would be appropriate to handle their needs. This realization led the township to submit an unmet need to the Beaver County EOC and, at 1805 hours, Beaver County confirmed this request. The EMC did not completely set up the staging locations for buses and ambulances until the actual evacuation was ordered and the vehicles were sent from the county relocation centers, per the plan. The organization should be commended for its appropriate and timely actions, measures, and support for special groups.

Issue: The township plan (Section G.1.4) called for two buses and the transport of only 75 evacuees. During the exercise, the EOC staff realized, to its credit, that nine ambulances and five buses were required to evacuate the 225 individuals without transportation. (BVX92-17R)

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. Vanport police were deployed to the TCP at the intersection of Toy Street and Route 63. It was decided by both the Police Chief and the EMC that the other predetermined TCP was not required (Buffalo Lane and Beaver Cemetery). The EMC stated that the TCPs in the plan were not central to the traffic control of an evacuating public. Only, one traffic controller was deployed in a timely manner, following a briefing by the EMC which reviewed the PA being implemented, evacuation routes for the public to use, and the location of the reception centers. Adequate communications capability existed between the EOC and the police car in the event it became necessary to provide additional instructions to the officer or public.

Issue: Vanport Township failed to demonstrated one of the two predetermined TCPs listed in the plan under the Police SOP, Attachment D-1, page D5. (BVX92-18R)

(d) Support Counties

(1) Allegheny County

(a) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Allegheny County EOC staff, in its role as a support county, promptly posted the proper ECLs on the status board when notified via telephone by the PEMA Western District. All ECL changes were verified. The ECLs which guided the staff's activities were prominently displayed and understood by the entire staff and support personnel.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The first series of telephone calls was made by the Operations Officer and Communication Assistant via commercial telephone at the Alert notification. This placed key staff members and organizations on a standby status. An up-to-date telephone call list was used. At the SAE notification, the entire EOC staff was mobilized and the EOC was fully operational. No staff or personnel were dispatched to either the reception center or mass care center.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The county EMC was effectively in charge of the emergency response. He was assisted by the Deputy EMC and Operations Officer. Periodic briefings were held to keep the staff updated on the emergency situation. EOC staff input was used when appropriate in the decision making process. Copies of the county plan were available and used by the staff. A message log was maintained on all incoming and outgoing messages. The protective action decisions and their implementation were coordinated effectively with all appropriate organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communication systems demonstrated during the exercise were: 12 commercial telephone lines with conferencing capability; EIS, Special Services Maintenance and Port Authority System Nets, a facsimile machine, and RACES. The EOC was able to communicate with PEMA, Indiana Western Area, Beaver County, and other surrounding support counties. The EOC was also able to

communicate with its reception, mass care, and decontamination centers. The primary communication system was able to handle the communications flow without delays. Also, back-up systems were demonstrated and functioned properly. There were no communication systems breakdowns during the exercise and all activities were consistent with the county plans.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The county EOC was located on the second floor of the County Building, 1520 Pennsylvania Avenue, Pittsburgh. All the amenities (space, lighting, ventilation, etc.) were sufficient, and typewriters, a word processor, computer, copier, and facsimile machine were on line. Security was provided by county deputies. Back-up power was available and demonstrated via two 275 KVA (275 KW) 900 amp generators. This system, even when employing only one generator, provided full power to the EOC's lighting and equipment for an extended time without problems or difficulties during the actual switch over or subsequent operation. The Allegheny County EOC had several regional maps posted. The status board was kept current and updated as events occurred.

Issue: None.

(b) Reception/Mass Care/Decontamination Centers

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. These activities were demonstrated out of sequence during a two hour window provided during the exercise. Notification was staggered, and personnel were notified at their places of work by commercial telephone or radio. All staff members were notified in a timely manner and a current call list was used during the notification process. The ARC staff was told to report to the parking lot at South Park for their assignments. From this staging area, assignments were given to the staff and they departed either for the South Park reception center or the Independence High School mass care center.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. All communications systems (primary and back-up) at the reception center and the mass care facility functioned adequately with no delays throughout the demonstration window. There was an adequate number of telephones and radios, including hand-held portable radios which were operated by a team of RACES operators

who handled all communications between the reception center, mass care facility, county EOC, and the ARC chapter office.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Although this demonstration was simulated by the issuance of photocopy dosimetry, adequate knowledge of dosimetry, exposure control, and record keeping procedures was demonstrated by the RO and team members. The monitoring and decontamination team members knew how often to read the dosimetry, the authorized exposure limits (5 R), and whom to contact if limits were exceeded.

Issue: None.

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The reception center staff's duties were to advise evacuees that the mass care center was open and give information on its location, how to get there, and what would be done at the mass care center. All registration, monitoring and decontamination, feeding, and other long term care were the responsibility of the mass care center. The Communications at the reception center consisted of a RACES team and hand-held portable radios. Both systems operated well. If needed, a South Park EMS ambulance was on standby. An ARC coordinator was in charge of the reception center.

Issue: None.

Objective 22: The facilities, equipment, and personnel for congregate care of evacuees were adequately demonstrated. Independence High School could adequately support the expected 850 evacuees. The Allegheny ARC was the agency that managed the facility, with support from other agencies which included the county health department, Forest Hill Volunteer Fire Department, and a South Park EMS ambulance and personnel. Arrangements were made with local organizations to supply any required clothing, food, cots, and bedding. The facility would be able to accommodate handicapped evacuees since the main entrance was at ground level and free of any stairways or obstructions. Two nursing stations provided medical assistance; crisis counseling, if needed, was provided by a trained counselor. The county had emergency 911 services for emergencies that could not be handled at the center. Evacuees would be advised of events taking place at the nuclear station and their communities by briefings given by the shelter manager. The monitoring, decontamination, and registration of evacuees were done at this facility. The monitoring equipment and decontamination procedures demonstrated were adequate. Contaminated evacuees would be decontaminated in

separate male and female shower areas. Contaminated clothing would be bagged, tagged, and stored for future disposition. Any replacement clothing would be provided by the ARC. Evacuees that were contaminated were kept separate from uncontaminated evacuees until the decontamination process was complete. All evacuees were registered at this facility. If vehicles were found to be contaminated, the vehicles were impounded until decontamination could be completed. Sufficient parking was available for the separation of contaminated and uncontaminated vehicles. All activities demonstrated were consistent with the county plan.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment, vehicles, and for waste disposal was adequately demonstrated. If necessary, the facility was large enough to provide the required parking space for vehicles and equipment storage for both evacuee and emergency worker contaminated/uncontaminated vehicles. Emergency workers would be monitored and decontaminated in separate male and female shower facilities. The trigger level for decontamination was 0.1 mR over background. The CD V-700 survey instrument as mentioned in the plan was properly used for the monitoring of emergency workers, their equipment, and vehicles. The monitoring teams used appropriate forms to record all contamination information for both emergency workers and their vehicles.

Issue: None.

(2) Butler County

(a) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The Butler County EOC received the initial notification of a NOUE from the BVPS. Following the NOUE ECL, the Alert, SAE, and GE ECL upgrades were sent by the PEMA Western Area Office. All ECLs and PAS were verified by the Butler County EOC staff. Each ECL was prominently displayed on the EOC status board and was periodically announced to the staff.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The mobilization of emergency response personnel via telephone was accomplished by the EMC and completed in a timely manner. A current call list was utilized to perform this function. At the SAE, the EOC staff contacted all key personnel for mobilization, per the plan. The staff included the EMC, Communications Officer, Radiological Officer, Mass Care Officer, Public Works Coordinator, PIO, Hazardous Materials Coordinator, and Fire Coordinator. None of the staff was dispatched to other facilities or locations.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Butler County EMC was effectively in charge of emergency response activities. The staff was involved in decision making during the periodic briefings held by the EMC. A copy of the plan was available to the entire EOC staff. An internal message-handling system was utilized to provide information to the staff in a prompt manner. Although copies of the incoming and outgoing messages were distributed to the staff, a message log was not maintained to track the messages or their status. Protective action decisions and the implementation of these decisions were coordinated effectively with all appropriate organizations.

Issue: Throughout the exercise, a message log was not maintained for incoming and outgoing messages. (BVX92-19R)

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary communications system was the telephone, supported by RACES, cellular-telephone, EIS, and a facsimile machine as

sufficient back-up systems. All systems were demonstrated and no communication delays or breakdowns occurred. The Butler County EOC primarily had communication links with the Beaver County EOC and PEMA.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The Butler County EOC had the following components and equipment to support emergency operations: adequate space, furnishings, lighting, restrooms, ventilation, back-up power (this was effectively demonstrated), typewriters, computer, copier, kitchen supplies, and cots. Also, status boards were utilized and positioned for viewing by the staff. The information on the boards, which was updated within 10 minutes of notification of status changes, included ECLs, protective action decisions, and weather data. Various maps were used to support the emergency response. These included the plume EPZ, evacuation routes, plume EPZ population by planning zone, relocation centers, radiological monitoring points, and the ingestion EPZ for agricultural information. Access to this facility was controlled.

Issue: None.

(b) Reception/Mass Care/Decontamination Centers

Objective 2: The ability to fully alert, mobilize, and activate personnel for both facility and field based emergency functions was adequately demonstrated. The Butler County EMC, in cooperation with Slippery Rock Borough, Slippery Rock University, Slippery Rock School, and ARC volunteers set, up a reception and mass care demonstration. This demonstration was at the Slippery Rock University parking lot and Slippery Rock Middle School from 1900-2100 hours. After notification of the Alert status, the Butler County EMC called in the ARC representative and asked him to open the mass care facility at Slippery Rock. Also, the activation of a decontamination team was requested by the Bulter County RO. The staff members participating in the demonstration included the Slippery Rock University Police and the Slippery Rock Borough Liaison Officer. Additionally, a RACES operator and an ARC representative were present.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communications systems at the reception center were the Slippery Rock University Police radio network and a RACES operator. School telephones were available as a back-up. The reception

center and mass care center had communications links to the Butler County EOC, Slippery Rock Police Station, and Slippery Rock University Police Station. No communication breakdowns occurred during the exercise. The use of telephones as back-up communications at the Slippery Rock Middle School was simulated.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. By prior arrangement, the Butler County radiological monitoring team at the mass care center had one 0-200 R charged dosimeter and two other dosimeters which were simulated. Also, TLDs were simulated. However, a supply of TLDs, KI, and dosimeters was maintained at the Butler County EOC. The Assistant RO for Butler County was a member of the team and was familiar with exposure limits (5 R), dosimeter reading frequency, and recording requirements. The Assistant RO knew whom to contact and what to do if anyone received an exposure higher than authorized.

Issue: None.

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The Slippery Rock University parking lot served as the reception center and parking area for cars. The Slippery Rock Middle School served as the site for the demonstration of mass care for Butler County. At the reception center, evacuees were given maps directing them to the mass care center. Once passengers were dropped off at the mass care center, vehicles were returned to the parking lot for monitoring and decontamination as required. A three-person monitoring team had set up at the school entrance. The team members were well trained in monitoring techniques and contamination control. They employed instrument probe covers and gloves. They scanned each evacuee at proper distances and speeds and monitored the required body areas. A roster was presented as evidence that more than 80 people had been trained as monitors for Butler County. Readings were recorded for each person and, if contaminated, that person would follow a well-designed and controlled traffic plan to the designated school shown for decontamination. One shower was available; however, male and female monitors would be available since men and women would be decontaminated in separate groups. Contaminated clothing would be bagged and personal possessions additionally tagged. Replacement clothing would be obtained and issued by the ARC. After an evacuee had been declared clean or had been decontaminated, that person would be registered using a standard ARC form and then be given further directions.

Issue: None.

Objective 22: The facilities, equipment, and personnel for congregate care of evacuees were adequately demonstrated. The Slippery Rock Middle School in Slippery Rock, Pennsylvania was a large, modern facility and could adequately support the care of 200 evacuees. Additional facilities were available at Slippery Rock University, which was located across the street, or at Slippery Rock High School on an adjacent property. The ARC operated and managed this mass care center with support from the Butler County EMA, RACES, Slippery Rock School District, Slippery Rock University Campus Police, and Slippery Rock Borough Police. Also, the Butler County hazardous materials vehicle provided a back-up generator and lighting system. The facility could be equipped with cots within 24 hours. Restrooms facilities were available to for 200 people. Drinking water, secure storage, and parking spaces were available. Food would be available in the school center area and an agreement had been made with the university cafeteria to serve food to evacuees. A nurse was present during the demonstration and she was qualified to provide crisis counseling. If needed, an ambulance could be called by RACES. Public safety was ensured by the presence of University and Borough Police Officers. By calling the Butler County EOC, it would be possible to determine what was happening in the affected area and general announcements could be made to all evacuees.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment and vehicles, and for waste disposal was adequately demonstrated. The decontamination of equipment and vehicles and disposal of waste were simulated. A large university parking lot would allow the separation of contaminated and uncontaminated vehicles. The mass care center flow plan would separate potentially contaminated personnel and equipment from clean equipment. The trigger point for decontamination was known. The proper instruments were available and monitoring speed was demonstrated.

Issue: None.

(3) Lawrence County

(a) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The county EOC was notified of ECLs in a timely manner by the Western Area Office of PEMA. All notifications were verified by the EMC. ECLs were prominently displayed on a status board in the EOC. Staff members were aware of ECLs and activities associated with them.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. After the notification of the Alert, the supporting agencies and facilities in the county were notified by the EMC to go to standby status. Staff members (group chiefs) were alerted in a timely manner through the use of a current call list of telephone numbers. Once activation was completed, a briefing was conducted at the EOC. Staff present at the EOC included the EMC and her assistant, the Fire and Rescue Group Chief, a State Police representative, the Agriculture Group Chief, a medical group representative, the Communications Officer, two ROs, mass care and school services representatives, township police, a transportation representative, two RACES operators, the PIO and assistant, and representatives of the ARC. Staff members dispatched to other locations included a reception center worker and a radiological monitoring team.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was effectively in charge of the emergency response. A briefing occurred after key county representatives reported to the EOC and periodically thereafter at each significant ECL or PA development. Staff members were appropriately involved in decision making, and a copy of the county plan was available for reference at each station. Logs were kept for all incoming and outgoing messages. Messages were distributed promptly through the use of an internal message system utilizing file copies. The implementation of protective action decisions was effectively coordinated with the Beaver County EOC.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communications systems demonstrated during the exercise included two commercial telephone lines (primary), an EIS, RACES, a

facsimile machine, and ECOMM as back-up. The Lawrence County EOC had the ability to communicate with PEMA's Western Area Office and all other counties within the State. The primary communication system was able to handle communication flow without delays and support communication systems did not break down during the exercise.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The Lawrence County EOC was located in the county courthouse at ground level. Space, furnishings, lighting, restrooms, and ventilation were sufficient to support emergency operations. Equipment available at the EOC consisted of a typewriter, a computer linked to the State, a photocopy machine, a computerized notification system, kitchen and rest room facilities, maps and status boards, and a facsimile machine. Access to the facility was controlled at the main entrance. Maps were of an appropriate nature for a support county. A status board was used in the EOC for the purpose of displaying ECLs, protective action decisions, and other significant activities. The status board was updated in a timely manner, and all functions demonstrated were consistent with the Lawrence County plan. The back-up power generator was demonstrated for 30 minutes.

Issue: None.

(b) Reception/Mass Care/Decontamination Centers

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Using a current call list, the EOC staff telephoned the required emergency personnel in a timely manner. All staff personnel reported as required. The staff members were not dispatched to any other locations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. RACES, Fire Department radios, and commercial telephones were available at the mass care center. RACES was the primary means of communication, with the Fire Department radio and commercial telephone serving as back-up communications systems. The reception center was located in a shopping center parking lot and its communications consisted of the Fire and Police Department radio network and RACES. Seven fire fighters and two police officers were assigned to this location and each worker had access to hand-held and vehicle-mounted radios. There were no

communications delays or breakdowns at either location and voice communication with the county EOC and other agencies was successfully demonstrated.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each member of the team was issued a 0-200 R self-reading dosimeter that was zeroed at the time of issue. Team members were instructed to read their dosimeters every 30 minutes and to record the readings in their personal exposure log. Any increase in the reading of the dosemeter was to be reported to a supervisor. TLDs and KI were available at the county EOC. Radiological background readings were taken prior to monitoring activities and the monitoring team was aware that 5 R exposure was the limit for this activity.

Issue: None.

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The reception center was located in a shopping center approximately one mile from the mass care center. The function of the reception center was to direct evacuees to the mass care center through the use of strip maps which were issued to each occupant of a vehicle. This method served as a counting system to control mass care center occupancy. Evacuee monitoring was accomplished by three members of the Union Township Fire Department using CD V-700 instruments that had been calibrated. Monitoring took place at the school's front entrance, which was adjacent to separate male and female shower rooms. Monitoring and decontamination forms were completed for each evacuee. Decontamination was supervised by the County Radiological Officer and his assistant. The RO had available an additional list of trained monitors who could be called to duty as needed. Procedures to segregate contaminated and non-contaminated evacuees were demonstrated. Provisions to bag, tag, and dispose of contaminated clothing were discussed. Clean clothing for decontaminated evacuees would be issued by the ARC. Clean evacuees would be escorted to the mass care registration point where mass care center registration would be accomplished by ARC personnel. If a contaminated vehicle was found, it was identified with a placard and sent on to the decontamination center for further monitoring and decontamination. Adequate vehicle parking for both contaminated and decontaminated vehicles was available at the mass care center.

Issue: None.

Objective 22: The facilities, equipment, and personnel for congregate care of evacuees were adequately demonstrated. The Union Township Middle and High School had the capability to accommodate the expected 700 evacuees. The ARC operates and manages the mass care center under a letter of agreement with the Union Township Middle and High School. Additional letters of agreement exist between the ARC and each school that could be activated should the need arise. Support to mass care sheltering was provided by the Lawrence County EMA, RACES, Department of Health Services, and Union Township Fire and Police Departments. The ARC had 250 cots immediately available in New Castle, Pennsylvania and could obtain additional bedding from other ARC resources. The facility had 32 toilets and 12 showers. The school cafeteria had food immediately available and the Pennsylvania Department of Agriculture would provide additional food as needed. Standard ARC registration forms were available and their use was demonstrated. A nursing station was established by a registered nurse and signed medical protocol procedures were in place. Crisis counseling could be provided by Department of Health Services personnel. Physically handicapped evacuees could be adequately accommodated at the facility. Ambulance and hospital services were readily available. Twenty-four hour capability was demonstrated by the availability of staffing rosters.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment, vehicles, and for waste disposal was demonstrated. This facility was large enough to accommodate the number of emergency workers expected. There was adequate parking for both contaminated and uncontaminated vehicles. Additionally, traffic patterns were established to prevent cross contamination. Systems were in place to minimize the contamination of clean personnel and equipment by unclean equipment and personnel. The trigger point for decontamination was known by all staffers.

Issue: None.

(4) Washington County

(a) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. Initially, the ECLs were received from PEMA; however, as the exercise progressed, the Western Area Office furnished information on ECLs and PAs as required. ECLs and PAs were prominently displayed and the staff was aware of the current ECL at all times. The county EMC and staff made extensive use of the ECL-based checklists to guide their emergency responses.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. County EOC staff members were placed on standby at the Alert and activated at the SAE per the county plan. Current written call lists were used to alert and mobilize the staff in a timely manner. Many staff members elected to come to the EOC during the Alert phase. The EOC was fully staffed, with the exception of the Police and Fire Department representatives who were advised by the County EMC not to participate in the exercise. According to the Commonwealth of Pennsylvania, historically, there has been little or no activity requiring fire and police input during nuclear power plant exercises. As a result, the county EMC excused them from participating. RACES operators and monitors were dispatched to the reception and mass care center at the appropriate time. It should be noted that the county maintains resource books with very extensive listings of trained, available volunteer staff members who can be called upon when needed. For example, there are over 100 trained radiological monitors. In addition, there are numerous alternates for the EOC staff, typically four for at each position. These lists are maintained both on the computer and in hard copy and are updated continuously.

Issue: The County EMC elected to advise representatives from the Police and Fire Department not to participate in the exercise. Therefore, those representatives were not present during the exercise. (BVX92-20R)

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The County EMC was effectively in charge of response operations. A copy of the plan was available for reference, and the EMC and staff made extensive use of the procedures to guide their actions. Informational messages from PEMA, such as EBS announcements and news releases, were copied and distributed as appropriate. There were informal staff briefings which facilitated the EMC and staff

coordination activities. The ARC representative was in touch with ARC personnel at other locations to coordinate the implementation of mass care. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The county had extensive primary and back-up communications capabilities including: 15 commercial telephone lines, seven of which were unpublished to permit use for outgoing calls; one mobile (vehicle mounted) and two portable cellular telephones; PEMARS, VHF high and low band radios for police, fire, EMS, and hospital communications; ECOMM satellite computer link; RACES two-meter and packet computer systems; two facsimile machines; and a mobile communications van with most of the above systems. Through the use of these communications systems, the county was able to communicate with PEMA, other affected counties and organizations, and the reception and mass care centers. No communication problems were experienced during the exercise.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The EOC was located in the County EMC office area. The facility had adequate space, furnishings, and supplies to meet the needs of the staff. Displays included a status board which was updated periodically, county maps, and plume EPZ maps with evacuation routes marked. Listings of TCP, reception center, and mass care shelter locations were available in the plan. The facility had a back-up power supply (generator), but it could not be demonstrated without affecting the entire County Building. Access to the EOC was controlled. The County EOC had an outstanding computer capability including EIS, "Watson", and other computer software to aid operations. Using the computer, the county can, among other things: maintain and update response resource lists; automate telephone notification of staff; generate maps showing reception center and mass care center, locations, and routes from one to another; and estimated travel times, traffic loads, and optimal routes for evacuation traffic.

Issue: Although an adequate back-up generator was available, it was not actually demonstrated for 30-90 minutes. (BVX92-20I)

b) Reception/Mass Care/Decontamination Centers

Objective 2: The ability to fully alert, mobilize, and activate personnel was adequately demonstrated. Staff members at the EOC used a current alert list to telephone the required staff members in order to mobilize and activate their respective centers during the demonstration window.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was demonstrated. The communication systems of both the reception center and the mass care center, located respectively at the Washington County Fairgrounds and Trinity High School, functioned at all times. RACES was available and there were commercial telephones at both the fairgrounds and Trinity High School. Communications equipment included AM and FM radio, with low band and high band; the UHF radio from the hazard materials vehicle at the reception center; and Packet radio with computers. No delays or breakdowns in communications were observed. Both locations could communicate with the Washington County EOC and each other, as well as with other locations through the RACES network. The personnel monitoring and congregate care center was located in Trinity High School. Communications were provided by RACES operators who were set up in an anteroom adjacent to the gymnasium.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Equipment and supplies were at the Washington County EOC and at the Washington County Health Center near the Washington County Fairgrounds Reception Center. Supplies present at the Washington County EOC included about 125 TLDs supplied by PEMA, and about 125 bottles of KI. Dosimeters were kept at the health center. Simulated TLDs were used by emergency workers during the exercise. The Washington County radiological monitoring team at the reception and vehicular decontamination location, which was outside the 10-mile EPZ, consisted of two members, each of whom had a 0-200 R direct reading dosimeter (CD V-742 dosimeter). Team members indicated that the dosimeters had been zeroed, but several had readings substantially above zero at the time of the evaluation. The team had instructions and exposure record forms; however, the forms were not completely filled out. A member of the team was aware of the exposure authorized for the mission (5 R) and whom to contact for authorization to incur excess exposures. A similar situation prevailed at the Trinity High School monitoring and congregate care center, where another monitoring team also demonstrated similar equipment.

Issue: Washington County reception center and mass care emergency workers did not zero all their dosimetry and several exposure record forms were not completed. (BVX92-21R)

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The Washington County Fairgrounds served as the registration and vehicular monitoring and decontamination facility. In this jurisdiction, evacuee monitoring and decontamination were conducted at a separate location Trinity High School. The reception center at the fairgrounds served as a point from which to direct evacuees to the appropriate mass care center, using strip maps (which were to be distributed to each evacuee) as a means of taking a preliminary count of evacuees. A two member vehicle monitoring team demonstrated vehicle monitoring for a single vehicle at the fairgrounds. A two-member evacuee monitoring team demonstrated evacuee monitoring at Trinity High School. The team employed suitable survey meters and monitoring techniques relative to the body areas to be monitored and scanning speed and distance. Many activities were simulated and discussed. One individual was routed through the monitoring and decontamination station. Separate personnel traffic routes lead to the showers for men and women. Contaminated clothing would be bagged and tagged and personal possessions additionally tagged. Clean clothing would be issued from county stores. Clean and decontaminated evacuees would be routed into the main gymnasium room, where a registration table was set up. Evacuees would be registered using standard procedures established by the ARC.

Issue: None.

Objective 22: The facilities, equipment, and personnel for congregate care of evacuees were adequately demonstrated. Trinity High School in Washington County provided a large and modern facility that could adequately support the care of 2,700 evacuees. The ARC operated and managed the mass care center with support from the Washington County Emergency Management Agency and RACES. In the event that this shelter capacity was exceeded, the next shelter would be opened from a list of available facilities in the county. Evacuees would be monitored and decontaminated as needed on entering the high school. Then they would register, using standard procedures and ARC forms. The ARC had set up cots, food, and beverages for the demonstration. The shelter manager, a nurse, and two additional ARC personnel were on hand, in addition to the RACES and other staff. Handicapped individuals had adequate access to school facilities, as was verified by an observer, herself handicapped, from another Pennsylvania County. The nurse was able to contact other ambulance and hospital services as needed. It was noted that the Washington County EOC maintained an excellent database of all congregate care facilities in the county and had the ability to

produce strip maps for routing evacuees between the reception area and each congregate care facility.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment, vehicles, and for waste disposal was adequately demonstrated. The facility was sufficient in size to accommodate a number of emergency workers. Adequate parking was available for both contaminated and uncontaminated vehicles and the parking areas were separate to prevent cross contamination. Systems were also in place to minimize contamination of clean personnel and equipment by unclean equipment and personnel. The trigger point for required decontamination was known by all staffers. The staff used appropriate monitoring instruments and monitoring procedures. If a person, piece of equipment, or vehicle was contaminated, a record was completed.

Issue: None.

2. State of West Virginia

a. State Entities and Functions

(1) State Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The State EOC was notified of all ECL changes by the staff of the Beaver County EOC. The West Virginia State EOC Coordinator, in concert with the State Director, advised staff members of each change in the ECL. The current ECL was permanently displayed on a status board in a timely manner. Verification of the ECLs was accomplished in accordance with the plan. Throughout the course of the exercise, the EOC staff demonstrated its knowledge of the current ECL through the implementation of required emergency responses.

Issue: None.

Objective 2. The ability to alert, mobilize, and activate personnel was adequately demonstrated. At the Alert ECL, staff members used a checklist and a recently updated roster of emergency staff members to ensure that all appropriate personnel were alerted, mobilized, and activated. After verification of the Alert ECL, two Office of Emergency Services (OES) Operations Officers immediately began the call down by telephone. Also, an air sampling team was dispatched (simulated) at the Alert ECL. At the SAE, an additional OES Operations Officer assisted in the notification process. Emergency personnel were alerted, mobilized, and activated in an efficient, effective, and timely manner. Since the EOC is routinely manned from 0800 hours through 1700 hours, Monday through Friday, the normal operating staff members were in place at the time of the NOUE. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency response at the West Virginia State EOC was adequately demonstrated. The State EOC Coordinator, working in concert with the State Director, provided excellent direction and control throughout the exercise. Upon the coordinator's arrival at the EOC, a staff briefing was conducted which provided current emergency information. Thereafter, briefings were conducted on a regular basis throughout the exercise, including after each ECL change. After each briefing, staff members were queried by the State Director and/or the EOC Coordinator with respect to any questions or additional input. There was excellent interaction among all staff members. Logs were kept of all incoming

outgoing, and internal messages. The messages were copied, and made available for staff members' review. The operations staff did an excellent job of quickly recording the emergency information and posting it on the EOC status board. The protective action decision to evacuate was effectively coordinated with all appropriate organizations. The staff members were quite knowledgeable of their duties and responsibilities as outlined in their plan, which was provided to each staff member for reference.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary means of communication was by telephone. Facsimile and RACES served as the back-up communications systems. There were 10 incoming and eight outgoing telephone lines and two facsimile machines, one for incoming and one for outgoing messages. Conference capability was available via the telephones. In addition, there was a direct line to the BVPS and an unlisted telephone line was reserved for communication between the West Virginia Department of Health representative in the EOC and the department's representative on site at the BVPS. HF and VHF radios and a "packet" radio operated by RACES operators were available in the EOC Communication Center. Cellular telephones and mobile communications units with a low band FM radio were available in the EOC vehicles. Additional radio communications were available from the West Virginia National Guard, the Department of Highways, the Department of Natural Resources, and the Department of Public Safety. The EOC communicated with all State agencies, County EOCs, field monitoring and sampling teams, BVPS, and the Pennsylvania and Ohio Emergency Management Agencies. The RACES operators demonstrated two back-up communications systems, the HF radio and "Packet" radio. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Adequate space and furnishings were available at the State EOC to accommodate all staff members. Ventilation and lighting were excellent and the noise level was low. The back-up power generator was tested and was operational. There were separate rest room facilities for men and women which included a shower facility. The EOC was equipped with typewriters, computers, a facsimile machine, and copying equipment. A completely equipped kitchen which contained a number of microwaves and ovens was available. One cot was available at the EOC. However, during an emergency, additional cots could be secured from the West Virginia National Guard and ARC. Access to

the facility was controlled by a security officer and, upon entering the EOC, photo identification and sign-in were required. The EOC was equipped with the required emergency planning maps and additional detailed maps of Hancock, Brooke, and Ohio Counties. Status boards containing ECLs, protective action decisions, and weather data were correctly updated in a timely manner and positioned for high visibility by all staff members. However, times shown on status board could be misinterpreted and not clearly understood by all staff members, since there were no headings showing "Time Declared" and "Time Received" at the EOC.

Issue: Times shown on status boards may not have been clearly understood by all staff members since the times shown were not specified as "Time Declared" or "Time Received". (BVX92-21I)

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Hancock County EOC contacted the West Virginia EOC and requested approval to sound the sirens and broadcast an EBS message which stated, "...No action necessary at this time. Stay tuned to EBS for further announcements...." The Director of the State OES approved the action and instructed Hancock County, West Virginia to coordinate the action with Columbian, Ohio and Beaver County, Pennsylvania.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The scenario did not drive a projected or measured thyroid dose high enough for emergency workers to take KI. However, from discussions with the staff, it was evident that staff members were knowledgeable of the procedures and requirements for taking KI.

Issue: None.

Objective 26: The ability to identify the need for and call upon Federal and other outside support agencies was adequately demonstrated. The Director, West Virginia EOC, requested a fly over of the affected area by the DOE to define a footprint of the affected area after the radioactive release from the BVPS terminated. The request for the DOE fly over was made through FEMA, Region III. If requested or required, the West Virginia EOC was prepared to provide housing for Federal personnel and refueling for the aircraft. Relevant functions and activities were implemented in a manner that was consistent with the plan.

Issue: None.

(2) Public Information Center

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification was adequately demonstrated. The second EBS message, received by the West Virginia EOC from the Hancock County Director, stated that Hancock County would sound the sirens and broadcast an EBS message in conjunction with Ohio County and Beaver County to evacuate the 10-mile 360° EPZ for the BVPS. Hancock County was instructed to sound the sirens and follow up with an evacuation EBS message. This action was accomplished within the required time frame. The formation and development of PA information was accomplished by the State assessment team, and the State EOC provided guidance to the counties. The State PIO disseminated information to the public through the JPIC State representative. The PIO was present at all briefings and used briefing information, as well as status board entries and message traffic, to develop press releases. The West Virginia OES Director approved all press releases. The information was released in a timely manner, and a log of all releases, along with copies of the individual releases, was maintained. The media was briefed in the EOC media briefing room. Maps and copies of the press releases were used and distributed. The PIO received facsimile copies of all press releases from the JPIC and Hancock County PIO.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. The Governor's Press Secretary had the responsibility for this function and placed two representatives in the EOC. These representatives were included in all briefings, given copies of all messages, and had a clear, unobstructed view of the status boards. They had direct access to the Operations Chief and West Virginia OES Director and were in constant telephone contact with the JPIC and the Hancock County PIO. Also, they received facsimile copies of all JPIC and Hancock County press releases. The media was briefed in the EOC Media Briefing Room adjacent to the EOC. The briefings were given by Press Secretary representatives who had developed the briefings from current information gathered in the EOC. The representatives provided timely, accurate information, including PARs, in clear, non-technical terms. Maps were used, and copies of the press releases and maps were distributed. All press releases prepared by the representatives were approved by the State Director prior to their release. A log and copies of all press releases were

maintained. The relevant functions and activities of this objective were implemented in a manner consistent with the State's plan.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The rumor control telephone number was the EOC telephone number, which had an eight-line rollover capability. The number was publicized in all West Virginia OES postings and brochures. Rumor control calls were received at the operations desk in the EOC, where the nature of the inquiry was determined and then the call was routed to the appropriate staff member. Telephone calls of a general nature were routed to the PIO staff. The rumor control staff was included in all briefings and given copies of all messages. The PIO staff had an unobstructed view of the status boards and direct access to all EOC staff including the Director West Virginia OES and the Chairman of the State Assessment Team. The PIO staff members attended meetings of the State Assessment Team and were in telephone contact with the JPIC and the Hancock County PIO. There were eight incoming lines and an additional eight lines for outgoing calls. The Director, West Virginia OES authorized all releases of information. An actual rumor control call, initiated by an evaluator, was handled appropriately by the staff. The relevant functions and activities for this objective were implemented in a manner that was consistent with the State's plan.

Issue: None.

(3) Accident Assessment

Objective 10: The ability, within the plume exposure pathway, to project dosage to the public via plume exposure based on plant and field data was adequately demonstrated at the West Virginia EOC by the Bureau of Health Accident Assessment Team. The calculations were made using a lap-top computer (battery power back-up) with the modeling code (an in-house customized program) stored on the disk. Also, a desk-top computer was available as back-up. Plant status information was promptly provided and new dose assessments were made as additional information became available. Projected plumes were sketched on maps of the plume exposure zones. Field monitoring teams were deployed to establish the plume boundaries and radiation levels. The field team data, as well as the plant data, was compared with the projected dose rates. Wind shifts, which are common in the valley, were considered when establishing the potential plume exposure area. All relevant activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 11: The ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates, and other relevant factors, was adequately demonstrated. Following a PAR from the utility, discussions were held regarding potential dosage, population density, and shelter availability. Support personnel were alerted and a conference call with the adjoining State EOCs ensued. During this call, a final decision regarding implementation was made. Following this decision, the PA (evacuation of a 10-mile zone, 360°) was implemented without delay. All relevant functions were implemented in a manner consistent with the plan.

Issue: None.

(4) Field Air Monitoring Team

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The State field air monitoring team for West Virginia was pre-positioned at the Hancock County EOC per the pre-exercise agreement. The field monitoring team "leader" had to fill the positions of both field team leader and field team coordinator at the Hancock County EOC. The original assigned field team coordinator had undergone medical treatment and was on medical leave. No back-up personnel had completed training, although health physics personnel were being trained at the time. There was a lack of trained personnel available at the time to fill the position. The field team was dispatched for samples at 1830 hours. The field team leader demonstrated the field team operation along with the Hancock County Sheriff's Deputy. The Sheriff's Deputy was a member of the sampling team, participating as the driver and locator of the sampling locations. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: The lead member of the field monitoring team was required to fill both his regular position and the field team coordinator's position because of medical problems affecting the field team coordinator. There were no back-up personnel available at the time to fill the field team coordinator's position. In a real emergency, he would be unable to fill both positions. (BVX92-22R)

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communications system consisted of the Hancock County Sheriff's Radio System (located in the squad car and used as a field team vehicle) and the telephone (911 number which rings in the sheriff's office at the Hancock County EOC). The radio had a communications link with the field team coordinator, the

Sheriff's Office, and all 911 emergency channels. The radio was able to handle all communications without undue delays. During this exercise, there were no breakdowns in the communications systems. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker who entered the plume EPZ had a TLD (simulated), two direct-reading dosimeters (0-200 mR and 0-20 R), and an exposure record form (hand written) which was properly completed. Team members were aware of the exposures authorized for the mission and whom to contact if the exposure level was exceeded. There were dosimeter chargers available for the team members. Appropriate instructions were issued regarding the dosimeter's use and how often to read and record the dosimeter readings. The field team leader would contact the field team coordinator if he received an exposure higher than the 5 R authorized mission exposure limit. The relative functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. The team had both high range (CD V-715) and low range (E-120, GM and HP 210 probe) instruments. Also, the team had access to approximately 75 recently calibrated back-up instruments (CD V-700 and CD V-715) which were stored in the Hancock County EOC. Both battery and source checks were performed during operational checkout of these instruments. The detector probes were enclosed in plastic bags and both the Beta and Beta-Gamma readings were made at waist high, at or near ground, and six foot levels for plume verification determination. The readings were properly logged as they were obtained and promptly transmitted to the field team coordinator. The teams were able to find and arrive at the monitoring locations promptly and were knowledgeable of the monitoring and sampling procedures. Procedures were available for I-131 calculations. There were still errors present in the plan for West Virginia, such as referring to the Barium-133 source at the top of the sheet as a Barium-100 source. (See Annex 15, Section XI, Tab B, I-131 Sample, X-1-13-1.) Prior issue BVX90-28R was resolved since the team's supply of instrumentation, equipment, and supplies was in agreement with the plan. There was a form in the kit for recording field data and dosimeter readings. The relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: Annex 15, Section XI, Tab B, of the West Virginia plan erroneously states that a Barium-100 source should be used for setting the threshold window on one channel of the Ludlum dual channel analyzer instead of a Barium-133 source. (BVX92-23R)

Objective 8: The ability to demonstrate the appropriate equipment and procedures for the measurement of airborne radiiodine concentrations as low as 10^{-7} (.0000001) microcuries per cc in the presence of noble gases was adequately demonstrated. The team used the monitoring equipment identified in the organization's plan. The power supply for the air pump was a direct hookup to the car battery and a converter was used for the Ludlum Model 2218 dual-channel analyzer's power supply. A supply of silver zeolite filters was sealed in plastic and available for I^{131} sampling, but a charcoal filter was used for demonstration purposes. Air samples were obtained using the proper flow rate and sample duration. A Barium 133 source, recently calculated, was on the vehicle and the Ludlum 2218 dual channel analyzer was available and used to count the sample after it had been purged in a low background area. The sample compartments were properly bagged and tagged with the time, date, location, and individual sampler's name. Fixed reproducible geometry was used during the counting of the sample and the count rates were promptly transmitted to the field team coordinator. The relevant functions and activities were implemented in a manner that was consistent with the organization's emergency plan and procedures.

Issue: None.

Objective 9: The ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses was adequately demonstrated. The field air monitoring team simulated the transportation of the sample, but the Hancock County Sheriff Deputy would transport the sample to the Jefferson County (Ohio) Emergency Services Office. They would in turn arrange for delivery to Emergency Services' Laboratory in Columbus, Ohio, for analysis. The field team coordinator would set up the initial arrangement for the transportation of the sample. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan and the expected demonstration described in the extent-of-play. Prior issue BVX90-27R was resolved by the above simulation of the sample being transported by the Hancock County Sheriff's Deputy to the Jefferson County (Ohio) Emergency Services Office and the arranged delivery of the sample to the Emergency Services' Laboratory in Columbus, Ohio, for analysis.

Issue: None.

b. Risk County - Hancock

(1) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs, as required by the scenario, was adequately demonstrated. The Hancock County EOC staff used the ECLs. The EOC was notified of ECL changes by a telephone call from the BVPS on a dedicated telephone line. Notifications received from the utility were immediately verified by the Emergency Services Director (ESD) using a code word. Upon notification, the current ECL was prominently displayed at the front of the operations room and the staff was briefed accordingly. At each ECL change, the ECL sign was removed and replaced with a different color sign showing the new ECL. The ECL signs were visible to all staff, except the RACES staff located on the second floor. However, the RACES staff was immediately notified of the ECL changes by messages sent by the ESD to the message center and then by runner to the RACES staff. The relevant functions and activities were implemented according to the county's plan.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. At 1530 hours, the Hancock County ESD and the Deputy began to call the EOC staff members and request that they report to the EOC. An up-to-date call list was used. Shortly thereafter, everyone on the call list was contacted and messages were left for the two individuals who had not been contacted. Within several minutes these two individuals contacted the EOC and they were requested to report to the EOC. At no time were any EOC staff members deployed to other locations. In accordance with the plan, the EOC staff members maintained communications with their field personnel and dispatched resources when needed. The relevant functions and activities for this objective were implemented in a manner that was consistent with the county's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Hancock County ESD was effectively in charge of the emergency response activities. Staff briefings were held by either the ESD or the Operations Officer at ECL changes and other significant events. On several occasions, meetings were called by the ESD in order to receive input from the staff on important issues requiring a coordinated decision making effort. Copies of the emergency response plan and procedures were available for immediate reference and use by staff members. All incoming and outgoing

messages were recorded on four-part message forms; the messages were then picked up by message center runners, and logged by the message center coordinator for tracking and distribution to appropriate staff for action. The message center coordinator monitored the log to ensure that messages requiring follow-up action were responded to in a timely manner. The relevant functions and activities were implemented according to the county's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Hancock County primary communications system was the commercial telephone. The types of communications equipment available at the EOC were nine commercial telephone lines, Beaver Valley Dedicated Hot Line, Hancock County Sheriff's Network, Emergency Medical Services Network, and RACES. Also, the county had two copiers and a facsimile machine to enhance its message center operations. Additionally, the EOC had communications links with the West Virginia State Police, West Virginia State Department of Natural Resources, Fire Departments, West Virginia State Department of Highways, West Virginia State Parks Services and local fire departments and the Sheriff's reserves. The primary communications system was able to handle the communications traffic without delays. There were no communications systems breakdowns; therefore, back-up communications systems were not demonstrated. The relevant functions and activities were implemented consistent with the organization's plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The EOC contained sufficient space, furnishings, lighting, restrooms, ventilation, and back-up generator. In addition, the EOC possessed, or had available, a typewriter, computer, copier, facsimile machines (two), kitchen supplies, and 700 stored cots, sufficient to support emergency operations. Access to the facility was controlled by the police. Several maps were used at the EOC. These maps included plume EPZ maps, ingestion EPZ maps, and other maps depicting evacuation routes, emergency response planning areas, and radiological monitoring points. The status boards were positioned in locations throughout the EOC where the boards were easily viewed by the staff. Information displayed on the status boards included ECLs, protective action decisions, weather data, and plant conditions. All status boards were updated in a timely manner. The relevant functions and activities for this objective were implemented in a manner that was consistent with the county's plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The Hancock County EOC was located outside of the 10-mile EPZ, so dosimetry was not required for the EOC staff. However, the Hancock County EOC had a sufficient supply of non-self-reading dosimeters (simulated) to provide to each emergency worker. Also, emergency workers had access to two direct-reading dosimeters and a dosimeter charger for their immediate use. The ranges of these dosimeters were 0-20 R and 0-200 R. The Hancock County Radiological Officer briefed the EOC staff and emergency workers on the proper use of dosimeters and chargers and how to ingest KI if authorized. The RO had a list in the radiological cabinet showing the calibration dates and the number of radiological instruments available in the county inventory. All individuals were aware that 5 R was the authorized exposure for their mission. Also, the Hancock County EOC staff and emergency workers knew whom to contact for authorization to incur exposures in excess of the EPA PAGs or whom to contact if they received an exposure higher than authorized. Activities and functions were implemented in accordance with the organization's plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. At SAE, the ESD coordinated with the other affected counties in the EPZ, Beaver County, Pennsylvania, and Columbus County, Ohio, to activate the sirens and broadcast a general EBS message. Also, the ESD notified the fire station personnel to initiate route alerting at each siren activation to ensure coverage of the entire population within the Hancock County portion of the EPZ. All procedures were executed in accordance with the plan.

Issue: None.

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. At the GE, the county received word from the State of West Virginia, in coordination with the Commonwealth of Pennsylvania and the State of Ohio, to activate the sirens and disseminate an EBS message calling for an evacuation of 360 degrees around the BVPS out the ten mile EPZ boundary. The county disseminated the evacuation PAR via EBS. The EBS message used familiar landmarks to outline the geographic boundaries of the area to be evacuated, where evacuees should go for shelter and what route evacuees should take, what they should take with them, and how to provide for the care of their pets and farm animals. Logs were maintained of all messages and information released to the public. Copies of all

messages were distributed to the EOC staff. Radio and television broadcasts were monitored. All procedures were carried out in accordance with the county's plan.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. Representatives of the media were not required to be briefed at the Hancock County EOC. Instead, two PIOs were dispatched from Hancock County to the JPIC to act as liaison and assist with media briefings. The ability to provide adequate news releases in a timely manner was demonstrated and media briefings were handled by the JPIC, in accordance with the Hancock County Emergency Response Plan, Annex K, page K-2, paragraph 6. A log of press releases was maintained and copies were distributed to decision makers and other involved personnel. Radio and television broadcasts were monitored to ensure message accuracy.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. A rumor control person was in place and answered a special rumor control line. A rumor that the mass care center was open (before it had actually been opened) was received and forwarded to the JPIC. The fire radio system was used to inform the emergency workers that the mass care center was not open. There were eight incoming and outgoing telephone lines which were dedicated to rumor control. All procedures were carried out in accordance with the county's plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision was made, if necessitated by radioiodine releases, was adequately demonstrated. The decision not to administer KI was made and the RO made the announcement that KI was not authorized or needed. However, the RO gave a informative briefing on KI, including its possible side effects, to the EOC staff and emergency workers. Adequate supplies of KI were available. Procedures for distribution and potential use of KI were followed in accordance with the county's plan.

Issue: None.

(2) Route Alerting

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The 911 dispatcher used a current call-down list to notify the personnel activated for the emergency. The staff was mobilized at the Alert phase according to the county plan. The individual in charge determined that additional personnel were needed to perform route alerting, so he called the Hancock County EOC for assistance. Five additional people from the Manchester Volunteer Fire Department (VFD) were notified by the EOC and promptly responded. Additionally, four Newell VFD staffers were dispatched to conduct the route alerting at the appropriate time. All functions were carried out in accordance with the plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Newell VFD van was equipped with a mobile base radio, and public address system for announcing messages without leaving the vehicle. Hand-held radios enabled personnel to communicate as needed while performing duties away from their vehicle. Communication links were established with the base station, other county fire stations, the Hancock County EOC, and area hospitals. The primary communication system was able to handle the communication traffic without any delays. The back-up communication system was demonstrated and functioned properly. All activities were carried out in accordance with the plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. During the briefing, the RO issued dosimeters to emergency workers consisting of TLDs, a CD V-730, and a CD V-742 dosimeter and gave instructions on the equipment's proper operation. The RO ensured that dosimeters were zeroed and that the results were recorded for each person. Additionally, the emergency workers were instructed to check and record the dosimeter readings every 30 minutes. One individual was responsible for recording dosimeter readings and he used a timer set every 30 minutes. Fireman at the base station called route alerting personnel in the field every 30 minutes to remind them to read their dosimeters and call in their readings. Exposure charts for each individual were maintained and updated at the fire station. Also, two chargers, four CD V-715, two CD V-700 and sufficient KI were located at the fire station. Personnel were aware of exposure authorized for

the mission (5 R) and what to do if a higher exposure occurred. All activities were carried out in accordance with the plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Newell VFD demonstrated its ability to disseminate an instructional message to the public within the specified time frame. At the SAE and GE, two route alerting teams were dispatched. Lists of special needs individuals (hearing-impaired, sight-impaired, transit-dependent, etc.) are updated annually. Route alerting teams had maps and copies of an instructional message to be given to residents and announced over the public address system. Route alerting teams knew their routes, the community, and its needs. All functions were carried out in accordance with the plan.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) was adequately demonstrated. Current lists of special needs individuals were available and up-to-date. Index cards contained the exact needs, i.e., in-person contact, phone call requested, transportation, etc. One advisory and one PA were issued at the SAE and GE, respectively. All functions were carried out in accordance with the plan.

Issue: None.

(3) Traffic and Access Control

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. According to the plan, the Hancock County Sheriff's Reserves were placed on standby at the Alert and mobilized at the SAE. The Hancock Law Enforcement Officer notified the Sheriff's Reserves, using the call-down list, and informed the reservists to be prepared to report to the Hancock County EOC for emergency assignments. Because the TCP/ACPs were actually demonstrated out of sequence, reserves were mobilized at the Alert. Notification of all personnel was timely and in accordance with the plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Sheriff's Reserve Officers had portable hand-held radios that enabled the officers to communicate with other agencies while away from their vehicles. The police vehicle had a mobile unit which had communication links with the Highway Department,

Sheriff's Office, Hancock EOC, and the Weirton Police Department. No delays in communication were experienced. All communication systems were demonstrated and worked properly. All relevant functions were carried out in accordance with the plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. One Sheriff's Reserve Officer was assigned to do traffic and access control. He had received the monitoring equipment at the EOC when he reported for duty. The equipment consisted of two dosimeters, one CD V-730 (0-20 R) and one CD V-742 (0-200 R), a dosimetry charger, one battery, a TLD badge, a bottle of KI, written instructions stating that dosimeters should be read every 30 minutes, and the dosimeter readings record. The officer knew the limits of exposure authorized (5 R) for the activity and when to call the EOC if a higher exposure was received. Activities were carried out consistent with the plan.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. One Sheriff's Reserve Officer and one trainee were assigned to a predetermined TCP/ACP at the intersection of West Virginia Routes 2 and 208 according to the plan. The team arrived in a timely manner (demonstrated out-of-sequence) and was aware of the PAs, areas evacuated, evacuation routes, and relocation centers. The communication equipment on hand ensured that the officers could receive instructions from the Hancock County EOC. The officers knew what to do, when to do it, and whom to contact for further instructions. All activities were carried out in accordance with the plan.

Issue: None.

(4) Emergency Worker Decontamination/ Reception Centers

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Personnel from the Weirton VFD and New Cumberland VFD were alerted by the EOC staff using pagers. Twenty-one volunteer fire fighters responded. This staff was deployed to several locations between 1600 and 1730 hours. All functions were performed at the New Cumberland

Fire Station. The mobilization process was carried out in accordance with the Hancock County plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary communication system for the fire personnel was the Hancock County Emergency Fire Network. Additionally, this communications system was supported by the emergency and ambulance services, telephone, and the Plextron Tone Alert System. RACES was used as back-up. All communication systems, including the back-up system, functioned without delays. All communication functions and activities were consistent with the plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker was issued a TLD, CD V-730 (0-20 R) and CD V-742 (0-200 R) dosimeters, instructions on how to read them, and the need to read them every 30 minutes. The self-reading dosimeters (TLD) were collected by the County RO for reading after the mission. All exposure readings were documented. Additionally, a charger was available, dosimeters were zeroed, and initial readings recorded. The emergency workers stated that their authorized exposure limits were 5 R unless otherwise instructed. An exposure exceeding the established limit was to be reported to the county Office of Emergency Services. Individual exposure should not exceed 25 R, except in life-saving situations. Emergency worker exposure control was implemented in accordance with the plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision was made, if necessitated by radioiodine releases, was adequately demonstrated. Simulated KI was issued to emergency workers along with their dosimetry and instructions not to take KI unless directed to do so by the County OES. The decision on whether to authorize KI was made by the West Virginia State Health Department and transmitted to the counties. The decision was made during this exercise to not authorize KI.

Issue: None.

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The staff arrived at the reception center in a timely manner. The

center was coordinated by the Weirton VFD which provided its management and personnel to direct traffic, interview and provide information to evacuees, and conduct radiological monitoring of vehicles. The Sheriff's Reserve Officers provided security. Additionally, RACES and Weirton Community Radio Watch provided communications. Evacuees arriving at the reception center were supplied with a packet containing registration forms and directions to the mass care center and their vehicles were checked for contamination. If contamination was found, the vehicle was marked with a green pencil and sent to the mass care center for decontamination. Vehicle monitoring was demonstrated by the staff using a fire truck. The 1992 Weirton VFD SOP Attachment 1, Reception Center, listed 34 radiological monitors, thus indicating that there was adequate personnel to process all evacuees. Evacuees were sent to the Milltop Community Center for decontamination. If the center was filled to capacity, then the evacuees were directed to other mass care centers by the Red Cross. The parking area was large enough to accommodate about 100 cars waiting in line to be monitored. All relevant functions and activities were performed according to the Hancock County plan.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment, vehicles, and for waste disposal was adequately demonstrated. About 500 emergency workers could possibly be expected to be monitored and the emergency worker decontamination facility at the New Cumberland Fire Station was large enough to accommodate them. Parking was available for about 100 vehicles. The parking lot could be divided into two areas, one for contaminated vehicles and the other for clean vehicles. A system was in place to keep potentially contaminated personnel and equipment separated from clean personnel and equipment. Monitoring and decontamination of an emergency worker was demonstrated. The monitor wore a protective suit and used a CD V-700 detector with the probe covered with a plastic bag to take the readings. Proper procedures were followed during monitoring, and the results were recorded. A reading of 1.75 R was simulated at the hand. The worker was instructed to wash his hands in the designated area. After his hands were washed, the reading was repeated and found to be zero (background). Vehicle monitoring and decontamination were demonstrated by another team. It took about three minutes to monitor the vehicle. A fast and effective high pressure fire hose was used for decontamination. The decontamination facility staff had direct communication links with ambulances and other emergency services if further assistance was needed. All decontamination procedures were carried out according to the plan.

communications delays or breakdowns at either location and voice communication with the county EOC and other agencies was successfully demonstrated.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each member of the team was issued a 0-200 R self-reading dosimeter that was zeroed at the time of issue. Team members were instructed to read their dosimeters every 30 minutes and to record the readings in their personal exposure log. Any increase in the reading of the dosemeter was to be reported to a supervisor. TLDs and KI were available at the county EOC. Radiological background readings were taken prior to monitoring activities and the monitoring team was aware that 5 R exposure was the limit for this activity.

Issue: None.

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The reception center was located in a shopping center approximately one mile from the mass care center. The function of the reception center was to direct evacuees to the mass care center through the use of strip maps which were issued to each occupant of a vehicle. This method served as a counting system to control mass care center occupancy. Evacuee monitoring was accomplished by three members of the Union Township Fire Department using CD V-700 instruments that had been calibrated. Monitoring took place at the school's front entrance, which was adjacent to separate male and female shower rooms. Monitoring and decontamination forms were completed for each evacuee. Decontamination was supervised by the County Radiological Officer and his assistant. The RO had available an additional list of trained monitors who could be called to duty as needed. Procedures to segregate contaminated and non-contaminated evacuees were demonstrated. Provisions to bag, tag, and dispose of contaminated clothing were discussed. Clean clothing for decontaminated evacuees would be issued by the ARC. Clean evacuees would be escorted to the mass care registration point where mass care center registration would be accomplished by ARC personnel. If a contaminated vehicle was found, it was identified with a placard and sent on to the decontamination center for further monitoring and decontamination. Adequate vehicle parking for both contaminated and decontaminated vehicles was available at the mass care center.

Issue: None.

Objective 22: The facilities, equipment, and personnel for congregate care of evacuees were adequately demonstrated. The Union Township Middle and High School had the capability to accommodate the expected 700 evacuees. The ARC operates and manages the mass care center under a letter of agreement with the Union Township Middle and High School. Additional letters of agreement exist between the ARC and each school that could be activated should the need arise. Support to mass care sheltering was provided by the Lawrence County EMA, RACES, Department of Health Services, and Union Township Fire and Police Departments. The ARC had 250 cots immediately available in New Castle, Pennsylvania and could obtain additional bedding from other ARC resources. The facility had 32 toilets and 12 showers. The school cafeteria had food immediately available and the Pennsylvania Department of Agriculture would provide additional food as needed. Standard ARC registration forms were available and their use was demonstrated. A nursing station was established by a registered nurse and signed medical protocol procedures were in place. Crisis counseling could be provided by Department of Health Services personnel. Physically handicapped evacuees could be adequately accommodated at the facility. Ambulance and hospital services were readily available. Twenty-four hour capability was demonstrated by the availability of staffing rosters.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment, vehicles, and for waste disposal was demonstrated. This facility was large enough to accommodate the number of emergency workers expected. There was adequate parking for both contaminated and uncontaminated vehicles. Additionally, traffic patterns were established to prevent cross contamination. Systems were in place to minimize the contamination of clean personnel and equipment by unclean equipment and personnel. The trigger point for decontamination was known by all staffers.

Issue: None.

(4) Washington County

(a) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. Initially, the ECLs were received from PEMA; however, as the exercise progressed, the Western Area Office furnished information on ECLs and PAs as required. ECLs and PAs were prominently displayed and the staff was aware of the current ECL at all times. The county EMC and staff made extensive use of the ECL-based checklists to guide their emergency responses.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. County EOC staff members were placed on standby at the Alert and activated at the SAE per the county plan. Current written call lists were used to alert and mobilize the staff in a timely manner. Many staff members elected to come to the EOC during the Alert phase. The EOC was fully staffed, with the exception of the Police and Fire Department representatives who were advised by the County EMC not to participate in the exercise. According to the Commonwealth of Pennsylvania, historically, there has been little or no activity requiring fire and police input during nuclear power plant exercises. As a result, the county EMC excused them from participating. RACES operators and monitors were dispatched to the reception and mass care center at the appropriate time. It should be noted that the county maintains resource books with very extensive listings of trained, available volunteer staff members who can be called upon when needed. For example, there are over 100 trained radiological monitors. In addition, there are numerous alternates for the EOC staff, typically four for at each position. These lists are maintained both on the computer and in hard copy and are updated continuously.

Issue: The County EMC elected to advise representatives from the Police and Fire Department not to participate in the exercise. Therefore, those representatives were not present during the exercise. (BVX92-20R)

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The County EMC was effectively in charge of response operations. A copy of the plan was available for reference, and the EMC and staff made extensive use of the procedures to guide their actions. Informational messages from PEMA, such as EBS announcements and news releases, were copied and distributed as appropriate. There were informal staff briefings which facilitated the EMC and staff

coordination activities. The ARC representative was in touch with ARC personnel at other locations to coordinate the implementation of mass care. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The county had extensive primary and back-up communications capabilities including: 15 commercial telephone lines, seven of which were unpublished to permit use for outgoing calls; one mobile (vehicle mounted) and two portable cellular telephones; PEMARS, VHF high and low band radios for police, fire, EMS, and hospital communications; ECOMM satellite computer link; RACES two-meter and packet computer systems; two facsimile machines; and a mobile communications van with most of the above systems. Through the use of these communications systems, the county was able to communicate with PEMA, other affected counties and organizations, and the reception and mass care centers. No communication problems were experienced during the exercise.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The EOC was located in the County EMC office area. The facility had adequate space, furnishings, and supplies to meet the needs of the staff. Displays included a status board which was updated periodically, county maps, and plume EPZ maps with evacuation routes marked. Listings of TCP, reception center, and mass care shelter locations were available in the plan. The facility had a back-up power supply (generator), but it could not be demonstrated without affecting the entire County Building. Access to the EOC was controlled. The County EOC had an outstanding computer capability including EIS, "Watson", and other computer software to aid operations. Using the computer, the county can, among other things: maintain and update response resource lists; automate telephone notification of staff; generate maps showing reception center and mass care center, locations, and routes from one to another; and estimated travel times, traffic loads, and optimal routes for evacuation traffic.

Issue: Although an adequate back-up generator was available, it was not actually demonstrated for 30-90 minutes. (BVX92-20I)

(b) Reception/Mass Care/Decontamination Centers

Objective 2: The ability to fully alert, mobilize, and activate personnel was adequately demonstrated. Staff members at the EOC used a current alert list to telephone the required staff members in order to mobilize and activate their respective centers during the demonstration window.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was demonstrated. The communication systems of both the reception center and the mass care center, located respectively at the Washington County Fairgrounds and Trinity High School, functioned at all times. RACES was available and there were commercial telephones at both the fairgrounds and Trinity High School. Communications equipment included AM and FM radio, with low band and high band; the UHF radio from the hazard materials vehicle at the reception center; and Packet radio with computers. No delays or breakdowns in communications were observed. Both locations could communicate with the Washington County EOC and each other, as well as with other locations through the RACES network. The personnel monitoring and congregate care center was located in Trinity High School. Communications were provided by RACES operators who were set up in an anteroom adjacent to the gymnasium.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Equipment and supplies were at the Washington County EOC and at the Washington County Health Center near the Washington County Fairgrounds Reception Center. Supplies present at the Washington County EOC included about 125 TLDs supplied by PEMA, and about 125 bottles of KI. Dosimeters were kept at the health center. Simulated TLDs were used by emergency workers during the exercise. The Washington County radiological monitoring team at the reception and vehicular decontamination location, which was outside the 10-mile EPZ, consisted of two members, each of whom had a 0-200 R direct reading dosimeter (CD V-742 dosimeter). Team members indicated that the dosimeters had been zeroed, but several had readings substantially above zero at the time of the evaluation. The team had instructions and exposure record forms; however, the forms were not completely filled out. A member of the team was aware of the exposure authorized for the mission (5 R) and whom to contact for authorization to incur excess exposures. A similar situation prevailed at the Trinity High School monitoring and congregate care center, where another monitoring team also demonstrated similar equipment.

Issue: Washington County reception center and mass care emergency workers did not zero all their dosimetry and several exposure record forms were not completed. (BVX92-21R)

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The Washington County Fairgrounds served as the registration and vehicular monitoring and decontamination facility. In this jurisdiction, evacuee monitoring and decontamination were conducted at a separate location Trinity High School. The reception center at the fairgrounds served as a point from which to direct evacuees to the appropriate mass care center, using strip maps (which were to be distributed to each evacuee) as a means of taking a preliminary count of evacuees. A two member vehicle monitoring team demonstrated vehicle monitoring for a single vehicle at the fairgrounds. A two-member evacuee monitoring team demonstrated evacuee monitoring at Trinity High School. The team employed suitable survey meters and monitoring techniques relative to the body areas to be monitored and scanning speed and distance. Many activities were simulated and discussed. One individual was routed through the monitoring and decontamination station. Separate personnel traffic routes lead to the showers for men and women. Contaminated clothing would be bagged and tagged and personal possessions additionally tagged. Clean clothing would be issued from county stores. Clean and decontaminated evacuees would be routed into the main gymnasium room, where a registration table was set up. Evacuees would be registered using standard procedures established by the ARC.

Issue: None.

Objective 22: The facilities, equipment, and personnel for congregate care of evacuees were adequately demonstrated. Trinity High School in Washington County provided a large and modern facility that could adequately support the care of 2,700 evacuees. The ARC operated and managed the mass care center with support from the Washington County Emergency Management Agency and RACES. In the event that this shelter capacity was exceeded, the next shelter would be opened from a list of available facilities in the county. Evacuees would be monitored and decontaminated as needed on entering the high school. Then they would register, using standard procedures and ARC forms. The ARC had set up cots, food, and beverages for the demonstration. The shelter manager, a nurse, and two additional ARC personnel were on hand, in addition to the RACES and other staff. Handicapped individuals had adequate access to school facilities, as was verified by an observer, herself handicapped, from another Pennsylvania County. The nurse was able to contact other ambulance and hospital services as needed. It was noted that the Washington County EOC maintained an excellent database of all congregate care facilities in the county and had the ability to

produce strip maps for routing evacuees between the reception area and each congregate care facility.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment, vehicles, and for waste disposal was adequately demonstrated. The facility was sufficient in size to accommodate a number of emergency workers. Adequate parking was available for both contaminated and uncontaminated vehicles and the parking areas were separate to prevent cross contamination. Systems were also in place to the minimize contamination of clean personnel and equipment by unclean equipment and personnel. The trigger point for required decontamination was known by all staffers. The staff used appropriate monitoring instruments and monitoring procedures. If a person, piece of equipment, or vehicle was contaminated, a record was completed.

Issue: None.

2. State of West Virginia

a. State Entities and Functions

(1) State Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario was adequately demonstrated. The State EOC was notified of all ECL changes by the staff of the Beaver County EOC. The West Virginia State EOC Coordinator, in concert with the State Director, advised staff members of each change in the ECL. The current ECL was permanently displayed on a status board in a timely manner. Verification of the ECLs was accomplished in accordance with the plan. Throughout the course of the exercise, the EOC staff demonstrated its knowledge of the current ECL through the implementation of required emergency responses.

Issue: None.

Objective 2. The ability to alert, mobilize, and activate personnel was adequately demonstrated. At the Alert ECL, staff members used a checklist and a recently updated roster of emergency staff members to ensure that all appropriate personnel were alerted, mobilized, and activated. After verification of the Alert ECL, two Office of Emergency Services (OES) Operations Officers immediately began the call down by telephone. Also, an air sampling team was dispatched (simulated) at the Alert ECL. At the SAE, an additional OES Operations Officer assisted in the notification process. Emergency personnel were alerted, mobilized, and activated in an efficient, effective, and timely manner. Since the EOC is routinely manned from 0800 hours through 1700 hours, Monday through Friday, the normal operating staff members were in place at the time of the NOUE. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency response at the West Virginia State EOC was adequately demonstrated. The State EOC Coordinator, working in concert with the State Director, provided excellent direction and control throughout the exercise. Upon the coordinator's arrival at the EOC, a staff briefing was conducted which provided current emergency information. Thereafter, briefings were conducted on a regular basis throughout the exercise, including after each ECL change. After each briefing, staff members were queried by the State Director and/or the EOC Coordinator with respect to any questions or additional input. There was excellent interaction among all staff members. Logs were kept of all incoming

outgoing, and internal messages. The messages were copied, and made available for staff members' review. The operations staff did an excellent job of quickly recording the emergency information and posting it on the EOC status board. The protective action decision to evacuate was effectively coordinated with all appropriate organizations. The staff members were quite knowledgeable of their duties and responsibilities as outlined in their plan, which was provided to each staff member for reference.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary means of communication was by telephone. Facsimile and RACES served as the back-up communications systems. There were 10 incoming and eight outgoing telephone lines and two facsimile machines, one for incoming and one for outgoing messages. Conference capability was available via the telephones. In addition, there was a direct line to the BVPS and an unlisted telephone line was reserved for communication between the West Virginia Department of Health representative in the EOC and the department's representative on site at the BVPS. HF and VHF radios and a "packet" radio operated by RACES operators were available in the EOC Communication Center. Cellular telephones and mobile communications units with a low band FM radio were available in the EOC vehicles. Additional radio communications were available from the West Virginia National Guard, the Department of Highways, the Department of Natural Resources, and the Department of Public Safety. The EOC communicated with all State agencies, County EOCs, field monitoring and sampling teams, BVPS, and the Pennsylvania and Ohio Emergency Management Agencies. The RACES operators demonstrated two back-up communications systems, the HF radio and "Packet" radio. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Adequate space and furnishings were available at the State EOC to accommodate all staff members. Ventilation and lighting were excellent and the noise level was low. The back-up power generator was tested and was operational. There were separate rest room facilities for men and women which included a shower facility. The EOC was equipped with typewriters, computers, a facsimile machine, and copying equipment. A completely equipped kitchen which contained a number of microwaves and ovens was available. One cot was available at the EOC. However, during an emergency, additional cots could be secured from the West Virginia National Guard and ARC. Access to

the facility was controlled by a security officer and, upon entering the EOC, photo identification and sign-in were required. The EOC was equipped with the required emergency planning maps and additional detailed maps of Hancock, Brooke, and Ohio Counties. Status boards containing ECLs, protective action decisions, and weather data were correctly updated in a timely manner and positioned for high visibility by all staff members. However, times shown on status board could be misinterpreted and not clearly understood by all staff members, since there were no headings showing "Time Declared" and "Time Received" at the EOC.

Issue: Times shown on status boards may not have been clearly understood by all staff members since the times shown were not specified as "Time Declared" or "Time Received". (BVX92-21I)

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. Hancock County EOC contacted the West Virginia EOC and requested approval to sound the sirens and broadcast an EBS message which stated, "...No action necessary at this time. Stay tuned to EBS for further announcements...." The Director of the State OES approved the action and instructed Hancock County, West Virginia to coordinate the action with Columbian, Ohio and Beaver County, Pennsylvania.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The scenario did not drive a projected or measured thyroid dose high enough for emergency workers to take KI. However, from discussions with the staff, it was evident that staff members were knowledgeable of the procedures and requirements for taking KI.

Issue: None.

Objective 26: The ability to identify the need for and call upon Federal and other outside support agencies was adequately demonstrated. The Director, West Virginia EOC, requested a fly over of the affected area by the DOE to define a footprint of the affected area after the radioactive release from the BVPS terminated. The request for the DOE fly over was made through FEMA, Region III. If requested or required, the West Virginia EOC was prepared to provide housing for Federal personnel and refueling for the aircraft. Relevant functions and activities were implemented in a manner that was consistent with the plan.

Issue: None.

(2) Public Information Center

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification was adequately demonstrated. The second EBS message, received by the West Virginia EOC from the Hancock County Director, stated that Hancock County would sound the sirens and broadcast an EBS message in conjunction with Ohio County and Beaver County to evacuate the 10-mile 360° EPZ for the BVPS. Hancock County was instructed to sound the sirens and follow up with an evacuation EBS message. This action was accomplished within the required time frame. The formation and development of PA information was accomplished by the State assessment team, and the State EOC provided guidance to the counties. The State PIO disseminated information to the public through the JPIC State representative. The PIO was present at all briefings and used briefing information, as well as status board entries and message traffic, to develop press releases. The West Virginia OES Director approved all press releases. The information was released in a timely manner, and a log of all releases, along with copies of the individual releases, was maintained. The media was briefed in the EOC media briefing room. Maps and copies of the press releases were used and distributed. The PIO received facsimile copies of all press releases from the JPIC and Hancock County PIO.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. The Governor's Press Secretary had the responsibility for this function and placed two representatives in the EOC. These representatives were included in all briefings, given copies of all messages, and had a clear, unobstructed view of the status boards. They had direct access to the Operations Chief and West Virginia OES Director and were in constant telephone contact with the JPIC and the Hancock County PIO. Also, they received facsimile copies of all JPIC and Hancock County press releases. The media was briefed in the EOC Media Briefing Room adjacent to the EOC. The briefings were given by Press Secretary representatives who had developed the briefings from current information gathered in the EOC. The representatives provided timely, accurate information, including PARs, in clear, non-technical terms. Maps were used, and copies of the press releases and maps were distributed. All press releases prepared by the representatives were approved by the State Director prior to their release. A log and copies of all press releases were

maintained. The relevant functions and activities of this objective were implemented in a manner consistent with the State's plan.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The rumor control telephone number was the EOC telephone number, which had an eight-line rollover capability. The number was publicized in all West Virginia OES postings and brochures. Rumor control calls were received at the operations desk in the EOC, where the nature of the inquiry was determined and then the call was routed to the appropriate staff member. Telephone calls of a general nature were routed to the PIO staff. The rumor control staff was included in all briefings and given copies of all messages. The PIO staff had an unobstructed view of the status boards and direct access to all EOC staff including the Director West Virginia OES and the Chairman of the State Assessment Team. The PIO staff members attended meetings of the State Assessment Team and were in telephone contact with the JPIC and the Hancock County PIO. There were eight incoming lines and an additional eight lines for outgoing calls. The Director, West Virginia OES authorized all releases of information. An actual rumor control call, initiated by an evaluator, was handled appropriately by the staff. The relevant functions and activities for this objective were implemented in a manner that was consistent with the State's plan.

Issue: None.

(3) Accident Assessment

Objective 10: The ability, within the plume exposure pathway, to project dosage to the public via plume exposure based on plant and field data was adequately demonstrated at the West Virginia EOC by the Bureau of Health Accident Assessment Team. The calculations were made using a lap-top computer (battery power back-up) with the modeling code (an in-house customized program) stored on the disk. Also, a desk-top computer was available as back-up. Plant status information was promptly provided and new dose assessments were made as additional information became available. Projected plumes were sketched on maps of the plume exposure zones. Field monitoring teams were deployed to establish the plume boundaries and radiation levels. The field team data, as well as the plant data, was compared with the projected dose rates. Wind shifts, which are common in the valley, were considered when establishing the potential plume exposure area. All relevant activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 11: The ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates, and other relevant factors, was adequately demonstrated. Following a PAR from the utility, discussions were held regarding potential dosage, population density, and shelter availability. Support personnel were alerted and a conference call with the adjoining State EOCs ensued. During this call, a final decision regarding implementation was made. Following this decision, the PA (evacuation of a 10-mile zone, 360°) was implemented without delay. All relevant functions were implemented in a manner consistent with the plan.

Issue: None.

(4) Field Air Monitoring Team

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The State field air monitoring team for West Virginia was pre-positioned at the Hancock County EOC per the pre-exercise agreement. The field monitoring team "leader" had to fill the positions of both field team leader and field team coordinator at the Hancock County EOC. The original assigned field team coordinator had undergone medical treatment and was on medical leave. No back-up personnel had completed training, although health physics personnel were being trained at the time. There was a lack of trained personnel available at the time to fill the position. The field team was dispatched for samples at 1830 hours. The field team leader demonstrated the field team operation along with the Hancock County Sheriff's Deputy. The Sheriff's Deputy was a member of the sampling team, participating as the driver and locator of the sampling locations. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: The lead member of the field monitoring team was required to fill both his regular position and the field team coordinator's position because of medical problems affecting the field team coordinator. There were no back-up personnel available at the time to fill the field team coordinator's position. In a real emergency, he would be unable to fill both positions. (BVX92-22R)

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communications system consisted of the Hancock County Sheriff's Radio System (located in the squad car and used as a field team vehicle) and the telephone (911 number which rings in the sheriff's office at the Hancock County EOC). The radio had a communications link with the field team coordinator, the

Sheriff's Office, and all 911 emergency channels. The radio was able to handle all communications without undue delays. During this exercise, there were no breakdowns in the communications systems. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker who entered the plume EPZ had a TLD (simulated), two direct-reading dosimeters (0-200 mR and 0-20 R), and an exposure record form (hand written) which was properly completed. Team members were aware of the exposures authorized for the mission and whom to contact if the exposure level was exceeded. There were dosimeter chargers available for the team members. Appropriate instructions were issued regarding the dosimeter's use and how often to read and record the dosimeter readings. The field team leader would contact the field team coordinator if he received an exposure higher than the 5 R authorized mission exposure limit. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. The team had both high range (CD V-715) and low range (E-120, GM and HP 210 probe) instruments. Also, the team had access to approximately 75 recently calibrated back-up instruments (CD V-700 and CD V-715) which were stored in the Hancock County EOC. Both battery and source checks were performed during operational checkout of these instruments. The detector probes were enclosed in plastic bags and both the Beta and Beta-Gamma readings were made at waist high, at or near ground, and six foot levels for plume verification determination. The readings were properly logged as they were obtained and promptly transmittted to the field team coordinator. The teams were able to find and arrive at the monitoring locations promptly and were knowledgeable of the monitoring and sampling procedures. Procedures were available for I-131 calculations. There were still errors present in the plan for West Virginia, such as referring to the Barium-133 source at the top of the sheet as a Barium-100 source. (See Annex 15, Section XI, Tab B, I-131 Sample, X-1-13-1.) Prior issue BVX90-28R was resolved since the team's supply of instrumentation, equipment, and supplies was in agreement with the plan. There was a form in the kit for recording field data and dosimeter readings. The relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: Annex 15, Section XI, Tab B, of the West Virginia plan erroneously states that a Barium-100 source should be used for setting the threshold window on one channel of the Ludlum dual channel analyzer instead of a Barium-133 source. (BVX92-23R)

Objective 8: The ability to demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} (.0000001) microcuries per cc in the presence of noble gases was adequately demonstrated. The team used the monitoring equipment identified in the organization's plan. The power supply for the air pump was a direct hookup to the car battery and a converter was used for the Ludlum Model 2218 dual-channel analyzer's power supply. A supply of silver zeolite filters was sealed in plastic and available for I^{131} sampling, but a charcoal filter was used for demonstration purposes. Air samples were obtained using the proper flow rate and sample duration. A Barium 133 source, recently calculated, was on the vehicle and the Ludlum 2218 dual channel analyzer was available and used to count the sample after it had been purged in a low background area. The sample compartments were properly bagged and tagged with the time, date, location, and individual sampler's name. Fixed reproducible geometry was used during the counting of the sample and the count rates were promptly transmitted to the field team coordinator. The relevant functions and activities were implemented in a manner that was consistent with the organization's emergency plan and procedures.

Issue: None.

Objective 9: The ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses was adequately demonstrated. The field air monitoring team simulated the transportation of the sample, but the Hancock County Sheriff Deputy would transport the sample to the Jefferson County (Ohio) Emergency Services Office. They would in turn arrange for delivery to Emergency Services' Laboratory in Columbus, Ohio, for analysis. The field team coordinator would set up the initial arrangement for the transportation of the sample. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan and the expected demonstration described in the extent-of-play. Prior issue BVX90-27R was resolved by the above simulation of the sample being transported by the Hancock County Sheriff's Deputy to the Jefferson County (Ohio) Emergency Services Office and the arranged delivery of the sample to the Emergency Services' Laboratory in Columbus, Ohio, for analysis.

Issue: None.

b. Risk County - Hancock

(1) Emergency Operations Center

Objective 1: The ability to monitor, understand, and use ECLs through the appropriate implementation of emergency functions and activities corresponding to ECLs, as required by the scenario, was adequately demonstrated. The Hancock County EOC staff used the ECLs. The EOC was notified of ECL changes by a telephone call from the BVPS on a dedicated telephone line. Notifications received from the utility were immediately verified by the Emergency Services Director (ESD) using a code word. Upon notification, the current ECL was prominently displayed at the front of the operations room and the staff was briefed accordingly. At each ECL change, the ECL sign was removed and replaced with a different color sign showing the new ECL. The ECL signs were visible to all staff, except the RACES staff located on the second floor. However, the RACES staff was immediately notified of the ECL changes by messages sent by the ESD to the message center and then by runner to the RACES staff. The relevant functions and activities were implemented according to the county's plan.

Issue: None.

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. At 1530 hours, the Hancock County ESD and the Deputy began to call the EOC staff members and request that they report to the EOC. An up-to-date call list was used. Shortly thereafter, everyone on the call list was contacted and messages were left for the two individuals who had not been contacted. Within several minutes these two individuals contacted the EOC and they were requested to report to the EOC. At no time were any EOC staff members deployed to other locations. In accordance with the plan, the EOC staff members maintained communications with their field personnel and dispatched resources when needed. The relevant functions and activities for this objective were implemented in a manner that was consistent with the county's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Hancock County ESD was effectively in charge of the emergency response activities. Staff briefings were held by either the ESD or the Operations Officer at ECL changes and other significant events. On several occasions, meetings were called by the ESD in order to receive input from the staff on important issues requiring a coordinated decision making effort. Copies of the emergency response plan and procedures were available for immediate reference and use by staff members. All incoming and outgoing

messages were recorded on four-part message forms; the messages were then picked up by message center runners, and logged by the message center coordinator for tracking and distribution to appropriate staff for action. The message center coordinator monitored the log to ensure that messages requiring follow-up action were responded to in a timely manner. The relevant functions and activities were implemented according to the county's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Hancock County primary communications system was the commercial telephone. The types of communications equipment available at the EOC were nine commercial telephone lines, Beaver Valley Dedicated Hot Line, Hancock County Sheriff's Network, Emergency Medical Services Network, and RACES. Also, the county had two copiers and a facsimile machine to enhance its message center operations. Additionally, the EOC had communications links with the West Virginia State Police, West Virginia State Department of Natural Resources, Fire Departments, West Virginia State Department of Highways, West Virginia State Parks Services and local fire departments and the Sheriff's reserves. The primary communications system was able to handle the communications traffic without delays. There were no communications systems breakdowns; therefore, back-up communications systems were not demonstrated. The relevant functions and activities were implemented consistent with the organization's plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The EOC contained sufficient space, furnishings, lighting, restrooms, ventilation, and back-up generator. In addition, the EOC possessed, or had available, a typewriter, computer, copier, facsimile machines (two), kitchen supplies, and 700 stored cots, sufficient to support emergency operations. Access to the facility was controlled by the police. Several maps were used at the EOC. These maps included plume EPZ maps, ingestion EPZ maps, and other maps depicting evacuation routes, emergency response planning areas, and radiological monitoring points. The status boards were positioned in locations throughout the EOC where the boards were easily viewed by the staff. Information displayed on the status boards included ECLs, protective action decisions, weather data, and plant condition. All status boards were updated in a timely manner. The relevant functions and activities for this objective were implemented in a manner that was consistent with the county's plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The Hancock County EOC was located outside of the 10-mile EPZ, so dosimetry was not required for the EOC staff. However, the Hancock County EOC had a sufficient supply of non-self-reading dosimeters (simulated) to provide to each emergency worker. Also, emergency workers had access to two direct-reading dosimeters and a dosimeter charger for their immediate use. The ranges of these dosimeters were 0-20 R and 0-200 R. The Hancock County Radiological Officer briefed the EOC staff and emergency workers on the proper use of dosimeters and chargers and how to ingest KI if authorized. The RO had a list in the radiological cabinet showing the calibration dates and the number of radiological instruments available in the county inventory. All individuals were aware that 5 R was the authorized exposure for their mission. Also, the Hancock County EOC staff and emergency workers knew whom to contact for authorization to incur exposures in excess of the EPA PAGs or whom to contact if they received an exposure higher than authorized. Activities and functions were implemented in accordance with the organization's plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. At SAE, the ESD coordinated with the other affected counties in the EPZ, Beaver County, Pennsylvania, and Columbus County, Ohio, to activate the sirens and broadcast a general EBS message. Also, the ESD notified the fire station personnel to initiate route alerting at each siren activation to ensure coverage of the entire population within the Hancock County portion of the EPZ. All procedures were executed in accordance with the plan.

Issue: None.

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. At the GE, the county received word from the State of West Virginia, in coordination with the Commonwealth of Pennsylvania and the State of Ohio, to activate the sirens and disseminate an EBS message calling for an evacuation of 360 degrees around the BVPS out the ten mile EPZ boundary. The county disseminated the evacuation PAR via EBS. The EBS message used familiar landmarks to outline the geographic boundaries of the area to be evacuated, where evacuees should go for shelter and what route evacuees should take, what they should take with them, and how to provide for the care of their pets and farm animals. Logs were maintained of all messages and information released to the public. Copies of all

messages were distributed to the EOC staff. Radio and television broadcasts were monitored. All procedures were carried out in accordance with the county's plan.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. Representatives of the media were not required to be briefed at the Hancock County EOC. Instead, two PIOs were dispatched from Hancock County to the JPIC to act as liaison and assist with media briefings. The ability to provide adequate news releases in a timely manner was demonstrated and media briefings were handled by the JPIC, in accordance with the Hancock County Emergency Response Plan, Annex K, page K-2, paragraph 6. A log of press releases was maintained and copies were distributed to decision makers and other involved personnel. Radio and television broadcasts were monitored to ensure message accuracy.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. A rumor control person was in place and answered a special rumor control line. A rumor that the mass care center was open (before it had actually been opened) was received and forwarded to the JPIC. The fire radio system was used to inform the emergency workers that the mass care center was not open. There were eight incoming and outgoing telephone lines which were dedicated to rumor control. All procedures were carried out in accordance with the county's plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision was made, if necessitated by radioiodine releases, was adequately demonstrated. The decision not to administer KI was made and the RO made the announcement that KI was not authorized or needed. However, the RO gave a informative briefing on KI, including its possible side effects, to the EOC staff and emergency workers. Adequate supplies of KI were available. Procedures for distribution and potential use of KI were followed in accordance with the county's plan.

Issue: None.

(2) Route Alerting

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The 911 dispatcher used a current call-down list to notify the personnel activated for the emergency. The staff was mobilized at the Alert phase according to the county plan. The individual in charge determined that additional personnel were needed to perform route alerting, so he called the Hancock County EOC for assistance. Five additional people from the Manchester Volunteer Fire Department (VFD) were notified by the EOC and promptly responded. Additionally, four Newell VFD staffers were dispatched to conduct the route alerting at the appropriate time. All functions were carried out in accordance with the plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Newell VFD van was equipped with a mobile base radio, and public address system for announcing messages without leaving the vehicle. Hand-held radios enabled personnel to communicate as needed while performing duties away from their vehicle. Communication links were established with the base station, other county fire stations, the Hancock County EOC, and area hospitals. The primary communication system was able to handle the communication traffic without any delays. The back-up communication system was demonstrated and functioned properly. All activities were carried out in accordance with the plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. During the briefing, the RO issued dosimeters to emergency workers consisting of TLDs, a CD V-730, and a CD V-742 dosimeter and gave instructions on the equipment's proper operation. The RO ensured that dosimeters were zeroed and that the results were recorded for each person. Additionally, the emergency workers were instructed to check and record the dosimeter readings every 30 minutes. One individual was responsible for recording dosimeter readings and he used a timer set every 30 minutes. Fireman at the base station called route alerting personnel in the field every 30 minutes to remind them to read their dosimeters and call in their readings. Exposure charts for each individual were maintained and updated at the fire station. Also, two chargers, four CD V-715, two CD V-700 and sufficient KI were located at the fire station. Personnel were aware of exposure authorized for

the mission (5 R) and what to do if a higher exposure occurred. All activities were carried out in accordance with the plan.

Issue: None.

Objective 12: The ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate official(s) was adequately demonstrated. The Newell VFD demonstrated its ability to disseminate an instructional message to the public within the specified time frame. At the SAE and GE, two route alerting teams were dispatched. Lists of special needs individuals (hearing-impaired, sight-impaired, transit-dependent, etc.) are updated annually. Route alerting teams had maps and copies of an instructional message to be given to residents and announced over the public address system. Route alerting teams knew their routes, the community, and its needs. All functions were carried out in accordance with the plan.

Issue: None.

Objective 18: The ability and resources necessary to implement appropriate PAs for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons) was adequately demonstrated. Current lists of special needs individuals were available and up-to-date. Index cards contained the exact needs, i.e., in-person contact, phone call requested, transportation, etc. One advisory and one PA were issued at the SAE and GE, respectively. All functions were carried out in accordance with the plan.

Issue: None.

(3) Traffic and Access Control

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. According to the plan, the Hancock County Sheriff's Reserves were placed on standby at the Alert and mobilized at the SAE. The Hancock Law Enforcement Officer notified the Sheriff's Reserves, using the call-down list, and informed the reservists to be prepared to report to the Hancock County EOC for emergency assignments. Because the TCP/ACPs were actually demonstrated out of sequence, reserves were mobilized at the Alert. Notification of all personnel was timely and in accordance with the plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Sheriff's Reserve Officers had portable hand-held radios that enabled the officers to communicate with other agencies while away from their vehicles. The police vehicle had a mobile unit which had communication links with the Highway Department,

Sheriff's Office, Hancock EOC, and the Weirton Police Department. No delays in communication were experienced. All communication systems were demonstrated and worked properly. All relevant functions were carried out in accordance with the plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. One Sheriff's Reserve Officer was assigned to do traffic and access control. He had received the monitoring equipment at the EOC when he reported for duty. The equipment consisted of two dosimeters, one CD V-730 (0-20 R) and one CD V-742 (0-200 R), a dosimetry charger, one battery, a TLD badge, a bottle of KI, written instructions stating that dosimeters should be read every 30 minutes, and the dosimeter readings record. The officer knew the limits of exposure authorized (5 R) for the activity and when to call the EOC if a higher exposure was received. Activities were carried out consistent with the plan.

Issue: None.

Objective 20: The organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas were adequately demonstrated. One Sheriff's Reserve Officer and one trainee were assigned to a predetermined TCP/ACP at the intersection of West Virginia Routes 2 and 208 according to the plan. The team arrived in a timely manner (demonstrated out-of-sequence) and was aware of the PAs, areas evacuated, evacuation routes, and relocation centers. The communication equipment on hand ensured that the officers could receive instructions from the Hancock County EOC. The officers knew what to do, when to do it, and whom to contact for further instructions. All activities were carried out in accordance with the plan.

Issue: None.

(4) Emergency Worker Decontamination/ Reception Centers

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Personnel from the Weirton VFD and New Cumberland VFD were alerted by the EOC staff using pagers. Twenty-one volunteer fire fighters responded. This staff was deployed to several locations between 1600 and 1730 hours. All functions were performed at the New Cumberland

Fire Station. The mobilization process was carried out in accordance with the Hancock County plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary communication system for the fire personnel was the Hancock County Emergency Fire Network. Additionally, this communications system was supported by the emergency and ambulance services, telephone, and the Plextron Tone Alert System. RACES was used as back-up. All communication systems, including the back-up system, functioned without delays. All communication functions and activities were consistent with the plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker was issued a TLD, CD V-730 (0-20 R) and CD V-742 (0-200 R) dosimeters, instructions on how to read them, and the need to read them every 30 minutes. The self-reading dosimeters (TLD) were collected by the County RO for reading after the mission. All exposure readings were documented. Additionally, a charger was available, dosimeters were zeroed, and initial readings recorded. The emergency workers stated that their authorized exposure limits were 5 R unless otherwise instructed. An exposure exceeding the established limit was to be reported to the county Office of Emergency Services. Individual exposure should not exceed 25 R, except in life-saving situations. Emergency worker exposure control was implemented in accordance with the plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision was made, if necessitated by radioiodine releases, was adequately demonstrated. Simulated KI was issued to emergency workers along with their dosimetry and instructions not to take KI unless directed to do so by the County OES. The decision on whether to authorize KI was made by the West Virginia State Health Department and transmitted to the counties. The decision was made during this exercise to not authorize KI.

Issue: None.

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring, and decontamination of evacuees were adequately demonstrated. The staff arrived at the reception center in a timely manner. The

center was coordinated by the Weirton VFD which provided its management and personnel to direct traffic, interview and provide information to evacuees, and conduct radiological monitoring of vehicles. The Sheriff's Reserve Officers provided security. Additionally, RACES and Weirton Community Radio Watch provided communications. Evacuees arriving at the reception center were supplied with a packet containing registration forms and directions to the mass care center and their vehicles were checked for contamination. If contamination was found, the vehicle was marked with a green pencil and sent to the mass care center for decontamination. Vehicle monitoring was demonstrated by the staff using a fire truck. The 1992 Weirton VFD SOP Attachment 1, Reception Center, listed 34 radiological monitors, thus indicating that there was adequate personnel to process all evacuees. Evacuees were sent to the Millstop Community Center for decontamination. If the center was filled to capacity, then the evacuees were directed to other mass care centers by the Red Cross. The parking area was large enough to accommodate about 100 cars waiting in line to be monitored. All relevant functions and activities were performed according to the Hancock County plan.

Issue: None.

Objective 25: The ability to provide sufficient facilities, equipment, supplies, procedures, and trained personnel for decontamination of emergency workers, equipment, vehicles, and for waste disposal was adequately demonstrated. About 500 emergency workers could possibly be expected to be monitored and the emergency worker decontamination facility at the New Cumberland Fire Station was large enough to accommodate them. Parking was available for about 100 vehicles. The parking lot could be divided into two areas, one for contaminated vehicles and the other for clean vehicles. A system was in place to keep potentially contaminated personnel and equipment separated from clean personnel and equipment. Monitoring and decontamination of an emergency worker was demonstrated. The monitor wore a protective suit and used a CD V-700 detector with the probe covered with a plastic bag to take the readings. Proper procedures were followed during monitoring, and the results were recorded. A reading of 1.75 R was simulated at the hand. The worker was instructed to wash his hands in the designated area. After his hands were washed, the reading was repeated and found to be zero (background). Vehicle monitoring and decontamination were demonstrated by another team. It took about three minutes to monitor the vehicle. A fast and effective high pressure fire hose was used for decontamination. The decontamination facility staff had direct communication links with ambulances and other emergency services if further assistance was needed. All decontamination procedures were carried out according to the plan.

Issue: None.

(5) Mass Care Center

Objective 2: The ARC adequately demonstrated the ability to fully alert, mobilize, and activate personnel at the mass care center, located at the Millsop Community Center in Wierton, West Virginia. During the Alert ECL, the ARC liaison at the Hancock County EOC notified the chapter's headquarters of the emergency and placed the staff on standby. At the SAE ECL, the ARC notified its liaison at the EOC that ARC personnel had arrived at the mass care center. At 1850 hours, the ARC Disaster Chairman informed the EOC liaison that the shelter was open. All relevant functions were carried out in accordance with the plan.

Issue: None.

Objective 4: The staff at the Wierton Mass Care Center adequately demonstrated the ability to communicate with all appropriate locations and field personnel. The types of communications systems available at the mass care center were commercial telephones, radios, a two meter repeater, and RACES. The ARC maintained communications with the ARC chapter headquarters and the Hancock County EOC. The organization responsible for evacuee monitoring and decontamination was the Wierton VFD. If needed, both organizations would establish communications with the hospitals. There was no breakdown in any of the communications systems, nor was there any delay.

Issue: None.

Objective 6: The Wierton VFD was able to adequately monitor and control emergency worker exposure throughout the monitoring and decontamination procedures. The Fire Department had emergency worker kits. Each kit contained a dosimeter charger, exposure record card, simulated KI, two direct reading dosimeters (SRD-732 with a range of 0-20 R and SRD-742 with a range of 0-200 R), and a simulated TLD film badge. The Fire Department staff was also issued instructions regarding the dosimeter's use and frequency for taking readings (every 30 minute). The authorized exposure for the mission was no greater than 5 R. The emergency workers would contact the Hancock EOC Fire Service representative before incurring additional doses above the EPA PAGs. The personnel at the monitoring and decontamination stations were aware of the procedures and performed adequately and in accordance with the plan.

Issue: None.

Objective 21: The procedures, facilities, equipment, and personnel for the registration, radiological monitoring and decontamination of evacuees was adequately demonstrated. The

mass care center was established at the Millsop Community Center in Wierton, West Virginia. In accordance with the Hancock County plan, the activities performed at the mass care center were evacuee monitoring/decontamination and registration/sheltering. The first function of the mass care center was evacuee monitoring and decontamination which was the responsibility of the Wierton VFD. There were two monitors on hand to scan the evacuees. Both monitors suited up in the monitoring clothing. Another team of four fire personnel escorted the evacuee to the shower for decontamination procedures. The path to the shower was covered with brown paper which was taped to the floor. The area where the victim was monitored was also covered with taped down paper. If another evacuee was to be monitored, this paper would be removed and new paper would be put down. There were adequate showers and restrooms in both the men's and women's lockers (six showers, four toilets for men and eight showers, four toilets for women). The procedure for decontaminating evacuees was adequate; however, cross-contamination in the shower area was quite possible, since the entrance and exit paths were the same. After evacuees were deemed uncontaminated by the radiological monitors, they proceeded to the ARC area where ARC personnel completed the registration process. After registration, depending on the individual's needs the evacuees would be fed or clothed.

Issue: The entry and exit paths to the shower stall required an individual to retrace his/her steps, thereby greatly increasing the probability of cross-contamination. (BVX92-24R)

Objective 22: The facilities, equipment, and personnel for congregate care of evacuees were adequately demonstrated. The ARC was in charge of the congregate care of evacuees. At 1315 hours, the EOC liaison for the ARC (in Hancock) was informed that ARC staff had arrived at the mass care center and would begin opening the shelter. At 1850 hours, the ARC Disaster Chairman announced that the shelter was officially open. The other agencies at the mass care center were the Fire Department, for evacuee monitoring and decontamination, and a nursing consultant for medical treatment, distribution of medication, and crisis counseling, if needed. If needed, the Salvation Army would have been present to provide clothing for evacuees and caterers would provide food. The center's capacity was 1,250 people.

Issue: None.

B. Ingestion Phase

1. Commonwealth of Pennsylvania

a. State Entities and Functions

(1) State Emergency Operations Center

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The ingestion exercise reflected a two-and-one-half time jump from the plume phase of the exercise and the continued staffing of the State EOC. Participation during this phase of the exercise involved these primary State agencies: PEMA, Department of Environmental Resources, and Department of Agriculture. During this phase of the exercise, no State EOC staff participants were dispatched to another location. The Director of PEMA coordinated the participation of supporting State agencies. Twenty support agencies were involved in reentry, recovery, and relocation. These agencies dispatched representatives to attend the briefings on the emergency situation and discuss procedures for providing their agencies' support to counties requesting their assistance.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. During this phase of the exercise, the Director, Deputy Director, and Operations Officer demonstrated excellent direction of the State emergency activities. The Director briefed the EOC staff and prepared informational memos for State and county emergency managers. Key staff members were involved in the decision making process, particularly in the development of a methodology for verification of the plume footprint and assessment of ingestion impact. Incoming and outgoing messages were received, transmitted, and logged into computerized and hard copy files. Messages were distributed to appropriate staff members for action or informational use. All staff members were knowledgeable of their jobs and responsibilities. Relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary communication system linking the State EOC with the utility, PEMA Western Area Office, and risk and support counties was a dedicated telephone line. Existing radio, commercial telephone, facsimile, and message systems were available for back-up and the coordination of field operations managed by participating State agencies. All systems were operational

during the ingestion phase of the exercise with no undue delays in transmission or breakdown of any of the systems. Relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. Following a number of briefings, EOC staff meetings, and technical analyses, a news release was prepared and a recommendation was made to residents living within the 50-mile radius concerning the precautionary washing of garden vegetables. This recommendation was made by the Department of Agriculture and carefully coordinated with the Department of Environmental Resources and executive staff as part of an information release on current State damage assessment activities. This information release was authorized by the Director of PEMA. Relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. During the plume phase, the Department of Health determined that KI should not be distributed to emergency workers. This decision continued during the ingestion phase. Relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 26: The ability to identify the need for and call upon Federal and other outside support agencies was adequately demonstrated. During the ingestion pathway demonstration, the Director of PEMA and his staff prepared a draft letter to the White House requesting a major disaster declaration by the President. During the recovery/reentry demonstration, the PEMA operations staff contacted FEMA Region III and requested the Corps of Engineers to remove contaminated soil and provide six desalinization units and 1,500 personnel for long-term security of restricted areas in Beaver County. The request was authorized

by the PEMA Director. All actions associated with the accomplishment of this objective were taken in accordance with the basic document and Annex E of the Commonwealth's plan.

Issue: None.

Objective 29: The ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, FDA PAGs, and other relevant factors was adequately demonstrated. A projected exposure footprint was developed by the BRP, based on aerial monitoring surveillance by the DOE conducted during the response phase of the operation. Ground field monitoring teams were dispatched by BRP to confirm the footprint location through actual measurements. A coordination and planning meeting was conducted by the PEMA Director and included BRP and Commonwealth Departments of Health, Agriculture, and Transportation and the Fish Commission. The group discussed the need for PAs based on actual data available and data projections, and taking into account the types of foods, food products, and animals that might be contaminated: dietary intake factors; radionuclide buildup in milk and fish; and the economic impact of a negative public perception of the State's agricultural products. Additional monitoring was directed, both in known contaminated areas and suspected "clean areas." Laboratory analyses of water and agricultural samples prompted a decision to advise washing garden vegetables which had been grown in the ingestion pathway area. The activities associated with the accomplishment of this objective were taken in accordance with Annex E of the Commonwealth's plan.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The general public in the ingestion pathway was advised to wash, scrub, or peel fresh fruit and vegetables to remove any surface contamination. Continued emergency worker PAs, including monitoring and decontamination were ordered. The PAs were disseminated through normal emergency management channels to the emergency management agencies of the ingestion pathway counties and to the public through a news release and a media briefing (simulated.) The activities associated with the accomplishment of this objective were taken in accordance with Annex E of the Commonwealth's plan.

Issue: None.

(2) Public Information Activities

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. During the ingestion pathway demonstration, sirens and EBS broadcasts were not utilized. Instead, public instructions were disseminated to the public via scheduled (simulated) media briefings at 1200 and 1600 hours. The Director of PEMA instructed the PEMA Press Secretary on which PARs were to be disseminated. The Press Secretary included the PARs in a news release and the simulated media briefing at 1200 hours. Copies of the news release were sent via the ECOMM satellite system to the support and ingestion counties EOCs, and via facsimile to the PEMA liaison officers at the utility media center. In addition to information on the PARs, the news release included situation updates from the Commonwealth's Departments of Agriculture and BRP. Information for these departmental updates was provided by the Press Secretaries for the affected departments. The Press Secretaries had direct contact with their respective EPLOs. The activities associated with this objective during the ingestion pathway demonstration were accomplished in accordance with the Commonwealth's Radiological Emergency Preparedness Plan, Appendix 16, Annex E.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. Simulated media briefings were scheduled at 1200 and 1600 hours. One news release was actually prepared for release during the simulated media briefing at 1200 hours. Copies of the news release were sent via the ECOMM satellite system to the support and ingestion counties' EOCs, and via facsimile to the PEMA liaison officers at the utility media center. The news release included situation updates for the media from PEMA, the Commonwealth's Departments of Agriculture and BRP. Information for these departmental updates was provided by the press secretaries for those departments, who had direct contact with their respective EPLOs. The activities associated with this objective during the ingestion pathway demonstration were accomplished in accordance with the Commonwealth's Radiological Emergency Preparedness Plan, Appendix 16, Annex E.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The PEMA Operations Officer acted as the point of contact for rumor control inquiries from all participating County EOCs. One rumor concerning an erroneous statement attributed to a USDA

official was corrected. After researching the facts with the USDA, the PEMA Operations Officer relayed the correct information to the caller. The action was entered on the operations center master event log. All actions associated with the demonstration of this objective were carried out in accordance with Annex E of the Commonwealth's Radiological Emergency Operations Plan.

Issue: None.

(3) Situation Analysis

Objective 29: The ability to project dosage to the public for ingestion pathway exposure and to determine appropriate protective measures based on field data, FDA PAGs, and other relevant factors was adequately demonstrated at the State EOC. The area of concern was initially identified based on projections and meteorological data and later defined based on a DOE flyover and field monitoring results. Radionuclide buildup/decay and dietary intake factors were considered during the discussions and development of PARs. Laboratory analyses of food, milk, and feed were provided via controller injects in an appropriate and timely manner. The technical basis for the PARs was FDA PAGs annotated in the Pennsylvania Radiological Emergency Response Plan, Appendix 6, Annex E, pages E-6-19 to E-6-26. Based on the laboratory analyses of milk samples (taken from the affected area), it was determined that milk should be held in tanks indefinitely, to prevent the contamination of milk sheds and to protect the public's health and safety. Although the 10-mile radius around the BVPS had been evacuated, news releases took into consideration the possibility that some residents in the area might have chosen not to leave. Therefore, subsequent news releases provided pertinent health and safety information and PARs to residents living within the 50-mile EPZ as well as any individuals remaining inside the 10-mile EPZ.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The State Department of Agriculture, with assistance from the USDA, demonstrated the implementation of PAs for ingestion hazards. The agencies utilized maps that identified both general and specific locations of farms and commodity producers within 5- and 10-mile radius of the BVPS. In addition, the maps facilitated the directing of sampling teams. Preventive and emergency PAs were formulated utilizing information from the maps, and agriculture agents at the county EOCs, in consultation with the BRP. It was determined that food already processed and enclosed (within boxes/containers) at retail outlets, processing plants, and homes would be safe to consume. PAs were issued in a timely manner, and were available to both emergency personnel and to the general public. General

categories of agricultural concerns were well addressed. However, when questioned about an agricultural concern that did not fit under the routine "milk, hay, feed, crop" category, agriculture personnel were not prepared to address the issues. For example, no consideration had been given to bee hives, orchards, berry farms and fish farms, or to other issues, such as hunting and the gathering of edibles from the wild, that might be extremely relevant to the small rural populations of the area. Part of this problem/issue was due to the system maintained by the USDA and Pennsylvania Department of Agriculture. However, these agencies have representatives at the local level. The expectation was that local level representatives should be consulted to determine if there were agricultural issues that needed to be addressed outside of the realm of commercial production/operations. Future exercises should drive the agricultural representatives to address agricultural issues/concerns on a more comprehensive basis.

Issue: General categories of agricultural concerns were well addressed. However, when questioned about agricultural concerns that did not fit under the routine "milk, hay, feed, crop" category, agriculture personnel were not prepared to address the issues. For example, no consideration had been given to bee hives, orchards, berry farms, and fish farms or to other issues such as hunting and the gathering of edibles from the wild, that might have been extremely relevant to small, rural populations of the area. (BVX92-25R)

(4) Accident Assessment

Objective 29: The ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, FDA PAGs, and other relevant factors was adequately demonstrated. The BRP developed an ingestion strategy based on Appendix 15 of Annex E. Each organization identified in Appendix 15 responded to the BRP's request for its expertise. Throughout the exercise, the BRP in conjunction with the other entities having ingestion related responsibilities, conducted sampling activities in the 50-mile EPZ of agricultural products, including feed, hay, and silage, as well as analyses to determine the location of the projected radiation deposition area. This information and data was used by the participants to facilitate the development of PARs relative to the sheltering of livestock, placement of livestock on stored food, and restrictions and/or advisories regarding the use of various agricultural products. The BRP considered food products processed prior to the incident as being safe and marketable. Any food in question would have received a close Federal and State inspection. Local garden foods in the ingestion pathway exposure areas were deemed to be safe if washed carefully and prepared under normal conditions. The BRP planned to circulate brochures for farmers living in the 50-mile ingestion pathway.

BRP advised communities with open surface water supplies in the plume exposure pathway that special considerations for the return of emergency water and sanitization operations were under development. In addition, the BRP also sampled the Midland Water Treatment Plant during this phase.

Issue: None.

(5) Field Sampling Team A

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The milk sampling team, consisting of two milk sanitarians and a health physicist, was told, through prearrangement, to report to the Department of Environmental Resources office in Beaver Falls, Pennsylvania, at 0900 hours. The team was dispatched to take samples of milk, hay, feed, and silage at three dairy farms. Pennsylvania officials demonstrated the ability to alert, mobilize, and activate an emergency milk sampling team.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. A Department of Environmental Resources van, equipped with a radio, was utilized during the exercise for transmissions by cellular telephone. The van also had a computer with a printer. The milk sampling team members communicated information to their offices in Harrisburg, Pennsylvania. There was no delay in relaying sample information. Relevant functions and activities were carried out in a manner consistent with the plans and procedures.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each team member had a TLD badge and two self-reading dosimeters supplied by the BRP. The team carried a charger and each member had an exposure record on which they recorded their dosimeter readings every 30 minutes, after the initial zeroed reading. Team members knew the authorized exposure limit of 5 R and that they would want to keep exposure below 500 mR. The team knew whom to contact for authorization to exceed the EPA PAGs for the general public or the authorized mission limit. Also, they knew what to do if they received an exposure higher than authorized. Relevant functions and activities were implemented in a manner that was consistent with the emergency plan and procedures.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. The team was well equipped with a Beta-Gamma survey instrument, including a spare instrument, and a high range instrument as specified in the plan. Battery and source checks were performed and all instruments were within the calibration period. Gamma only and Beta-Gamma readings were made (simulated) about waist-high and near ground level at each sampling point. Radiation measurements were properly logged. Sample farms were located promptly, and the team displayed excellent training and knowledge. The vehicle was equipped with a radio which transmitted to a microwave relay point to Harrisburg. The team demonstrated appropriate equipment for determining field radiation measurements. Relevant functions and activities were implemented in a manner consistent with the organization's emergency plan and procedures.

Issue: None.

Objective 27: The ability to demonstrate the appropriate use of equipment and procedures for collection and transportation of samples of vegetation, food crops, meat, poultry, water, and animal feeds (indigenous to the area and stored) was adequately demonstrated. The team had scoops and shovels, one-gallon plastic containers for milk, plastic collection bags with ties, identification labels, writing materials, area measuring devices, scissors, knives, cutting equipment, disinfectant, and a cooler with ice. The team also had booties, disposable coveralls, and gloves available. Radiation measurements were simulated at each sampling location using a Beta-Gamma type instrument but not the preferred micro-R-meter. Samples of milk, hay, dry feed, and silage were then taken on three dairy farms within five miles of the BVPS. One of the team members owned a dairy farm in the area and easily found the sample locations. Proper technique was used in sample collection. Written SOPs were needed to outline each agency's responsibilities, such as who supplies sampling containers, dosimetry, vehicles, and radios, and for providing sampling procedures. Samples were logged, labeled, and double bagged. Labeling included the time, date, location, and number as well as the sampler's name. Precautions were taken to prevent the transfer of contaminated materials by removing booties (simulated), cleaning the equipment, and using double bags. The taking of samples to the laboratory was simulated. All relevant functions and activities were consistent with each organization's plan and procedures.

Issue: Current plans say that agricultural and radiation protection agencies will assist each other, but each agency's responsibilities were not defined. Detailed sampling procedures, for the acquisition of soil and pasture samples were not available. Also, procedures did not include use of a micro-R-meter for surface radiation measurements. (BVX92-22I)

(6) Field Sampling Team B

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Notification to the Department of Environmental Resources Emergency Response Team Leader was simulated at 0830 hours, at which time the water sampling teams began exercise play. The agencies represented at the command vehicle were the following: BRP, Community Environmental Control, Emergency Response Team, Air Pollution, Water Pollution, and Waste Management. Upon the teams arrival at the Department of Environmental Resources command vehicle, equipment was checked and the water sampling teams proceeded to their monitoring assignments. All activities were implemented in a manner which was consistent with their plans and procedures. Department of Environmental Resources effective use of the Emergency Response Team and command post (Winnebago-type vehicle) to coordinate the water sampling teams should be commended. Both the Emergency Response Team Coordinator and Assistant Coordinator assumed their emergency oversight roles with dedication and care. The use of the command post vehicle was an excellent enhancement to Department of Environmental Resources emergency response capabilities.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary communication system was a mobile two-way radio (microwave system) and the back-up system was cellular telephone and pagers. The command vehicle and field teams had communication links with each other as well as Department of Environment Resources Pittsburgh and Department of Environment Resources Harrisburg. The primary communication systems were able to handle the communication flow without undue delays. The back-up cellular telephone system and pagers were also demonstrated. There were no communication breakdowns during this exercise. Relevant functions and activities were implemented in a manner consistent with their organization's plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker was issued the correct dosimetry which consisted of three dosimeters (0-500 mR, 0-20 R and 0-100 R) and a TLD.

The TLD would be returned to Department of Environmental Resources in Harrisburg and processed by Landeaver Company, Glenwood, Illinois. Appropriate instructions were issued with the dosimetry. Each worker had an authorized exposure log that was properly completed. Team members were aware of their exposure limit of 5 R and to contact their BRP Supervisor if their exposure exceeded the exposure authorized for this mission. The team had a SRD Charger available and dosimeters were zeroed prior to deployment authorized for this mission. Team members also carried KI and were given appropriate instructions. Activities demonstrated were consistent with their plan and procedures.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. One member of the water sampling team, from the BRP, conducted the monitoring for radiological background and contamination control. The team had both low-range and high-range survey instrumentation, consisting of a GM-E-120 (calibration date of March 1993), a PIC 6-A (calibration date of May 1992) and a Victoreen Radector (calibration date of March 1992). The probes were covered with plastic to protect them from radioactive contamination and spare instruments were available in a third kit that could be brought in from the BRP Office in Pittsburgh. A few back-up instruments were also carried by the team. Battery and source checks were performed and the instruments were found to be operable. Both Gamma and Beta-Gamma readings were made at one meter and at ground level. All readings were logged and properly transmitted. The BRP team member was knowledgeable and efficient in the performance of his duties. The relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 27: The ability to demonstrate the appropriate use of equipment and procedures for collection and transportation of samples of vegetation, food crops, meat, poultry, water, and animal feeds (indigenous to the area and stored) was adequately demonstrated. Team B consisted of three Department of Environmental Resources personnel, which included one member from the BRP. They were equipped with all of the designated sampling equipment and materials, including protective clothing. Additional equipment included hard hats, respiratory protection, and equipment for monitoring oxygen concentration and organic vapors. The team was sent to two locations, which were found promptly. Drinking water was sampled. Proper techniques and procedures for sampling and contamination control were followed. No micro-R-meter was available for background readings. Samples

were properly obtained, labelled, and logged by a Department of Environmental Resources Community Environmental Control member. Transportation of the samples to the Harrisburg laboratory was simulated. Functions and activities were consistent with the plan and procedures.

Issue: The water sampling plan and procedures lacked detail and did not address the acquisition of water from public water supplies, i.e., household tap water, nor the use of a micro-R-meter for background measurements. (BVX92-23I)

(7) Field Sampling Team C

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The water sampling team, consisting of two Department of Environmental Resources personnel, was, through prearrangement, told to report to the Department of Environmental Resources office in Beaver Falls, Pennsylvania, at 0900 hours. The team was dispatched to take samples of water at 0900 hours.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Department of Environmental Resources surface water field sampling team demonstrated its ability to communicate with all required organizations. The team's vehicle had a Department of Environmental Resources network radio and was in contact with the Department of Environmental Resources District Office in New Castle, Pennsylvania and the Department of Environmental Resources mobile unit in Beaver Falls, PA. Also, a cellular telephone was available from the District Office. One commercial telephone call was made for demonstration purposes. No technical or operational problems or difficulties were encountered at any time with the communications system.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each emergency worker was issued the correct dosimetry which consisted of three dosimeters (0-500 mR, 0-20 R and 0-100 R) and a TLD. The TLD would be returned to the department of environmental resources in Harrisburg and processed by the Landeaver Company in Glenwood, Illinois. Appropriate instructions were issued with the dosimetry. Each worker had an exposure log that was properly completed. Team members were aware of their exposure limit of 5 R and to contact their supervisor if their exposure exceeded the limit. The team had a SRD Charger available and dosimeters

were zeroed prior to deployment. Also, team members carried KI and were given appropriate instructions. Activities demonstrated were consistent with the plan and procedures.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. The team had both low-range and high-range survey instrumentation, consisting of a GM-E-120 (calibration date of March 1992), a PIC 6-A (calibration date of May 1992), and a Victoreen Radector (calibration date of March 1992). The probes were covered with plastic to protect them from radioactive contamination and spare instruments were available from a third kit that could be brought in from the Department of Environmental Resources Office in Pittsburgh. A few back-up instruments were also carried by the team. Battery and source checks were performed and the instruments were found to be operable. Both Gamma and Beta-Gamma readings were made at one meter and at ground level. All readings were logged and properly transmitted. The team members were knowledgeable and efficient in the performance of their duties. The relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 27: The ability to demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, meat, poultry, water, and animal feeds (indigenous to the area and stored) was adequately demonstrated. The Department of Environmental Resource team clearly demonstrated its ability to properly collect surface water samples following its guidelines and procedures. The team used a State vehicle complete with all required water sampling equipment and supplies. Upon dispatch, the team members quickly proceeded to the Shenango Valley water treatment plant in Sharon, Pennsylvania, where they donned protective gloves and proceeded to take upstream, downstream, and outflow water samples following their guidelines. The samples were put into special one-gallon containers used only for nuclear incidents, labelled, tagged with all sampling information, and put in iced coolers. The team returned to the District Office in New Castle to deliver the samples for the subsequent simulated transfer to the laboratory. Both team members are full-time Department of Environmental Resources Water Collection and Quality Specialists. They were very knowledgeable of water sampling procedures and followed their guidelines for surface water sampling.

Issue: None.

(8) Joint Public Information Center

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. Public instructions for the ingestion phase of the exercise were not formulated at the JPIC. However, the ability to disseminate information received from State and county news release centers in a timely fashion was demonstrated. The States of Ohio and West Virginia formulated specific ingestion pathway advisories (produce embargoes) that were made available to the press and public at the JPIC in a timely manner.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. Two briefings were conducted, with actual media representatives retained by the utility in attendance. All affected States and the utility participated in these briefings, which were organized and chaired by the Director of Nuclear Communications of BVPS. Four utility news releases, one release by Pennsylvania, and a set of agricultural advisories from West Virginia and Ohio were available by the conclusion of the second briefing. All spokespersons had access to current, accurate, and timely information generated by their respective EOCs. In general, all presentations were coordinated and informative, and spokespersons were very straightforward in responding to media questions.

Issue: None.

b. Ingestion Counties

(1) Allegheny County

Objective 2: The ability to alert, mobilize, and activate personnel for both facility-based and field-based emergency functions was adequately demonstrated. The EMC contacted the staff by the telephone. The EOC staff alert roster and offsite response organizations lists were current and the alert was conducted in a timely manner. All required staff members listed in the county plan were present in the EOC. Responsible staff members telephoned offsite response organizations as required by the Allegheny County plan. During the ingestion exercise, no staff members were dispatched to other locations.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The County EMC was effectively in charge of the emergency response. He was assisted in these duties by his efficient Operations Officer. The staff was kept aware of the ingestion activities through periodic briefings. Discussions were encouraged among the various staff members. Copies of the county plan were available and utilized by the staff. Logs were maintained of all incoming and outgoing communications transmissions. Messages were reproduced and distributed to staff members. Protective action decisions, as they related to the support counties, were coordinated effectively with all appropriate organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communication systems demonstrated included 12 commercial telephone lines with conference capability, a RACES system, and an EIS communication computer link that was relayed by facsimile from the police department to the EOC. The EOC was able to communicate with PEMA, Beaver County, and all surrounding support counties. The primary communication system was able to handle the communication flow without any delays. The back-up systems (facsimile machine and computer link) were used throughout the exercise. The telephone system stopped working at 1128 hours, but came back on line at 1130 hours and caused no undue delays. A message was sent to the EOC from the State via a computer link between the State and the Police Department and facsimile between the Police Department and the EOC. However, this message was three hours late reaching the EOC staff from the Police Department.

Issue: PEMA sent a message via the EIS to the Allegheny Police Department which in turn, was to forward the message via facsimile to the County EOC for implementation. However, the Police Department staff took three hours to facsimile the message to the EOC. (BVX52-26R)

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The EOC was staffed by members of the County Department of Emergency Management (Deputy Director, Operations Officer, Radiological Health Officer, RACES, runners, and secretaries). Penn State Extension Agent, County Health Department and ASCS (USDA County Emergency Board). The ASCS representative had maps in the EOC that depicted the location of the following for the county: all farms and owners, feed facilities, dairy and milk production processors, meat and meat processors; cereal and cereal products, warehouses and storage. Feed grains and seeds, livestock summary, feed facility locations, general crop/livestock areas, landowner details, and the EPZ information requested by PEMA were provided using these maps. The County Health Department would assist the State in milk sampling and taking surface water samples. Other PEMA requests were made to the county staff which handled the request in a timely and professional manner. Food products and water were declared safe for human consumption in Allegheny County once it was determined that there was no contamination in the county. This information also was furnished to the citizens of the county (simulated).

Issue: None.

(2) Armstrong County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Emergency response personnel and local organizations were alerted and mobilized by name and title. The current list was maintained at the 911 police center for use by the police dispatchers. The required six staff members reported for duty at 0745 hours at the EOC; no personnel were required to be dispatched elsewhere. All other agency representatives were available by telephone.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Armstrong County EOC was under the direction and control of the County EMC who effectively controlled the response of the EOC staff. Briefings were held periodically to update the group and other technical staff members were involved, as appropriate, which enhanced the decision making process. The Armstrong County Emergency Operations Plan was available and used by the staff. Logs of messages were kept, but no internal message handling system was utilized.

Issue: The EOC staff did not implement a formal internal message handling system. (BVX92-27R)

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Armstrong EOC had four telephone lines, and the 911 center dispatcher had three more lines. Additionally, the EOC was serviced by RACES and ECOMM and was supported by two facsimile machines. The Armstrong EOC had the ability to communicate with all EPZ communities, risk counties, ingestion counties, field personnel, and State organizations. No breakdowns or delays occurred in the communication systems.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The Armstrong EOC was located in the basement of the new county annex adjacent to the 911 center. The facility had excellent lighting and ventilation. Since Armstrong County was part of the ingestion zone, the EOC was especially designed to be enlarged, if a greater number of participants were required. One table with eight chairs, a kitchen, and restrooms were sufficient for this exercise. A typewriter, computer, copier, and cots were available, if needed in the EOC. A map of the 50-mile ingestion zone was posted, as were status boards to record pertinent information. Armstrong County was unaffected by the plume so limited playing conditions existed. A back-up

generator was located in the building, but had not been hooked up yet; therefore, there was no demonstration of back-up power.

Issue: The back-up generator for the new county annex building had not been connected; therefore, a demonstration of back-up power capability was not accomplished. (BVX92-24I)

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. Using controller injects and pre-determined table-top exercise questions, the EOC staff and the Agricultural Stabilization and Conservation Service Officer were able to provide meaningful responses and clarify any existing rumors. Maps of farms and computer listings of farms, producers, processing plants, and water intake points were available and up-to-date.

Issue: None.

(3) Beaver County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The Beaver County EOC was appropriately staffed to perform the ingestion phase of the exercise. The individuals and organizations that participated in ingestion operations included the Agricultural Extension Office (which included a USDA representative), the EMC, the PIO, and the RO. The relevant functions and activities were implemented in a manner that was consistent with the Beaver County plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Beaver County EMC during the ingestion phase of the exercise provided effective leadership which enhanced EOC operations. Staff briefings were conducted at significant event occurrences and on an hourly basis. During the hourly briefings, each staff section gave a brief report on the status of its function to advise other staff members of important issues and decide which issues affected other county agencies. All incoming and outgoing messages were recorded on a master log, reproduced, and distributed to staff members. The current plan was available and used for reference. The Director frequently discussed the current status of the emergency with other staff members. The relevant functions and activities of this objective were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated at the Beaver County EOC. Adequate communication systems included: commercial telephones with conference ability, cellular telephone, PEMARS, RACES, EIS computer link, 911 radio system, and a facsimile machine. These communication devices were successfully used to communicate with various Federal, State, and local emergency response organizations. Primary communications were able to handle the communication flow. Back-up communication systems were demonstrated and functioned properly. Relevant functions and activities were implemented in a manner that was consistent with the Beaver County plan.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The individuals who participated in ingestion operations included representatives of the Agricultural Extension Office, the EMC, and the RO. The PARs for ingestion pathway hazards included the following: place animals within the plume

pathway on stored feed, store milk and milk products and other foods being processed, and wash all produce before human consumption. Recommended emergency PAs also included the interdiction of contaminated food products prior to entering the marketplace. Recommended PAs were implemented and disseminated to emergency workers and the public via the EBS and EOC staff. Agricultural information used at the EOC included the locations of dairy farms, meat and poultry producers, fisheries, fruit producers, grain producers, food processing plants, and water intake points. The agricultural representatives were very knowledgeable about agricultural issues within the county. A database and an agricultural overlay map system were used for information. All functions and activities were implemented in a manner consistent with the Beaver County plan.

Issue: None.

(4) Butler County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. All essential personnel reported to the EOC. A current written call list was available. If needed, the Agricultural Services Officer was physically located in a building adjacent to the EOC and was on call. Following a telephone call from the EOC Director, the Agricultural Services Officer reported to the EOC in a timely manner. The Butler County mass care centers continued to operate (simulated) from Day 1 and were coordinated by the Mass Care Officer. The mass care centers had received evacuees from Beaver County on Day 1. The Butler County EOC was adequately staffed to fulfill all appropriate responsibilities required by the plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was effectively in charge throughout the exercise. The appropriate staff, e.g., Mass Care Officer was involved in the decision making process. All incoming and outgoing messages were logged, copied, and distributed. Additionally, a copy was maintained for reference. Periodic briefings were held. Copies of the county plan were readily available to the EOC staff. Protective action decisions, as they related to the support counties, were coordinated effectively with all appropriate organizations.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary and back-up communications systems were demonstrated, e.g., telephone, municipal services radio, PEMARS, ECOMM, and facsimile. The EOC staff communicated with the following organizations: fire, police, support county EOCs, PEMA-Harrisburg, PEMA-Western Area, Beaver County EOC, and the municipal services. The primary communications systems were able to handle all essential communications with no delays. There were no breakdowns of communications equipment.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. Butler County functioned as a support county which received evacuees from Beaver County. The Butler County EMC was prepared to implement any PAs that might have been issued. Appropriate and accurate information on food products and water indigenous to the county was readily available to the Agricultural Service Officer from USDA. This information could have been communicated to emergency workers and the public in a

timely manner, if necessary. A computer listing of the names, addresses, and telephone numbers of all dairy farms, meat producers, fruit growers, grain producers, food processing plants, and surface water intake points was maintained. Also, the locations of all farms had been mapped. Personnel representing the various functions e.g., agricultural services, public communications, mass care, transportation, public works, etc., were prepared to implement PAs in a manner consistent with the county plan.

Issue: None.

(5) Clarion County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Telephone calls were promptly made to notify off site response organizations as required by the Clarion County plan. Telephone calls were made by the County EMC. Lists of contacts and telephone numbers were up-to-date and correct, and all staff were alerted in a timely manner. The staff arrived promptly, and the facility was activated. One staff member was deployed to pick up required feed, silage, and milk samples. Relevant functions and activities were implemented in a manner that was consistent with the Clarion County plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The individual effectively in charge of the emergency response was the EMC. Briefings were held periodically to keep the staff up-to-date on the current situation. A copy of the plan was available for reference throughout the exercise. Message logs were kept for all incoming and outgoing messages. Messages were reproduced and distributed, as appropriate. The Clarion County EOC utilized an internal message handling system and information was provided to the staff in a prompt manner. All protective action decisions and implementation of the decisions were coordinated effectively with all appropriate organizations. Relevant functions and activities were implemented in a manner consistent with the Clarion County plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communications systems utilized during the exercise included commercial telephone, radio systems, and a computer link with PEMA (Harrisburg) and its Western Area Office. The organizations that the County EOC communicated with included PEMA, USDA, other ingestion counties, and the BRP. Primary communications adequately handled communications flow without delay and a radio system served as a back-up communication system. None of the systems broke down. Relevant functions and activities were implemented in a manner consistent with the Clarion County plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. Space, furnishings, lighting, ventilation, restrooms, and back-up power were sufficient to support emergency operations. Typewriters, computers, a copier, kitchen supplies,

cots, and facsimile machines also were available. Access to the facility was controlled. Maps were located on the walls, in the EIS, and in the plan. Status boards were available. Relevant functions and activities were implemented in a manner consistent with the Clarion County plan.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAS for ingestion pathway hazards was adequately demonstrated. The County Agricultural Coordinator, with the County EMC, demonstrated the implementation of PAS for all ingestion hazards. The PAS recommended for ingestion pathway hazards were to place dairy animals, within 50 miles of the plant, on stored feed and water. No other actions were recommended. Because of the location of the county in relation to the plume, no food products or water restrictions applied. The recommended PA was implemented in a manner that was consistent with the Clarion Township plan. All information on food and water within the county was appropriate, accurate, and available to emergency personnel and the public. A list of dairy farms with the number of cows was available at the EOC and facsimiled to PEMA at its request. Relevant functions and activities were implemented in a manner that was consistent with the Clarion County plan.

Issue: None.

(6) Fayette County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The USDA and appropriate support agency representatives were notified the day of the ingestion exercise by the EMC's administrative assistant. The notified staff reported to the EOC in a timely manner. The EOC was operational at the beginning of the regularly scheduled work day. Other support agency personnel were contacted and their expertise was used as required by exercise events. All relevant functions and activities were implemented in accordance with the county's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was an effective leader who coordinated all staff actions and ensured that all participants were up-to-date. The EMC and the USDA/ASCS agent, supported by other county agencies, were fully capable of responding to foreseeable ingestion pathway zone problems. Messages were recorded on pressure sensitive three copy forms and summarized in computer records. All relevant functions and activities were implemented in accordance with the county's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations, organizations, and field personnel was adequately demonstrated. The telephone was the primary communication system and was supported by facsimile, radio, RACES, and the EIS. No breakdowns, delays, or problems were noted in any communication system. All relevant functions and activities were implemented in accordance with the county plan.

Issue: None.

Objective 5: The adequacy of facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated. The EOC was in the courthouse basement which provided sufficient space, furnishings, lighting, restrooms, ventilation, and back-up power and was supported by typewriters, computer, word-processors, copiers, and numerous cots. Additionally, the staff had access to an adjacent snack bar which would have sustained emergency operations. However, the back-up generator operation was not demonstrated. Maps and status boards entries were appropriate to scenario requirements. All relevant functions and activities were implemented in accordance with the county plan.

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (BVX92-25I)

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. One telephone message to the EMC's office and to USDA/ASCS office instructed the staff that animals should be sheltered and placed on stored feed and water. The EMC questioned the caller and requested verification by PEMA. PEMA confirmed this as misinformation. A PEMA request for hay and milk samples for testing was accomplished in a timely manner. All relevant functions and actions were implemented in accordance with the county's plan.

Issue: None.

(7) Greene County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC arrived at the county EOC after PEMA notified him by telephone of the emergency situation. A current written call-down list was utilized by the EMC to alert the remaining EOC members by telephone. The staff members reported to the EOC in a timely manner and quickly assumed their duties and responsibilities. During the course of the ingestion exercise, no staff members were dispatched to other locations. All relevant functions were consistent with the Greene County Emergency Plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated by the EMC who was in charge. Briefings were held with the EOC staff and represented organizations. Staff members were encouraged to be involved in the decision making process. All internal and external messages were logged and distributed accordingly. Records of incoming and outgoing messages were kept. The protective action decisions and their implementation were effectively coordinated with all appropriate organizations. All relevant functions were carried out in accordance with the Greene County plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The EOC coordinator had direct contact with PEMA via a two-way FM band radio system. There were three commercial telephone lines available. Also, the EOC had direct contact with the county's police and fire rescue organization. The primary communications system was able to effectively handle the communications traffic without undue delay. All back-up communications systems functioned properly. All relevant functions and activities were implemented in a manner that was consistent with the Greene County plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The county's EOC contained typewriters, word processors, a copier, and kitchen supplies. Cots were available from the police department. The EOC had a functional back-up generator. However, the actual demonstration was not done. Access to the facility was not controlled due to inadequate staffing. A sign-in sheet was maintained. Plume EPZ maps, evacuation routes, relocation centers, and radiological

monitoring points were posted in the EOC. Status boards which displayed ECLs, protective action decisions, and weather data information were updated in a timely manner.

Issue: Throughout the exercise, access to the EOC was not adequately controlled due to inadequate staffing. (BVX92-28R)

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials chose not to operate the generator. (BVX92-26I)

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The organizations involved were the Greene County EOC and the USDA. The preventive PAs recommended were the covering of open wells and cisterns and storing of milk that had been processed into milk by-products. No PA was recommended for food products for human consumption. All recommended PAs were implemented in a timely manner. The appropriate information on food products was released to emergency workers and the general public. This information pertained to the feeding of livestock. All relevant functions and activities were fully implemented in a manner that was consistent with the plan.

Issue: None.

(8) Lawrence County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC requested support from the USDA County Emergency Board (CEB) members by notifying the ASCS, which in turn notified the Cooperative Extension Service and Soil Conservation Service and requested them to report to the Lawrence County EOC. According to the plan, the Mercer County Farmers Home Administration representative, also a Lawrence County Cooperative Extension Service member, would coordinate activities with Lawrence County, if these services were needed. Since these services were not needed, he was not contacted. Additionally, the facility was staffed by members of RACES, the PSP, the PEMA Liaison Officer, and clerical personnel. Also, two Department of Environmental Resources personnel were at the EOC. The Department of Environmental Resources personnel, along with one RACES operator, were dispatched (simulated) to sample water and grain products. All relevant functions and activities were implemented in accordance with the organization's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. At the Lawrence County EOC, the EOC Coordinator effectively demonstrated the ability to direct, coordinate, and control ingestion emergency activities by involving the CEB in decision making activities and providing accurate, current, and timely briefings each time the staff convened. All incoming and outgoing messages were entered in the EOC's message log and circulated, along with internally generated documents, among EOC staff members. Copies of the State and Lawrence County plans were available for reference. Protective action decisions were discussed and a resolution was agreed upon by all appropriate parties. All relevant functions and activities were implemented in accord with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated through the use of the primary commercial telephone system supported by RACES, PEMARS, a 20-channel base radio, facsimile machine, and the EIS. All communication systems functioned without a breakdown. All communication traffic from or to the State EOC, Western Area PEMA, and State agencies occurred without undue delays. RACES units were demonstrated and functioned properly, assuring communications with field teams. Also, conferencing capability was available with Federal agencies, State, and local

police services, medical facilities, fire facilities, and Department Environmental Resources. All relevant functions and activities were implemented in accordance with the organization's EOP.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The EOC received notification of a protective action decision (made by BRP at the State EOC with concurrence from PEMA) to shelter and place all livestock within 50 miles of the BVPS on stored feed and water. The message was generated by a representative of the Department of Agriculture located at the State EOC. Due to the nature of the message, the agency issuing the order, and the general procedures observed, the Lawrence County PEMA Liaison Officer conferred with Western Area PEMA about the validity of the protective action decision. Everyone involved questioned the directive; therefore, the EMC called the agriculture representative at the State EOC to confirm the decision. Telephone contact was made with the State agriculture representative, who confirmed the validity of the protective action decision. Upon verification that this was a bonafide protective action, the CEB immediately issued an EBS message notifying county residents of the protective action decision. Approximately one hour after the PA message was released, the EOC received a message from Western Area PEMA indicating that the person who issued the order did not exist and that a false PA had been transmitted. After much discussion by the CEB, it was determined to be in the best interest of all concerned to leave the PA in effect for Lawrence County. This action allowed the CEB time to monitor weather conditions and deposition data which possibly could result in the same PA. Later in the day, after reviewing the data, the CEB decided to reissue an EBS message limiting sheltering of all livestock to within a 10-mile limit of the BVPS. Current and accurate agricultural information concerning impacted dairy farms, meat/poultry producers, vegetable and grain producers, food processing plants, and water intake points was available and identified by emergency personnel. All food and water products were declared safe for human consumption as the county was not impacted by plume deposition. The capability existed to disseminate appropriate information to the general public.

Issue: None.

(9) Mercer County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. Emergency response personnel and local organizations were alerted and mobilized by name and title using up-to-date written call lists which were available for two shifts. The Radiation Protection Manager notified the team members in a timely manner by telephone, using current call lists. All activities were implemented in a manner which was consistent with their plans and procedures.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. During the course of the exercise, the Mercer County EOC Operations Officer provided effective leadership which enhanced EOC operations. Staff briefings were conducted at all ECL changes, significant event occurrences, and on an hourly basis. During the hourly briefings, each staff section gave a brief report on the status of its function to advise other staff members of important issues and decide which issues affected other county agencies. All incoming and outgoing messages were recorded on a master log, reproduced, and distributed to staff members. The current plan was available and used for reference. The Director frequently discussed the current status of the emergency with other staff members. The relevant functions and activities of this objective were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The EOC was equipped with a sophisticated communications system connecting the Mercer County EOC with the Western EOC, fire, police, hospitals, rescue, and other response agencies. The communications systems at the Mercer County EOC consisted of two commercial telephones (primary), radio, and RACES, which was the back-up communications system. If required, high and low band radio frequencies were available. All communications systems demonstrated during the exercise operated properly and communications were carried out as described in the plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated. The Mercer County EOC was located in a two-story building on the grounds of the Mercer County Living Center. There was sufficient space, lighting, furniture, restrooms, ventilation, telephones, computer, and a copy machine to support

emergency operations. Back-up power consisting of a generator equipped with battery packs was available and functioned properly for 90 minutes. The large, well-lighted operations room was equipped with a status board and maps showing the plume EPZ, evacuation routes, plume EPZ population areas, relocation areas, and ingestion EPZ agriculture information. Tables were set up and labeled for representative agencies assigned to this facility. The relevant functions and activities of this objective were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAS for ingestion pathway hazards was adequately demonstrated. The evaluator asked the appropriate questions to establish that, had the county received sufficient exercise play, they would have been able to demonstrate their capability to implement appropriate measures for the ingestion exposure pathway. The organizations and individuals represented at the EOC were the USDA, RACES, PIO, Pennsylvania State Agriculture Section, EMS, PEMA, RO, and a medical representative. These organizations were responsible for implementation of PAS for ingestion hazards. PAS recommended were to place dairy animals within 50 miles of the plant on stored food and water, and to cover open wells and cisterns. Specific agricultural information was used at dairy farms, meat and poultry producers, food processing plants, and grain producers. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

(10) Venango County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EMC and his assistant notified the following EOC staff members by telephone: PIO, County Commissioners, rumor control, and the County Emergency Board. The EOC was fully staffed in a timely manner. Activities during the exercise did not require dispatching staff members to other locations. Additional EOC staff members were available in their offices in the event they were needed.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The EMC was effectively in charge of the emergency response and kept the staff informed and involved through timely briefings. The staff was involved in decision making. Logs were maintained for all incoming and outgoing messages and all staff members had access to these messages. PAs did not directly affect Venango County, however, the EOC staff members reviewed their various information sources and were prepared to respond if the need arose. Relevant functions and activities were implemented in a manner consistent with the plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Communications equipment in the EOC included seven commercial telephone lines, County Sheriff's Department radio network, EIS, and RACES. The ability to communicate with all county agencies and the PEMA Western Area Office was adequately demonstrated. There were no communications breakdowns or delays during this exercise. RACES demonstrated its excellent communications capabilities. Relevant functions and activities were implemented in a manner consistent with the emergency plan.

Issue: None.

Objective 5: The adequacy of facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated. The County EOC was located in the basement of the county courthouse. Space, furnishings, lighting, restrooms, and ventilation were adequate to support emergency operations. The EOC had a generator that provided back-up electrical power and its capability was adequately demonstrated during this exercise. The available equipment at the EOC consisted of a typewriter, word processor, copier, kitchen supplies, and cots. Status boards and maps were available and used during this exercise. Displays were kept current and maps included the plume EPZ and ingestion EPZ for agricultural

information. Status boards included ECLs, protective action decisions, and weather data. All relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The EMC utilized the agricultural information and expertise provided by the County Emergency Board during this exercise. There were 19 milk, grain and fruit producing farms in the Venango County portion of the 50-mile ingestion pathway zone. A complete list of county agricultural producers was maintained by the ASCS. An employee of the ASCS was in the EOC during this exercise and provided excellent information concerning agricultural data. Protective action decisions during this exercise did not require Venango County to implement PAs. Observations during this exercise indicated that Venango county could effectively respond to an emergency.

Issue: None.

(11) Washington County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The mobilization of personnel for ingestion pathway emergency functions at the Washington County EOC began with the notification of required staff by the EMC. A current call list was utilized. The staff at this facility included the EMC, Communications Officer, PIO, Agriculture Officer, PEMA Liaison Officer, Transportation Officer, and RO. No staff members were dispatched to other facilities or locations. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Washington County EMC was effectively in charge of the response activities. The staff was involved in decision making, particularly during the periodic briefings held by the EMC. A copy of the plan was available to the entire EOC staff. An internal message handling system was utilized, which provided information to the staff in a prompt manner. Also, a message log was utilized to record all incoming, outgoing, and internal messages. Protective action decisions and their implementation were effectively coordinated with all appropriate organizations. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The staff of the Washington County EOC effectively demonstrated the ability to communicate during an ingestion pathway radiological response by utilizing primarily high-frequency radio systems and commercial telephone lines. RACES, cellular telephone, EIS, and a facsimile machine served as sufficient back-up systems. All systems were demonstrated and no communication delays or breakdowns occurred. The Washington County EOC primarily had communications links with the State EOC in Harrisburg and the Beaver County EOC. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The implementation of preventive PAs was demonstrated by the County Emergency Board. Specifically, a

notification was received by the Department of Agriculture at the PEMA State EOC requiring livestock within the 50-mile EPZ to be placed in shelters and given stored feed and water. This action was implemented by the Washington County Agriculture Officer who along with the PIO made arrangements with the media, and utilized a pre-established network of telephone communications to notify and inform all farmers within the affected area. Although this recommendation was considered an extraordinary request and was later classified as a rumor generated by the PEMA State EOC, the PAR was followed and not down-scaled. The decision was based on recent information from PEMA regarding the possible reentry into most areas of Washington County within 24-hours (due to low radiation levels) and was kept effective as a temporary precautionary measure. No food products or water were declared unsafe for human consumption in the county. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

(12) Westmoreland County

Objective 2: The ability to alert, mobilize, and activate personnel for both facility-based and field-based emergency functions was adequately demonstrated. After being alerted by PEMA, the EMC notified key members of the EOC staff by telephone, placing them on standby. Staff members were alerted in a timely manner through the use of a current call list. Once activation was completed, a briefing occurred in the EOC. Staff present in the EOC included the EMC and his secretary, eight ROs, two ARC representatives, the Hazardous Materials Chief and Superfund Amendments and Reauthorization Act of 1989 Officer, the County Emergency Medical Technician, the PIO, two Regional Response Team members, the Communications Officer, and RACES operator. A field sampling team consisting of five ROs and a representative of the USDA were dispatched. Functions and activities were implemented in a manner consistent with the Westmoreland County Plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated by the Westmoreland County EOC. The County EMC was effectively in charge of the emergency response. Staff briefings were held after each significant development. Staff members were appropriately involved in the decision making process, and a copy of the county plan was available for reference. Logs were kept of all messages. Appropriate messages were distributed promptly through the use of an internal message system utilizing file copies. Field sampling activities were effectively coordinated with PEMA. The relevant functions and activities for this objective were implemented in a manner consistent with the county's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated by the Westmoreland County EOC. The communication systems demonstrated during the exercise included six commercial telephone lines (primary), PEMARS, RACES, a cellular telephone in a vehicle, ECOMM, and a facsimile machine. The Westmoreland County EOC had the ability to communicate with PEMA (Western Area Office) and the affected counties in the State. The primary communications system was able to handle communication flow without delays. Back-up systems demonstrated during the exercise included the facsimile machine and the cellular telephone in the field team's vehicle. At no time did the communication systems break down during the exercise, and all activities were consistent with the Westmoreland County Plan.

Issue: None.

Objective 5: The adequacy of facilities, equipment, displays, and other materials to support emergency operations was adequately demonstrated at the Westmoreland County EOC. The Westmoreland County EOC was located on the ground level of the county courthouse. Space, furnishings, lighting, restrooms, and ventilation were sufficient to support emergency operations. Equipment available at the EOC consisted of personal computers, a facsimile machine, photo copier, and communications equipment. The court house cafeteria was available for the EOC staff. Access to the facility was controlled at the entrance to the EOC. Appropriate maps of the 50-mile ingestion EPZ were present. A status board was updated as messages came in and were processed. All functions demonstrated were consistent with the Westmoreland County Plan. The provision of back-up power through an emergency generator was not demonstrated during the exercise.

Issue: The facility was equipped with a generator capable of serving the needs of the facility. However, officials chose not to operate the generator. (BVX92-27I)

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated by the Westmoreland County EOC. A field sampling team, consisting of five ROs and a field sampling expert from USDA, was deployed to a specified dairy farm and successfully collected milk and hay samples. The samples were taken to the Westmoreland County Airport for shipment to Harrisburg (simulated) for analysis. Communications with the field team were conducted with a cellular telephone in the team's vehicle. An informational booklet on radiological precautions for farmers and food processors had been distributed in the county. A number of telephone calls by concerned residents and farmers concerning appropriate precautions were handled by the EMC. All activities were conducted in a manner consistent with the Westmoreland County Plan. No PAs were ordered for the county.

Issue: None.

2. State of West Virginia

a. State Entities and Functions

(1) State Emergency Operations Center

Objective 2: The ability to fully alert, mobilize, and activate personnel for both facility and field-based emergency functions was adequately demonstrated. The emergency staff for the ingestion phase of the exercise was in place at the West Virginia EOC at the time the exercise resumed. The appropriate staff members were present, including RACES operators and the members of the Ingestion Zone Recovery and Reentry Advisory Group. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The Commissioner of the West Virginia Bureau of Public Health chaired the Ingestion Zone Recovery and Reentry Advisory Group. Periodic briefings were conducted to update the group on the emergency situation. A prioritized checklist was used to ensure that necessary actions were accomplished in a timely manner. Four sampling locations were determined to be required and the requests for State sampling teams were initiated. The staff in the EOC was provided with up-to-date situation information so that it could answer local requests for information. When the sample results were received in the West Virginia EOC, the data was analyzed in a timely manner and presented to the Advisory Group. The data was discussed by the group and a reentry advisory was generated. The EMC and his staff provided administrative support, such as message dispatch and receipt, distribution of incoming messages as appropriate, and maintenance of a message log. The relevant functions and activities were implemented in a manner consistent with the organization's plan.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The primary means of communication was by telephone. However, facsimile and RACES served as the back-up communication system. There were ten incoming and eight outgoing telephone lines available, and two facsimile machines, one for incoming and one for outgoing messages. All telephone lines had conference capability. Additionally, there was a direct telephone line to the BVPS. HF and VHF radios and a packet radio operated by RACES operators were available in the EOC Communication Center. Also, cellular telephones were in EOC vehicles and individual mobile communication units with low band FM radios were available.

Additional radio communications were available from the West Virginia National Guard, the Department of Highways, the Department of Natural Resources, and the Department of Public Safety. The EOC communicated with all State agencies, all County EOCs, field monitoring and sampling teams, BVPS, FEMA, and Ohio Emergency Management Agency. The RACES operators demonstrated two back-up communications systems--the HF radio and the packet radio. All relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 16: The ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons based on predetermined criteria as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases, was adequately demonstrated. The scenario did not drive the use of KI. However, the Ingestion Zone Recovery and Reentry Advisory Group Chairperson, the Commissioner of the State Bureau of Public Health, and a medical doctor conducted an extensive discussion on the subject, which resulted in the decision that the issuance of KI was not warranted.

Issue: None.

Objective 26: The ability to identify the need for and call upon Federal and other outside support agencies was adequately demonstrated. When the Ingestion Zone Recovery and Reentry Advisory Group identified the need for additional sampling teams, the Director of the West Virginia OES sent a request to FEMA Region III for the required teams. The West Virginia OES was prepared to provide transportation, housing, and logistical support to the Federal team. Also, the West Virginia OES had the capability to provide local personnel to act as guides in the field. Non-Federal support was requested by the Director, West Virginia OES, from the ARC. The request was for the continued sheltering and feeding of evacuees and support to the State assistance center in the handling of evacuees. If required, the West Virginia OES was prepared to provide facilities and equipment. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 32: The ability to determine appropriate measures for controlled reentry and recovery based on estimated total population exposure, available PAGs, and other relevant factors was adequately demonstrated. The evacuated 10-mile EPZ was adequately secured and controlled as sampling teams continued to take samples. The proper calculations were made using measurements of radiative deposition in the areas impacted by the

plume. Policies and procedures were developed for reentry, relocation, and resettlement of individuals from impacted areas. These policies and procedures were based on data, supplied by the field sampling teams, which were compared with the EPA and Food and Drug Administration PAGs identified in the plan. A single geographic area in Hancock County between five and nine miles from the BVPS remained closed to the public. Individuals from this area were instructed to remain in the relocation center in Weirton, West Virginia. All other areas were freed from any advisories, except for the control of milk collection and production out to the 25-mile perimeter. Reentry routes were established and controlled for uncontaminated areas. All relevant functions were implemented in a manner consistent with the emergency plan.

Issue: None.

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. The planning for these measures was successfully carried out by the accident assessment team at the West Virginia State EOC. All planning decisions were based on information supplied by the field teams. Decisions were reached by consensus of the organizations represented on the Ingestion Zone Recovery and Reentry Advisory Group. These decisions regarding reentry and recovery were transmitted to the county EOCs promptly for implementation. All decisions resulted from extensive discussions regarding the pros and cons of each issue. All relevant functions and activities pertinent to the State EOC activities for this objective were conducted in a manner consistent with the West Virginia State plan.

Issue: None.

(2) Accident Assessment

Objective 29: The ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, Food and Drug Administration PAGs and other relevant factors was adequately demonstrated. The geographic area of concern was identified by dose projection and confirmed by field measurements. Dietary intake factors, as well as radionuclide build-up, were taken into consideration. Laboratory analyses were supplied in a timely manner. PAs recommendations for condemnation of food (e.g., disposing of milk within the 10-mile EPZ) were based on actual field measurements (simulated). In fact, all PARs were based on field data comparisons with EPA and/or Food and Drug Administration PAGs giving appropriate consideration to dietary factors. All areas of concern were adequately explored and properly determined. Relevant activities were implemented in a manner consistent with the emergency management plan, with one exception. Although the

plan called for color coded identification of sampling points on the display maps, the sampling locations were identified but the color coding was not used.

Issue: The West Virginia Plan required the color coded identification of sampling points on the display map. Sampling location points were identified on the map; however, the color coding scheme was not used. (BVX92-29R)

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. All West Virginia organizations identified in the plan were represented on the Ingestion Zone Reentry and Recovery Advisory Group and participated in the development of the protective action decisions and their implementation. Initial recommendations for sheltering of all animals in the 10-mile EPZ and placing the animals on stored feed and well water were followed by another recommendation to ban cultivating and harvesting, transporting, selling, and processing of grain, animal feed, produce, honey, milk, livestock, and poultry. Additionally, a ban on hunting and trapping throughout the 50-mile EPZ was established. When the field team sampling results became available and were interpreted, the bans were lifted in all areas, except for the five-to nine mile-EPZ in Hancock County. The suspension of the sale and use of honey was continued until samples of this product could be analyzed. Additionally, all milk in the 10-mile EPZ was to be disposed of and milk in the 10- to 25-mile EPZ was restricted to processed products. All PAs were implemented in a timely manner and specific information was made available to emergency personnel as well as the general public. Specific agricultural information was available and used at the County EOCs. Water sampling was continued at water intake points to ensure the safety of the water supply. All relevant functions were implemented in a manner consistent with the State plan.

Issue: None.

(3) Public Information

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. The formulation and development of protective guidance was accomplished by the State assessment team, and the State EOC then provided guidance to the counties. The State PIO disseminated information to the public through the JPIC State representative. The PIO was present at all briefings and used briefing information, as well as status board entries and message traffic, to develop his press releases. The West Virginia OES Director approved all press releases. The information was released in a timely manner, and a

log of all releases, along with copies of the individual releases, was maintained. The media was briefed in the EOC media briefing room. Maps and copies of the press releases were used and distributed. The PIO received facsimile copies of all press releases from the JPIC and Hancock County PIOs.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. The Governor's Press Secretary had the responsibility for this function and placed two representatives in the EOC to ensure the accuracy of PIO activities. These representatives attended all the briefings, were given copies of all messages, and had a clear, unobstructed view of the status boards. They had direct access to the Operations Chief and West Virginia OES Director and were in telephone contact with the JPIC and the Hancock County PIOs. They also received facsimile copies of all JPIC and Hancock County press releases. The media was briefed in the EOC Media Briefing Room adjacent to the EOC. The briefings were given by the Governor's Press Secretary's representatives, who had developed the presentation from current information gathered in the EOC. The representatives provided timely, accurate information, including PARs, in clear, non-technical terms. Maps and copies of the press releases were distributed. All press releases prepared by the representatives were approved by the Director, OES West Virginia, prior to release. A log and copies of all press releases were maintained. The log was accessible to the EOC staff. The relevant functions and activities of this objective were implemented in a manner that was consistent with the State's plan.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The staff at the EOC was responsible for this function. The rumor control telephone number was the same as the EOC telephone number, which had an eight line roll-over capability. The number was publicized in all West Virginia OES brochures. There were eight incoming lines and eight outgoing lines. Rumor control calls were received at the operations desk in the EOC, where the nature of the inquiry was determined and then the caller was routed to the appropriate expert. Calls of a general nature were routed to the PIO staff. The rumor control staff members were included in all briefings and received copies of all messages. They had an unobstructed view of the status boards and had direct access to all EOC staff members, including the Director of West Virginia OES and Chairman of the State Assessment Team. They attended meetings of the State Assessment Team and were in telephone contact with the JPIC and the Hancock County PIO. The Director, West Virginia OES, authorized the release of all

information. The relevant functions and activities for this objective were implemented in a manner that was consistent with the State's plan.

Issue: None.

(4) Field Sampling Center

Objective 2. The ability to alert, mobilize, and activate ingestion pathway sampling team personnel in West Virginia was adequately demonstrated. In accordance with the exercise extent-of-play agreement, the field sampling center and field sampling team personnel were pre-positioned for the exercise. Over 20 emergency workers were present at the Ohio County Airport, together with a communications van, a hazardous material van, sampling team vehicles, and other vehicles. Two field sampling teams were dispatched from this location to demonstrate sampling.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. A well-equipped communications van was co-located with the ingestion pathway field team sampling center and provided the communications capability. Communications systems at this site included cellular telephone; VHF, UHF, and HF radio systems; RACES; a facsimile; and commercial telephones which were available in the nearby airport buildings. The communications van had communications links with a number of other organizations including the two field monitoring teams, the West Virginia State EOC, the Marshall County EOC, the Ohio County EOC, and the hazardous material vehicle from which decontamination activities were conducted. The back-up communications systems were demonstrated and functioned properly. The primary systems were able to handle the communications flow without any delays.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The ingestion field sampling center personnel had simulated TLDs. The actual TLDs to be used were supplied by Landauer and were required to be read by a properly accredited processor. The direct-reading dosimeters had ranges 0-20 R and 0-200 R, and a charger was available. Exposure records and instructions were available. Dosimeters were zeroed and initial readings were recorded. The field team coordinator knew that an exposure of 5 R was authorized for the mission and was aware of what to do if he received an exposure higher than authorized. He indicated that for authorization to incur exposures in excess of 5 R, he

would contact the Commissioner of Public Health in Charleston, West Virginia.

Issue: None.

Objective 27: The ability to demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, meat, poultry, water, and animal feeds (indigenous to the area and stored) was adequately demonstrated. Equipment which was packed and available for the teams, included plastic collection bags, scoops or shovels, plastic containers for milk and water, identification labels, writing materials, tape measures for area measurement, cutting equipment, disinfectant, preservative, funnels, and coolers. The teams' protective equipment included anti-contamination suits, boots, and gloves, and appreciable supplementary equipment, such as flashlights for night operations. Surface radiation measurements were conducted, bagged, and labelled. Samples were brought to the center by field sampling teams and were surveyed using a Ludlum survey meter, not a micrometer as specified in the procedures. No micrometers were available. Radiation measurements taken on the samples were marked on the forms accompanying the samples and logged. Sampling was conducted by staff from the State Health Department and the State Department of Agriculture. The samples were re-bagged with appropriate forms accompanying them. A simulated fish sample brought in by a field team was dispatched to the EOC at Steubenville, Ohio, for forwarding to the Ohio State Laboratory in Columbus, Ohio, for analysis. Record forms with full information on the samples accompanied the samples to the laboratory, but copies of these forms were not kept and the sample reception group maintained only partial information, which did not include systematic sample location information, on a log sheet.

Issue: A micrometer, required in the procedures (SOP Field Sample Screening, Item #G, page 2.07) for surveying incoming samples, was not available. (BVX92-30R)

Issue: Record forms with full information on the samples accompanied the samples to the laboratory, but copies of these forms were not kept and the sample reception group maintained only partial information, which did not include systematic sample location information, on a log sheet. (BVX92-28I)

(5) Field Sampling Team A

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The communication systems consisted of a mobile radio (16 channels) installed in the West Virginia Department of National Resources vehicle. The back-up communications system was a hand-held portable radio issued by the Field Team Coordinator prior to the

team's dispatch to sampling locations. The field sampling team had communications with the Field Team Commander, the Department National Resources and the State and local police departments. The primary communications system (radio) was able to handle communications flow without delays and the back-up system (portable radio) was successfully demonstrated. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. Each team member was issued a TLD (Landeaver) and two self-reading dosimeters (0-20 R, 0-200 R). The team members had access to a dosimeter charger and were issued a record exposure chart along with appropriate instructions regarding how to use the dosimeters and read the results. Dosimeters were zeroed and initial readings were recorded on the permanent record chart along with the dosimeter serial number. Subsequent readings were requested every 30 minutes and recorded. The exposure authorized for the mission was 5 R and the team members were knowledgeable of whom to contact and what procedures to follow if they incurred exposures higher than authorized. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 7: The appropriate equipment and procedures for determining field radiation measurements were adequately demonstrated. The team had high and low range instruments (Tech Associates CP 44 calibrated May 1992, and CD V-700 calibrated January 1990). Additionally, back-up instrumentation was available and demonstrated. Both battery and source checks were performed during operational checkouts of the instruments. The instruments were enclosed in plastic bags to prevent contamination, and procedures were followed in obtaining both Beta and Beta-Gamma readings at the appropriate positions. All readings were properly logged and the teams were able to find and arrive at the monitoring and sampling locations promptly. They were knowledgeable in monitoring and sampling procedures. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: None.

Objective 27: The appropriate use of equipment and procedures for the collection and transport of samples of vegetation, food crops, meat, poultry, water, and animal feeds (indigenous to the area and stored) was not adequately demonstrated. The team had all the appropriate sampling equipment and materials available in

the sampling team vehicle. A complete change of protective clothing was demonstrated during this exercise. Surface samples were obtained from a consistent geometric configuration and surface radiation measurements were taken and recorded at sample locations using a CD V-700 and earphones. However, a micro-R-meter was not available for surface radiation measurements as required by the plan. Also, procedures were demonstrated to prevent cross contamination while obtaining strawberry and milk samples. However, there was no procedure in the plan for obtaining a surface water sample. The State Agriculture Department representative demonstrated this procedure (not written) for obtaining water samples, but the procedure was inappropriate for contaminated water (radiation) sampling. The West Virginia plan requires a detailed plan and procedure for obtaining surface water samples. Samples were returned to the field team coordinator who arranged for transportation to the Jefferson County, Ohio, Emergency Service Office, which would, in turn, arrange for delivery of the samples to its laboratory in Columbus, Ohio, for analysis. The relevant functions and activities were implemented in a manner that was consistent with the organization's plan.

Issue: There was no procedure in the plan for the sampling team to obtain a surface water sample. (BVX92-31R)

Issue: A micro-R-meter, required by the plan, was not available for surface radiation measurements. (BVX92-32R)

(6) Field Sampling Team B

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. Field Sampling Team B communications consisted of a vehicle-mounted radio and a hand-held portable radio. The primary and back-up communications systems operated well during the exercise. No delays or breakdowns were experienced during the exercise demonstration. Communications with the Ohio County Field Sampling Center were demonstrated. Activities demonstrated by the team were in accordance with the West Virginia Department of Health Plan.

Issue: None.

Objective 6: The ability to continuously monitor and control emergency worker exposure was adequately demonstrated. The emergency workers were issued proper dosimetry that included two direct-reading dosimeters (0-20 R, 0-200 R), a TLD, and record cards. The TLDs were read by an accredited processor. Team members had dosimeter chargers available for their self-reading dosimeters. Initial readings were recorded upon departure from the Ohio County Field Sampling Center. Instructions on dosimeter use, frequency of reading, and mission exposure limit (5 R) were

included in a briefing given by the RO. Individual dosimeters were read every 30 minutes and the readings recorded. Team members knew whom to contact for authorization to incur exposures in excess of the authorized mission exposure limit.

Issue: None.

Objective 7: The ability to demonstrate the appropriate equipment and procedures for determining field radiation measurements was adequately demonstrated. The team correctly performed field measurements using adequate instrumentation and procedures. The team's primary meter broke; however, their Ludlum 12-4, an equivalent back-up, was used and operated efficiently. All instruments were checked for proper operation, including battery and source checks at the Ohio County Field Sampling Center before departure and once again at the sampling site. The instruments were within their calibration periods. During Beta-Gamma surveys at near ground level and about waist level, instruments were protected with plastic bags. Readings were taken and recorded with the location, time, date, and name of the monitor who took the readings. The monitoring point of the sampling site was located promptly. All field readings were promptly transmitted to the sample collection point.

Issue: None.

Objective 27: The ability to demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, meat, poultry, water, and animal feeds (indigenous to the area and stored) was adequately demonstrated. The West Virginia Department of Natural Resources had all the equipment necessary to collect samples of fish that were requested. Two team members were issued gloves, boots, and anti-contamination suits which they put on for the exercise demonstration. The samples requested of the team were restricted to four pounds of fish. Surface radiation measurements were taken on the shore of a small pond using the CD V-700 Beta-Gamma instrument; the micro-R-meter required in the West Virginia sampling SOP was not available (previously cited - BVX92-33R). The team collected the fish samples from the pond and prepared them (simulated) for proper transportation to the sample collection point located at the Ohio County Airport. The team found the location of the pond promptly, and an adequate procedure was demonstrated during the fish collection process. Written SOPs were used during sample collection and preparation for transportation. The samples were correctly labelled with the time, date, and location of the sample collection site. All equipment was decontaminated at the sampling site before returning it to the vehicle. Team members and equipment were monitored for contamination before entering the vehicle. Activities demonstrated were consistent with the

West Virginia Department of Natural Resources SOP for a
contamination incident involving nuclear materials.

Issue: None.

b. Ingestion Counties

(1) Hancock County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The following personnel were pre-positioned: EOC Director, Deputy Director, PIO, (an additional PIO was dispatched to the JPIC), liaison officer from the utility, RO, the representative from the Department of Agriculture, and the County Police. Staffing was in accordance with the county's plan.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated. The County EMC and his deputy were effectively in charge of operations and very knowledgeable. They involved the EOC staff members in decision making and assisted them in resolving issues when necessary. There was an excellent message handling system; copies of incoming and outgoing information were read immediately and distributed to the staff. A log was kept as well, and included actions taken in response to queries and problems. Copies of the plan and SOPs were available at each duty station and they were followed carefully.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The Hancock County primary communications system was the commercial telephone. The EOC had the following communications equipment: nine commercial telephone lines; Beaver Valley Dedicated Hot Line; Hancock County Sheriff's Network; Emergency Medical Services Network; and RACES. The county also had two copiers and a facsimile machine to enhance its message center operations. Additionally, the EOC had communications links with the West Virginia State Police, West Virginia State Department of Natural Resources, West Virginia State Department of Highways, West Virginia State Parks Services, local fire departments, and the sheriff's reserves. The primary communications system was able to handle the communications traffic without delays. There were no communications systems breakdowns; therefore, back-up communications systems were not demonstrated. The relevant functions and activities implemented were consistent with the organization's plan.

Issue: None.

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instruction to the public in a timely fashion after the initial alert and

notification has occurred was adequately demonstrated. The PIO prepared, and the EMC's deputy authorized for release, information pertinent to ingestion pathway hazards and the resulting bans on hunting and trapping, use (consumption or sale) of grain and animal feed from the county, as well as other agricultural products originating in the county. These press releases were disseminated to the JPIC, the State, and the other risk counties (simulated) in accordance with the county's plan.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. Representatives of the media were briefed at the JPIC, not at the county EOC, in accordance with the Hancock County Plan (Annex K, page K-2, paragraph 6). Information on actions taken in Hancock County was promptly provided to the JPIC and other interested parties.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The PIO and other EOC staff members performed this function during the ingestion portion of the exercise. Although no actual rumor calls were received, questions were injected into play to stimulate response to potential rumors. The staff demonstrated its ability to forward the queries to the appropriate personnel, either within the County EOC, the JPIC, or the State EOC, in accordance with the county's plan.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. The EMC Deputy issued information about the bans on potentially contaminated produce, hunting and fishing, etc. The representative from the Department of Agriculture provided information to the State on farms and farmers in the county. Telephone calls were made (simulated) to farmers and the farmers in the evacuated emergency zone were assisted in caring for livestock (simulated). Assistance to the sampling teams was provided by the county; the farmers (who sample their soil, water, etc. frequently) provided information and assistance while the County Police provided escort services to keep teams from getting lost in the more rural areas of the county. All emergency workers and farmers had personal dosimetry and kept track of exposure limits. County Police, in cooperation with the West Virginia National Guard, maintained traffic and access control and monitored the passage of material to assure that the transport and sale of banned products did not occur. The County EMC was very well informed about procedures for the extended

emergency and about resources, including animal feed, water, and food that could be obtained from State and Federal agencies and private suppliers. Water supplies in the county were monitored. Most of the supply was covered and could not be easily contaminated. The EOC staff members worked well together and were knowledgeable about their plans and procedures which they followed throughout the exercise.

Issue: None.

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. The EMC and his Deputy conferred with their staff about communicating reentry information to evacuated persons in the mass care centers and to other members of the public via the media. A press release was issued giving information about the areas to be reentered and what to do if you could not reenter the hot spots, such as Chester and Lawrenceville. An assistance center, to provide help with the resettlement of Chester and Lawrenceville residents, was established at the Millsop Community Center in Weirton. Also, information about livestock, crops, hunting, and fishing was issued. Traffic and access control arrangements were reviewed and revised by the County Police in cooperation with the National Guard and State Police. Reentry and recovery procedures were followed in accordance with the county plan.

Issue: None.

(b) Ohio/Brooke Counties

Objective 2: The Ohio/Brooke County EOC staff adequately demonstrated the ability to fully alert, mobilize, and activate personnel for both facility and field-based emergency functions. During the plume phase of the exercise, the Ohio/Brooke County EOC staff was placed on standby and later informed to report to the EOC on Day 2 of the exercise. The Ohio/Brooke County EOC Director ensured that the staff members arrived at the EOC by telephoning them prior to reporting time. All of the activity at this location was carried out in accordance with the plan.

Issue: None.

Objective 3: The Ohio/Brooke County EOC Director demonstrated the ability to direct, coordinate, and control emergency functions. The EMC was effectively in charge of operations. The EMC conducted periodic briefings to update the staff on exercise conditions. Appropriate staff members were involved in decision making. A copy of the emergency plan was on hand for reference during the exercise. Direction and control at the Ohio/Brooke County EOC was demonstrated in accordance with the plan's procedures. The EOC performed all relevant functions in accordance with the plan and procedures.

Issue: None.

Objective 4: The Ohio/Brooke County EOC staff adequately demonstrated the ability to communicate with all appropriate locations, organizations, and field personnel. The EOC contained 11 commercial telephone lines (two had conference capabilities), radio systems, RACES and a facsimile machine. The EOC maintained communications with the State of West Virginia, Ohio County Airport, West Virginia EOC, and Hancock County EOC. Back-up systems were not demonstrated; however, they were available. There was no breakdown in the communications system or any undue delays. The Communications Officer promptly received information during the exercise via the various communications systems. The staff at the EOC demonstrated the activities and responses in accordance with the plan.

Issue: None.

Objective 5: The adequacy of facilities, equipment displays, and other materials to support emergency functions was adequately demonstrated. The EOC was well organized and contained sufficient space, furnishings, lighting, restrooms, ventilation, and back-up power (a generator). Also, the following equipment was on hand: a typewriter, computer, copier, facsimile machine, and kitchen supplies. Access to the facility was not controlled, but could have been by the County Police. The Ohio/Brooke County EOC was located approximately 45 miles from the plant, so the EOC

was only partially activated. Maps in the EOC depicted the plume EPZ, planning areas, and the ingestion EPZ, and a computer contained information on all of the relocation centers. Status boards displayed pertinent information during the entire exercise and were easily viewed by all staff. The procedures and facilities used at the Ohio/Brooke EOC were in accordance with the plan.

Issue: Access to the facility was not controlled by the County Police. (BVX92-33R)

Objective 13: The Ohio/Brooke County EOC adequately demonstrated the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion. In the ingestion counties, there are no sirens. The public becomes aware of EBS information by listening to the radio or by watching television. Media monitoring ensured that no misinformation was being given to the public. One EBS message was transmitted (simulated) over the radio. This message contained information warning farmers to shelter all animals and poultry in the 50-mile radius and place them on stored feed and water. The EBS message was facsimiled to the Ohio/Brooke County EOC from the West Virginia EOC.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. The Ohio/Brooke County EOC was located approximately 45 miles from the Beaver Valley Plant and, therefore was in the ingestion pathway EPZ. A limited amount of activity was observed due to the small amount of information being transmitted to this location. There was a room designated for media briefings, if needed. The PIO was on hand to answer questions and the PIO contacted the EBS radio station, WWVA, at 1130 hours to update the media. The media (radio station) was updated every 15 minutes on the protective action decisions. The Ohio/Brooke EOC staff adequately followed the procedures of its emergency plan.

Issue: None.

Objective 15: The Ohio/Brooke county EOC staff adequately demonstrated, via a tabletop discussion, the ability to establish and operate rumor control in a coordinated and timely fashion. The PIO in the EOC functioned as the rumor control operator. If misinformation was heard by the Communications Officer in the EOC, he would inform the PIO. The PIO would then contact the State EOC, which originates all information, and track down the rumor. Once the information was verified, the PIO would call the

radio station that broadcasts EBS messages and inform the staff of the correct information. All relevant functions and activities were carried out in accordance with the emergency plan and procedures.

Issue: None.

Objective 30: The Ohio/Brooke County EOC staff adequately demonstrated the ability to implement both preventive and emergency PAs for ingestion pathway hazards. The organizations involved in demonstrating PAs for ingestion hazards were the Wheeling/Ohio County Health Department, the State Health Department, and the West Virginia Department of Agriculture. The PAs taken were to place dairy animals on stored feed and water (within 50 miles of the plant). An undetermined amount of contamination had leaked into the water supply. Samples were taken and, after the results came in, the water was declared safe for human consumption. Accurate information was given to emergency personnel and the general public. At one time during the exercise, the PIO was called away to handle a real emergency. When this happened, the Assistant PIO took over the function. The county's relevant functions and activities were implemented in a manner consistent with its emergency plan and procedures.

Issue: None.

(c) Marshall County

Objective 2: The ability to alert, mobilize, and activate personnel was adequately demonstrated. The EOC was staffed by representatives of the County OES, County Health Department, County Agricultural Stabilization and Conservation Service, County Agricultural Extension Service, and local amateur radio operators (RACES). The staff members were knowledgeable and proficient with regard to their emergency response roles. The facility was staffed when the evaluator arrived. All staff members were volunteers, except the OES Director. Representatives of two agencies, Farmers Home Administration and the Soil Conservation Service, were on standby at their offices.

Issue: None.

Objective 3: The ability to direct, coordinate, and control emergency activities was adequately demonstrated by Marshall County. The County OES Director effectively coordinated the response activities. He kept the staff informed of key events. Incoming messages from the State OES were read and discussed with the staff, copied, and distributed. The staff members worked well together in formulating and implementing PAs. Actions were coordinated with other counties and state departments as appropriate. A copy of the plan was available for reference.

Issue: None.

Objective 4: The ability to communicate with all appropriate locations and organizations was adequately demonstrated. The EOC was equipped with nine telephone lines, including two dedicated lines, and complete radio communications, including the OES net, statewide Sheriff's Department Network, and county, municipal, and fire department networks. There are two complete sets of these radios; one is reserved as back-up. The EOC had a facsimile machine which was extensively used for incoming and outgoing message traffic during the exercise. The county also had two mobile cellular phones. Also located at the EOC was an RACES setup, with a two-meter FM unit, a 10-160 meter unit, 440 MHz unit, and a digital packet system computer link. These systems enabled the operator to communicate with other RACES operators in adjacent counties and with the State OES office and mobile communications van. The county had a well equipped mobile communications van, although it was not used for the exercise. All communications functions were implemented according to the plan.

Issue: None.

Objective 5: Facilities, equipment, displays, and other materials to support emergency operations were adequately demonstrated by Marshall County. The facility had adequate

space, facilities, furnishings, and equipment to support operations. All key events, such as response actions taken and incoming or outgoing messages, were promptly posted on the status board. The status board consisted of a large (poster-sized) pad of paper on a stand. As each page was filled up, it was torn off and posted on the wall to provide a continuous chronology of events easily visible to the EOC staff. All of the functions discussed above were implemented in accordance with the plan.

Issue: None.

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. The County representatives received prescribed ingestion pathway protection advisories from the State of West Virginia via facsimile and customized them for local EBS broadcast by designating the portion of Marshall County affected. The EBS messages were then handed to the County OES Director, who approved them and simulated transmission to the local EBS station. Also, the staff members prepared lists of particular dairy farms, slaughterhouses, dairy processors, and vegetable farms for individual contact by telephone. All public notification and instruction activities were conducted in accordance with the plan.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. The county plan required the PIO to provide information to the media upon request and the PIO was prepared to do so. However, no media requests were received. The county staff would tailor State-generated EBS messages to meet local needs by adding appropriate geographic information, etc.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. The County OES was available to answer inquiries and requests for help from county residents. There was a designated telephone number for this purpose and staff available to answer calls. The county may wish to consider amending its plan to state that the OES telephone number will be routinely added to local EBS announcements for use by county residents desiring further information or assistance. All activities associated with this objective were implemented in accordance with the plan.

Issue: The OES telephone number is not presently required by the plan to be included in local EBS announcements. (BVX92-29I)

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated by Marshall County. The County Agricultural Stabilization and Conservation Service agent and the County Extension Service agent worked together to implement ingestion pathway PAs for the county, based on advisories received from the State of West Virginia. The County Agricultural Stabilization and Conservation Service agent and the County Extension Service had an updated list of all agricultural producers and processors in the county with specific lists for particular categories, such as dairy farmers, fresh produce farms, and meat processors. When PAs advisories were received from the State, the agents composed messages for local EBS broadcast, based on the State advisory, but customized for local application. Since only part of Marshall County was in the ingestion pathway zone, the agents designated the area to which the PAs applied and included a description of this area in their EBS messages. The PA area was described in terms of landmarks and boundaries familiar to the local residents. A total of three EBS messages was prepared for local broadcast: one to initiate PAs, one to continue them, and one to lift them when the State determined they were no longer needed. All EBS messages were forwarded to the County OES Director for transmittal to the local EBS radio station. The County Agricultural Stabilization and Conservation Service agent and the County Extension Service agents also used their listings to compile lists of affected dairy and produce farms and slaughterhouses for individual notification. They identified sources of protected feed and hay to use, if needed, to supply sheltered animals. The County Health Department representative identified potential avenues of exposure in connection with drinking water, fishing, and recreational activities. One local community (Benwood) draws drinking water from the Ohio River and another (Cameron) has an open reservoir and storage tank. These communities were advised to avoid the use of these water supply sources and activate alternative sources (wells), where available. The State was requested to sample the potentially contaminated sources to determine whether they could be used safely. The Marshall County OES had four water tanker trucks to supply uncontaminated water, if necessary. The County Health Department also identified three local lakes that might be contaminated. After authorization from the County Commission, the Sheriff was contacted to close these areas to fishing and recreation. The State Department of Natural Resources was contacted to request water sampling and analysis. The lake restrictions were lifted later in the exercise when authorized by Department of Natural Resources. Overall, the county staff was very knowledgeable about the type and extent of local agricultural production, drinking water supplies, and other

potential recipients of ingestion pathway radiation contamination. They were familiar with radiological hazards and response procedures, and took prompt action to protect county residents.

Issue: None.

C. Reentry and Recovery Phase - Commonwealth of Pennsylvania

1. State Entities and Functions

a. State Emergency Operations Center

Objective 32: The ability to determine appropriate measures for controlled reentry and recovery based on estimated total population exposure, available EPA PAGs and other relevant factors was adequately demonstrated. The PEMA Director conferenced with the risk county to ensure that access into the 10-mile EPZ was being controlled. PEMA operations coordinated the efforts of the Department of Agriculture and BRP to develop a verified plume footprint that could be mapped and distributed to supporting State agencies and local governments. A restricted area was designated, based on contamination exceeding the State PAGs of 0.5 R/year and a study area with contamination less than 0.5 R was identified for reentry with monitoring. The State EOC participants followed the State plan and checklist. A new release that summarized the ingestion activities was released to the media.

Issue: None.

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. The PEMA Director conferenced with the risk county EOC to discuss a strategy and a schedule for the staged reentry into the unrestricted EPZ. Also, a meeting was held with 20 supporting State agencies. The agency representatives were briefed on the current situation. They then described their methodology, process, and current data, and the availability of support groups State and local governments to assist the locally impacted populations. Recent staging and planning for resettlement and possible relocation were discussed and available State data on the restricted area were provided to PEMA. Issues identified by State agencies and their current data were compiled by the PEMA Director and provided to the risk county during a conference call. Following this call, the Beaver and Washington County EMCs determined that reentry would be initiated in one more day. The State EOC staff discussed the development of a brochure for assisting the returning evacuees in addressing perceived local risks and concerns about a radiological accident.

Issue: None.

b. Public Information Activities

Objective 13: The ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred was adequately demonstrated. During

the recovery/reentry demonstration, sirens and EBS broadcasts were not utilized and public instructions were disseminated to the public via scheduled (simulated) media briefings at 1200 and 1600 hours. The Director of PEMA instructed the PEMA Press Secretary on the PARS to be disseminated. The Press Secretary included the PARS in a news release and (simulated) media briefing at 1600 hours. Copies of the news release were sent, via the ECOMM satellite system, to the support and ingestion county EOCs, and via telephone facsimile, to the PEMA liaison officers at the utility media center. In addition to the PAR, the news release included situation updates for the media from the Commonwealth's Departments of Agriculture and Environmental Resources/BRP. Information for these departmental updates was provided by the respective Press Secretaries, who had direct contact with their EPLOs. The activities associated with this objective during the ingestion pathway demonstration were accomplished in accordance with Appendix 16, Annex E, Commonwealth's Radiological Emergency Preparedness Plan.

Issue: None.

Objective 14: The ability to brief the media in an accurate, coordinated, and timely manner was adequately demonstrated. Briefings to the simulated media were scheduled at 1200 and 1600 hours. One news release was actually prepared for release during the media briefing (media personnel simulated) at 1600 hours. The activities associated with this objective during the reentry/recovery demonstration were accomplished in accordance with Appendix 16, Annex E, Commonwealth's Radiological Emergency Preparedness Plan.

Issue: None.

Objective 15: The ability to establish and operate rumor control in a coordinated and timely fashion was adequately demonstrated. Although no specific rumor control activities were demonstrated during the recovery/reentry phase, the ability to establish and operate rumor control in a coordinated and timely fashion was demonstrated at the Commonwealth of Pennsylvania EOC. The PEMA Operations Officer continued to act as the point of contact for rumor control inquiries from all participating County EOCs.

Issue: None.

c. Situation Analysis

Objective 29: The ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, FDA PAGs and other relevant factors was adequately demonstrated. The geographic area of concern, first projected by meteorological conditions and plant data, was later identified from a DOE flyover and from environmental and

agricultural monitoring and sampling. Both dietary intake factors and radionuclide buildup/decay were considered during the formulation of PARs. Laboratory analyses of food were simulated, via controller inject, in a timely manner. Subsequent PARs were based on FDA PAGs and dietary factors. It was determined that milk should continue to be held in tanks, indefinitely, in the geographic area of concern.

Issue: None.

Objective 30: The ability to implement both preventive and emergency PAs for ingestion pathway hazards was adequately demonstrated. At the State EOC, Department of Agriculture, and the USDA demonstrated the implementation of PAs for ingestion hazards through the release of PARs to the public. In addition, to maintaining dairy and other animals on stored food and protected water within the 10-mile radius of the BVPS, specific instructions were released to the general public (returning to their homes) concerning ingestion and agricultural related activities, including, but not limited to, wiping off containers of food before opening, washing and peeling fresh produce before eating, and avoiding dust-producing outdoor activities.

Issue: None.

d. Accident Assessment

Objective 29: The ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, FDA PAGs, and other relevant factors was adequately demonstrated. The initial footprint of deposited radioactive material was defined by a DOE aerial flyover. The BRP requested radiological assistance from the Federal Radiological Monitoring and Assistance Plan. Federal Radiological Monitoring and Assistance Plan assisted with the determination of the footprint boundary and restricted areas. The above determinations were done using ground measurements. The BRP plotted the footprint on maps which defined the area. The USDA provided the BRP with agricultural information on the defined area. BRP's projected dose estimates for reentry/recovery were based on sampling information obtained in the footprint in a timely fashion. Milk, fruit, and vegetable samples were taken inside and outside of the restricted area. The BRP requested milk shelf sampling to show the public that milk and milk products presently in the milk food chain were safe. This was also done to prevent the accidental contamination of the milk ingestion pathway. The BRP issued a PA that milk from dairy farms located in and around the restricted area was embargoed. The outcome of the embargo was not decided. The BRP conducted sampling to test for the presence of contaminated surface water in the plume exposure pathway. This was for all water sources flowing to the Ohio River and other waterways

supplying drinking water. The BRP determined that the Midland Water Treatment Plant was contaminated. The BRP installed a water compositor at the plant to take daily averages on the potential of contaminated water releases from the plant. BRP established that the water supply was acceptable only for non-potable usage.

Issue: None.

2. Risk County - Beaver County

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. The following actions were coordinated in support of reentry operations: normal government functions and organizations were established; risk municipality evacuees were relocated and plans for exiting mass care centers were coordinated; risk municipality emergency coordinators were notified and briefed concerning reentry; transportation resources were readied; arrangements were made for the return of hospital and home-bound hospital patients; police resources were readied for traffic and access control; banks, food services, and fuel suppliers were contacted; discussions were held with Department of Environmental Resources concerning sampling of public reservoirs, water intake points, water treatment plants, sewage treatment plants, ground water, and surface water; and the notification of evacuees was discussed. The relaxation of PAs was based on BRP and PEMA monitoring data which concerned the restricted zone, the study zone, and areas where reentry would be permitted. Once information was received from the BRP and PEMA, it was communicated to appropriate involved organizations. The RO made arrangements to provide emergency workers with information concerning radiological procedures for reentry. The staff at the EOC was knowledgeable concerning its role in reentry. All functions and activities were implemented in a manner consistent with the Beaver County Plan.

Issue: None.

3. Support Counties

a. Allegheny County

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. Although this portion of the exercise was a table-top, the County EOC staff clearly demonstrated its ability to implement appropriate measures for controlled reentry and recovery. The county emergency services agency was responsible for control of the recovery and reentry activities. Measures taken were in accordance with State guidelines and coordinated with the State EOC. Discussions indicated that planning and respond actions had been considered for relocation, resettlement, and reentry. Discussions concerning these items could and would be promptly communicated to field elements. The discussions demonstrated this county could implement all relevant functions and activities in a manner that was consistent with the organization's plan.

Issue: None.

b. Butler County

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. Resettlement and relocation were applicable to the evacuees housed in the Butler County mass care centers. Reentry was implemented at 1302 hours when Butler County EOC was informed by the State EOC that emergency workers were permitted to enter evacuated areas. The Butler County EOC received direction to begin reentry prior to termination of the exercise. Four mass care centers had been opened on Day 1 to receive residents from Beaver County. Due to attrition, by Day 5 of the scenario only two mass care centers remained open. Plan-based attrition calculations were used to determine the estimated number of evacuees still remaining in Butler County. The mass care center, transportation agency, and TCP emergency workers were notified that permission had been granted for emergency workers to enter evacuated areas. The Beaver County EMC notified the Butler County EOC that Beaver County would provide buses to transport Beaver County residents. Butler County was prepared to do the same, if needed.

Issue: None.

c. Lawrence County

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. The county emergency services agency was responsible for the control of the recovery and reentry activities. Assistance was provided to the Lawrence County EOC by the County Emergency Board and the ARC representatives, when requested. On their own initiative, and prior to the beginning of Day 3 of the exercise, the ARC compiled its own assessment of the mass care situation in Lawrence County. Throughout Day 3 of the exercise, the agencies present at the EOC discussed various potential situations which could occur in their county should they be affected by radiological contamination. Measures taken were in accordance with State guidelines and coordinated with the State EOC. Discussions indicated that planning and response actions had been considered for relocation, resettlement, and reentry. Discussions concerning these items could and would be promptly communicated to field elements.

Issue: None.

d. Washington County

Objective 33: The ability to implement appropriate measures for controlled reentry and recovery was adequately demonstrated. The Washington County EOC and County Emergency Board arranged to provide essential community services to the returning evacuees. Arrangements included allowing business owners and community service personnel to reenter the affected area prior to reentry of the evacuees. This action would have been authorized by PEMA. The reentry planning and response measures focused attention on: decision making, medical support, accident assessment, agricultural products handling, animal husbandry, displaced persons, alternate highway routes, communication issues, and public works concerns. The relaxation of PAs was based on PEMA's authorization and included monitoring data indicating safe levels of radioactivity. The reentry decisions were communicated promptly to the appropriate response organizations. Arrangements were made to provide emergency personnel with information concerning: access control procedures, radiation exposure information, possible health effects from low-level exposure, and the need for personnel dosimetry.

Issue: None.

IV. SUMMARY LIST OF ISSUES

The issues listed for each evaluated location or activity have been summarized and classified according to the following categories:

Deficiency is 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 the BVPS. Because of the potential impact of a Deficiency on emergency preparedness, the Deficiency should be corrected within 120 days through appropriate remedial actions, including remedial exercises, drills or other actions. There was one Deficiency identified during this exercise.

Areas Requiring Corrective Action are observed or identified inadequacies of organizational performance in an exercise and, although their correction is required during the next scheduled biennial exercise, they are not considered, by themselves, to adversely impact public health and safety. There were 33 ARCAs identified during this exercise.

Areas Recommended for Improvement identify an aspect of emergency preparedness that could be improved. While not required, correction of ARFIs would enhance an organization's level of emergency preparedness. There were 29 ARFIs identified during this exercise.

A. Deficiency

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-1D	Pennsylvania EOC	E.5 G.4.b	8/17/92	8/17/92

Issue: The Deficiency resulted when the Commonwealth of Pennsylvania's EOC staff failed to properly coordinate the dissemination of an appropriate EBS message with the Beaver County EOC staff. Thus, adequate information was not contained within Beaver County's released EBS message concerning the Governor of Pennsylvania's order to evacuate the public within 10 miles of the BVPS. Specifically, EBS Announcement 2 released by the Commonwealth of Pennsylvania's EOC staff to the Beaver County EOC staff was not the detailed sample General Evacuation EBS Announcement located on page E-16-11 of Attachment D to Appendix 16 to Annex E of the Commonwealth of Pennsylvania Emergency Operations Plan. Consequently, the Beaver County EOC staff merely used EBS Announcement 2, instead of the detailed General Evacuation EBS Announcement specific to Beaver County located on page E-4-9 of Attachment D to Appendix 4 to Annex E of the Beaver County Emergency Operations Plan. EBS Announcement 2 did not contain pertinent information such as: the names of municipalities within the 10 mile EPZ; geographic landmarks including rivers, roads, railroad tracks, towns and villages, or any combination thereof to delineate the area to be evacuated; a reference to the Beaver County Emergency Information Brochure; the names and locations of, and evacuation routes to, the reception centers servicing the municipalities; instructions for special needs populations; and suggested items to be taken when evacuating. (Objective 13)

Recommendation: Recognizing that a similar Deficiency was cited against Luzerne County at the Susquehanna Steam Electric Station, October 16, 1991, exercise, FEMA will require that the corrective action for this Deficiency include a review and revision by the Commonwealth of Pennsylvania of its radiological emergency response plans and SOPs to ensure that the plans and SOPs contain adequate provisions for (1) coordinating the release of EBS messages with the risk counties and (2) directing the risk counties to the specific prescribed EBS message to be broadcast. To facilitate the full resolution of this Deficiency, appropriate plan and SOP revisions must be completed prior to the remedial exercise and the amended plans and SOPs tested at that exercise.

State Response: This agency has conducted a review of the Commonwealth's radiological emergency response plans and SOPs. We have ascertained that the provisions for coordinating the release of EBS messages with risk counties and the direction of those counties to the specific prescribed, EBS message to be broadcast are both viable and adequate. Furthermore, it is our belief that the referenced Deficiency is the result of the improper implementation at the State level of the above referenced plans and procedures.

FEMA Comment: Between 1000 and 1100 hours on August 17, 1992, the Commonwealth of Pennsylvania and the Beaver County EOC staff successfully conducted a remedial exercise to correct the Deficiency. Based on the direction received from the State EOC, Beaver County issued the correct EBS message. The EBS message contained the pertinent information such as: the names of municipalities within the 10 mile EPZ; geographic landmarks including rivers, roads, railroad tracks, towns and villages, or any combination thereof to delineate the area to be evacuated; a reference to the Beaver County Emergency Information Brochure; the names and locations of, and evacuation routes to, the reception centers servicing the municipalities; instructions for special needs populations; and suggested items to be taken when evacuating.

B. Areas Requiring Corrective Action

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-1R	State Public Information Activities	G.3.a	8/26/92	

Issue: PEMA News Release 7 contained a header indicating a release time of 1956 hours, but the lead sentences concerned actions which followed the declaration of the GE ECL at 2010 hours. This resulted from the practice of listing the release time as the time of the preparation of the draft news release. Subsequent to this initial preparation time, the draft may have been modified with newer information before approval and release. (Objective 14)

Recommendation: Care should be taken in the editing of news releases to ensure that the appropriate updates and changes have been made. Additionally, either the actual time of issuance or approval of news releases should be used or the release time should be omitted.

State Response: Procedures for the drafting of the news releases will be reviewed and additional training conducted.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-2R	State Public Information Activities	G.3.a	8/26/92	

Issue: During the first media briefing, a State official incorrectly referred to the SAE ECL as a "Site Emergency." Because of the possible conflict with terms used in the emergency brochure distributed within the plume EPZ, all spokespersons should use exact terminology with respect to the ECLs. (Objective 14)

Recommendation: Additional emphasis should be placed on the use of correct ECL terminology during pre-briefing discussions among spokespersons.

State Response: Additional training has been conducted. It should be noted, however, that the difference between "Site Emergency" and "Site Area Emergency" is semantic and does not in itself hamper effective response and communication. This finding should be downgraded to an ARFI.

FEMA Response: FEMA has reviewed the State Response and has determined that, since the terminology used in referring to ECLs should be consistent with terminology used by the NRC and FEMA, and by Pennsylvania in its public information materials, FEMA will not downgrade this issue to an ARFI.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-3R	State Public Information Activities	G.3.a		

Issue: The effectiveness of the media briefing presentation was questionable because the spokesperson failed to employ maps and charts to provide an in-depth visual perspective of the locations affected and activities occurring to mitigate the incident.
(Objective 14)

Recommendation: Spokespersons should have available and use all appropriate maps, charts, and other displays.

State Response: In the past, maps, charts and other visual aids have been used in an attempt to provide the "in-depth visual perspective" referenced in the finding. It was discovered, however, that those graphic aids, while quite helpful during live press briefings, were of limited use in support of televised presentations. The detail and resolution of the material were such that they (the visual aids) did not enhance the presentations as desired.

To deem a media briefing as having questionable effectiveness as a result of not having supporting graphics is at best an arbitrary application of subjective criteria. The briefing contained up-to-date, accurate information delivered in clear understandable language and was in compliance with Planning Standard G, Evaluation Criteria 3.a., NUREG-0654, FEMA-REP-1, Revision 1.

This finding should be downgraded to an ARFI.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-4R	State Public Information Activities	E.5 G.4.b	8/26/92	

Issue: A staff member within the Commonwealth of Pennsylvania emergency management structure failed to send a media release concerning the evacuation order to the JPIC. (Objective 13)

Recommendation: It is recommended that, in the future, copies of media releases concerning evacuations should be forwarded to the JPIC expeditiously.

State Response: Procedures to preclude this from reoccurring have been developed and implemented.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-5R	Emergency Operations Facility	F.1.b	12/92	

Issue: Delays were encountered in the information flow between the BRP staffs in the EOF and the State EOC Accident Assessment Center. (Objective 4)

Recommendation: To eliminate communications delays, either provide a reliable and dedicated a communication link (telephone) between the EOF and the State EOC Accident Assessment Center for use by the BRP staff or assign a communicator at each end of an open line in the EOF and State EOC.

State Response: BRP is continuing negotiations with Duquesne Light Company to establish an additional communications line between the BVPS and the State EOC Accident Assessment Center for use by the BRP staff. The additional communications will be designed to eliminate delays in the exchange of information between the two facilities.

Until the additional communications line is in installed, BRP will maintain an open line on one of the existing commercial phone lines and assign a communicator at each end. This practice will begin immediately for any nuclear power station that does not have a dedicated phone line between the EOF and the State EOC.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-6R	Beaver County EOC	G.3.a	6/93	

Issue: Throughout the course of the exercise, the PIO did not conduct an actual media briefing or provide the staff copies of or access to county news releases and did not prepare or provide information kits to media representatives (real or simulated). (Objective 14)

Recommendation: Additional training should be provided to the PIO to ensure familiarity with the principles of conducting public information activities and an in-depth knowledge of the plans and procedures of the county.

State Response: Additional training will be conducted.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-7R	Emergency Worker Decontamination Station	K.5.a K.5.b	6/93	

Issue: The EOC and the emergency worker decontamination facility were co-located. However, the two operations were not separated by any structure; thus, there was considerable potential for the spread of contamination by individuals routinely moving between the two operations. (Objective 25)

Recommendation: Either conduct a study to determine if the municipal EOC or the emergency worker decontamination station could be relocated to another facility or reconfigure the available space to mitigate the possible spread of contamination.

State Response: The emergency worker decontamination station will be relocated.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-8R	Brighton Township EOC	D.3	10/16/92	

Issue: During the course of the exercise, the current ECL was not prominently displayed nor were the action status board sheets utilized as required in the Brighton Township Plan.
(Objective 1)

Recommendation: Supplemental training is required for selected staff members. Staff members should review the requirements set forth in Section A.3.3.e. of the Brighton Township Plan.

State Response: A new township emergency management coordinator has been appointed. Initial training has been conducted for the EMC and EOC staff.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-9R	Brighton Township EOC	A.1.d A.2.a	8/26/92	

Issue: When the Brighton Township EOC staff received the message concerning siren and EBS system activation for the evacuation of the municipality, the staff became involved in route alerting activities and did not remember to confirm the message content with the Beaver County EOC staff (Brighton Township EOP, SOP-B, page 10). (Objective 3)

Recommendation: Supplemental training is required for selected staff members. Staff members should review the requirements set forth in the Brighton Township Plan.

State Response: A new township emergency management coordinator has been appointed. Initial training has been conducted for the EMC and EOC staff.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-10R	Brighton Township EOC	G.4.c	10/16/92	

Issue: Throughout the exercise, the EOC staff did not remember to monitor the local EBS station to ensure the staff's access to current and accurate information and to ensure that timely and accurate information was being disseminated. (Objective 15)

Recommendation: Supplemental training is required for selected staff members. Staff members should review the requirements set forth in the Brighton Township Plan.

State Response: A new township emergency management coordinator has been appointed. Initial training has been conducted for the EMC and EOC staff.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-11R	Independence Township EOC	G.4.c	6/93	

Issue: Throughout the exercise, the AM/FM radio which was for the monitoring of EBS messages was not turned on. (Objective 15)

Recommendation: An appropriate EOC staff member should be designated to monitor EBS stations.

State Response: Additional training will be conducted. The proposed date for correction is June, 1993.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-12R	Potter Township	D.3	6/93	

Issue: At the time of the declaration of the SAE and throughout the rest of the exercise, the EMC and EOC staff used the term "Site Emergency," rather than the term "Site Area Emergency." (Objective 1)

Recommendation: Additional emphasis should be placed on the use of consistent terminology applicable to specific types of emergency responses.

State Response: Additional training will be conducted. It should be noted, however, that the difference between "Site Emergency" and "Site Area Emergency" is semantic and does not jeopardize public health and safety, nor does it impair the Township EMA's ability to effectively respond. This finding should be downgraded to an ARFI.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-13R	Potter Township EOC	G.4.c		

Issue: Throughout the exercise, the rumor control function was not assigned to a specific individual, nor were rumor control activities addressed. (Objective 15)

Recommendation: It is recommended that rumor control activities be conducted in accordance with the township plan.

State Response: There is no requirement for the Potter Township EMA to establish a rumor control function. Procedures outlined in the EOP state that all rumor control-related matters are to be referred to the Beaver County PIO. This finding should therefore, be deleted from the final report.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-14R	Raccoon Township EOC	K.3.a K.3.b K.4	12/92	

Issue: The quantity of dosimetry kits requested by the EOC (50 kits) was different from that listed in the Raccoon Township Emergency Plan (23 kits). (Objective 6)

Recommendation: The appropriate number of dosimetry kits should be determined; changes should be incorporated into the EOP; and supply requirements should be coordinated with the appropriate State personnel.

State Response: This planning issue will be resolved during the next quarterly plan update.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-15R	South Beaver/ Glasgow/Ohioville EOC	D.3	6/93	

Issue: Although the ECLs were promptly posted on the status board, when the board was filled old information was erased to make room for future data, thereby, at times, erasing the ECL, weather data, and protective action decisions. No other ECL listing or sign was available or prominently displayed to inform those already in or entering the EOC of the current ECL. Additionally, the correct terminology for the ECLs was not used at all times. On both the status board and in the event-action log, ECLs were referred to and listed as "Site Emergency" instead of "Site Area Emergency" and "General Alert" instead of "General Emergency." (Objective 1)

Recommendation: Additional training is required to ensure the EOC staff's familiarity with plan-related ECL terminology and display procedures.

State Response: Additional training will be conducted.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-16R	South Beaver/ Glasgow/Ohioville EOC	H.3.		

Issue: During the course of the exercise, it was noted that the emergency worker decontamination center and the EOC were co-located in the same building without a solid wall dividing the two major activities. This design gave rise to inadequate security and possible cross contamination between emergency workers and the EOC staff. (Objective 5)

Recommendation: Reevaluate the feasibility of the EOC and emergency worker decontamination center being co-located or develop and implement specific procedures to provide additional security for the communications center and ensure the improbability of cross contamination.

State Response: This ARCA is addressed in a previous finding. It constitutes a duplication and should be combined with finding BVPX-8R (SIC).

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-17R	Vanport Township EOC	J.10.d J.10.g J.10.h	12/92	

Issue: The township plan (Section G.1.4) called for two buses and the transport of only 75 evacuees. During the exercise, the EOC staff realized, to its credit, that nine ambulances and five buses were required to evacuate the 225 individuals without transportation. (Objective 18)

Recommendation: The Vanport Township Plan should be revised to reflect the latest special needs population figures and appropriate transportation requirements and the organizations which will provide the transportation.

State Response: This planning issue will be addressed during the next quarterly plan update.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-18R	Vanport Township EOC	J.10.j		

Issue: Vanport Township failed to demonstrate one of the two predetermined TCPs listed in the plan under the Police SOP, Attachment D-1, page D5. (Objective 20)

Recommendation: It is recommended that a survey be conducted to determine whether one or two TCPs are required in the township. Upon completion of the study, either modify the plan to reflect the need for only one TCP or request additional assistance in staffing the second TCP.

State Response: The objective clearly states that only one TCP at the local level must be demonstrated and that said demonstration must include a pre-deployment briefing and all other pertinent activities up to, but not including, actual dispatch. According to the information contained in the narrative summary, these actions were completed. This finding should, therefore, be deleted from the final report.

FEMA Response: State response accepted. The ARCA will be addressed as resolved during the next exercise.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-19R	Butler County EOC	A.2.a	2/94	

Issue: Throughout the exercise, a message log was not maintained for incoming and outgoing messages. (Objective 3)

Recommendation: It is recommended that a viable tracking system be developed and implemented to facilitate the management of communications traffic whether the traffic is internal, inbound, or outbound.

State Response: A message system will be developed and implemented.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-20R	Washington County EOC	E.1 E.2	2/94	

Issue: The County EMC elected to advise representatives from the Police and Fire Departments not to participate in the exercise. Therefore, those representatives were not present during the exercise. (Objective 2)

Recommendation: The EOC should be staffed according to the plan.

State Response: Historically, there has been little or no activity requiring fire and police input during nuclear power plant exercises. As a result, the county EMC excused them from participating.

In the future, plans will be revised to provide county EMC's the flexibility to notify only those staff officers the EMC believes to be essential to the response effort.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-21R	Washington County Reception/Mass Care Center and Decontamination Center	K.3.b	2/94	

Issue: Washington County reception center and mass care emergency workers did not zero all their dosimetry and several exposure record forms were not completed. (Objective 6)

Recommendation: Additional training should be mandated to ensure the emergency workers are aware of the requirements to zero all dosimetry and complete exposure record forms.

State Response: Objective 6(f), BVPS Exercise Objective and Extent of Play Agreement clearly states that "monitors at monitoring and decontamination centers, collocated with mass care centers, (emphasis added) and at the emergency worker monitoring and decontamination stations will have simulated dosimetry (emphasis added) and be fully knowledgeable of exposure control procedures and equipment." As there was no actual dosimetry issued, it would have been exceedingly difficult to zero the simulated variety. The same holds true for the completion of simulated exposure record forms. This finding should be deleted from the final report.

Note: The Location/Activity field should read, "Washington County Reception/Mass Care Center Monitoring and Decontamination Center" as opposed to the cited "Decontamination Station".

FEMA Response: Records indicate that personnel at that location volunteered the demonstration. Additionally, government records indicate that the Commonwealth of Pennsylvania did not enter into an extent-of-play agreement with FEMA Region III.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-22R	West Virginia Field Air Monitoring Team	E.1 E.2	10/31/93	

Issue: The lead member of the field monitoring team was required to fill both his regular position and the field team coordinator's position because of medical problems affecting the field team coordinator. There were no back-up personnel available at the time to fill the Field Team Coordinator's position. In a real emergency, he would be unable to fill both positions. (Objective 2)

Recommendation: The training of back-up personnel with a background in health physics is necessary to enable field team positions to be filled by capable personnel in the event of future problems of this nature.

State Response: West Virginia's Field Team Coordinator back-up did participate in the exercise, however, this person arrived at the County EOC after the FEMA Evaluator departed to another location. Additional training will be conducted in next year's annual training cycle.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-23R	West Virginia Field Air Monitoring	I.8 I.11 H.12	3/30/93	

Issue: Annex 15, Section XI, Tab B, of the West Virginia Plan erroneously states that a Barium-100 source should be used for setting the threshold window on one channel of the Ludlum dual channel analyzer instead of a Barium-133 source. (Objective 7)

Recommendation: It is recommended that the plan procedures be amended to reflect the correct source.

State Response: Annex 15, Section XI, Tab B will be revised to reflect the correct source used by the West Virginia Bureau of Public Health for setting the threshold window on the Ludlum dual channel analyzer.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-24R	Hancock County Mass Care Center	J.12	6/30/93	

Issue: The entry and exit paths to the shower stall required an individual to retrace his/her steps, thereby greatly increasing the probability of cross-contamination. (Objective 21)

Recommendation: It is suggested that either an additional pathway to or from the shower facility be created or another acceptable procedure to decontaminate individuals be established.

State Response: The Mass Care SOP for Millsop Community Center will be reviewed and revised, as necessary, to ensure an acceptable procedure for the decontamination of individuals.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-25R	Pennsylvania Situational Analysis (BRP - State EOC)	J.11	9/93	

Issue: General categories of agricultural concerns were well addressed. However, when questioned about agricultural concerns that did not fit under the routine "milk, hay, feed, crop" category, agriculture personnel were not prepared to address the issues. For example, no consideration had been given to bee hives, orchards, berry farms, and fish farms or to other issues such as hunting and gathering of edibles from the wild, that might have been extremely relevant to the small, rural populations of the area. (Objective 30)

Recommendation: Agriculture representatives should utilize resources familiar with local agricultural concerns and address all types of agricultural/ingestion concerns on a more comprehensive level.

State Response: Additional training will be conducted. Furthermore, this finding pertains to the State EOC's Agricultural Response Cell as opposed to the BRP Situation Analysis function as referenced above.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-26R	Allegheny County EOC	F.1.b	7/92	

Issue: PEMA sent a message via the EIS to the Allegheny Police Department which, in turn, was to forward the message via facsimile to the County EOC for implementation. However, the Police Department staff took three hours to facsimile the message to the EOC. (Objective 4)

Recommendation: Assign an EOC liaison staff member to the Police Department to ensure that messages are promptly relayed to the EOC by facsimile after arriving over the computer system.

State Response: This finding was the result of a lack of training and has since been corrected.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-2/R	Armstrong County EOC	A.2.a		

Issue: The EOC staff did not implement a formal internal message handling system. (Objective 3)

Recommendation: It is recommended that the county emergency communications SOPs shown in the Armstrong County Emergency Operations Plan on B-3, paragraph 3.A.5, be reviewed and revised to include a formal message handling system.

State Response: The limited nature of the exercise did not, in the opinion of the county EMC, warrant full implementation of a formal internal message system in the county EOC. Armstrong County has demonstrated this capability during numerous response operations both actual and simulated. Recommend that this finding be downgraded to an ARFI.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-28R	Greene County EOC	H.3		

Issue: Throughout the exercise, access to the EOC was not adequately controlled due to inadequate staffing. (Objective 5)

Recommendation: It is recommended that sufficient personnel be assigned the responsibility of controlling access to the EOC during emergencies.

State Response: This finding has been noted and will be correctly demonstrated during the next BVPS ingestion exercise.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-29R	West Virginia Accident Assessment	I.10	3/30/93	

Issue: The West Virginia Plan (page 14) requires the color coded identification of sampling points on the display map. Sampling location points were identified on the map; however, the color coding scheme was not used. (Objective 29)

Recommendation: Recommend that sampling points be identified in the appropriate color codes to facilitate a rapid analysis of deposition in accordance with the State's plan.

State Response: The color coded identification system will be addressed in the annual update of the West Virginia REP Plan.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-30R	West Virginia Field Sampling Center	I.8	3/30/93	

Issue: A micrometer, required in the procedures (5th Field Sample Screening, item g, page 2.07) for surveying incoming samples, was not available. (Objective 27)

Recommendation: An adequate number of micrometers should be provided, as specified in the West Virginia State SOP for field monitoring teams.

State Response: The need for additional equipment for sample screening is being reviewed. SOP's will be updated as required.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-31R	West Virginia Field Sampling Team A	I.8	12/31/92	

Issue: There was no procedure in the plan for the sampling team to obtain a surface water sample. (Objective 27)

Recommendation: The ingestion pathway portion of the West Virginia Radiological Emergency Plan must have a detailed plan and procedure for obtaining surface water samples.

State Response: A Surface Water Sampling SOP will be developed and included in the West Virginia's Sampling Team Procedures.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-32R	West Virginia Field Sampling Team A	I.8	3/30/93	

Issue: A micro-R-meter, required by the plan, was not available for surface radiation measurements. (Objective 27)

Recommendation: All appropriate field monitoring equipment outlined in the State's radiological plan should be made available and utilized.

State Response: The need for additional equipment for surface radiation measurements is being reviewed. SOP's will be updated as required.

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
BVX92-33R	Ohio/Brooke County EOC	H.3	12/31/92	

Issue: Access to the facility was not controlled by the County Police. (Objective 5)

Recommendation: It is recommended that access control be demonstrated for this facility in future exercises.

State Response: County EOC procedures will be reviewed and revised if necessary.

C. Areas Recommended For Improvement

Problem ID	Location/Activity	NUREG Element
BVX92-1I	PA EOC	H.3.

Issue: To accent the display screens used for maps and status boards in the EOC operations room, ceiling lights were curtailed and all workers used desk lamps. These desk lamps provided less than desirable lighting for reading maps and other large documents in the EPLO work areas. (Objective 5)

Recommendation: Increased ambient lighting or work area lighting should be provided in the EOC.

Problem ID	Location/Activity	NUREG Element
BVX92-2I	Emergency Operations Facility	H.3

Issue: The EOF field team map showed the location of utility field teams only. For ease of plume definition and comparison of field team measurements on the map, Department of Environmental Resources team positions should also be shown. (Objective 5)

Recommendation: Display and update locations of Department of Environmental Resources field teams on the EOF field monitoring map.

Problem ID	Location/Activity	NUREG Element
BVX92-3I	Joint Public Information Center	H.3

Issue: A spokesperson's failure to use plume trajectory overlays or similar visual aids resulted in several additional media questions attempting to gain a fuller understanding of the emergency situation. (Objective 5)

Recommendation: It would improve the clarity of media briefings following a plume release to use plume trajectory overlays or diagrams when describing risk areas. This would facilitate the media's understanding of the emergency situation.

Problem ID	Location/Activity	NUREG Element
BVX92-4I	State Area EOC - Indiana	H.3

Issue: The battery packs for the Indiana EOC back-up generator were not working and required replacement. (Objective 5)

Recommendation: It is recommended that the generator be repaired. Exercise play should be in accordance with demonstrated objectives.

Problem ID	Location/Activity	NUREG Element
BVX92-5I	Aliquippa EOC	H.3

Issue: The facility was equipped with a 5 KW generator capable of serving the needs of the building; however, since this was an operating city fire station, the city officials chose not to risk disruption to the fire service by running the generator.
(Objective 5)

Recommendation: Exercise demonstration should be in compliance with expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-6I	Brighton Township EOC	H.3

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials chose not to operate the generator. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-7I	Center Township EOC	H.3

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-8I	Chippewa Township EOC	H.3

Issue: Initially, the back-up generator would not start due to the batteries being devoid of electrolyte. However, back-up batteries were installed and the generator operated for 20 minutes, rather than the minimum of 30 minutes required by the extent-of-play agreement. The maintenance log consisted of a small sheet of paper pinned to a wall in the generator room. The paper contained a notation that the generator had last been tested on September 27, 1991. Additionally, although the back-up generator operated on natural gas, the fumes were not vented to the outside of the generator room. (Objective 5)

Recommendation: Supplemental training should be given to selected staff members in the maintenance of and administrative requirements relative to electrical equipment. In addition, outside ventilation should be provided for the generator room.

Problem ID	Location/Activity	NUREG Element
BVX92-9I	Hopewell Township EOC	H.3

Issue: Although an adequate back-up generator was available, it was not actually demonstrated for 30-90 minutes. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-10I	Independence Township EOC	H.3

Issue: Although an adequate back-up generator was available, it was not actually demonstrated for 30-90 minutes. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-11I	Industry Borough EOC	H.3

Issue: Although an adequate back-up generator was available, it was not actually demonstrated for 30-90 minutes because the generator was not integrated into the EOC's electrical system. (Objective 5)

Recommendation: It is recommended that the generator be hooked up.

Problem ID	Location/Activity	NUREG Element
BVX92-13I	Midland Borough EOC	H.3

Issue: The facility was equipped with a back-up generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (Objective 5)

Recommendation: Exercise demonstrations should be in compliance with the expected demonstrations.

Problem ID	Location/Activity	NUREG Element
BVX92-13I	Monaca Borough EOC	H.3

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (Objective 5)

Recommendation: Exercise demonstrations should be in accord with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-14I	Potter Township EOC	H.3 J.10.a J.10.b J.11

Issue: As observed, the physical layout or set-up of the EOC was not in accordance with the floor plan shown in the Potter Township Plan (page A-10). (Objective 5)

Recommendation: A reevaluation is recommended to determine and implement the ideal space configuration. The plan should then be amended to reflect the floor plan in use.

Problem ID	Location/Activity	NUREG Element
BVX92-15I	Potter Township EOC	H.3

Issue: Although an adequate back-up generator was available, it was not demonstrated for 30-90 minutes. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-16I	Raccoon Township EOC	H.3

Issue: Although an adequate back-up generator was available, it was not demonstrated for the 30-90 minutes. In addition, maintenance and testing logs were not available for the back-up generator. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration. Maintenance and testing logs should be maintained and kept available for the back-up generator.

Problem ID	Location/Activity	NUREG Element
BVX92-17I	South Beaver/ Glasgow/Ohioville EOC	H.3

Issue: The facility was equipped with a generator capable of servicing the needs of the facility. However, the EOC officials elected not to demonstrate the back-up power generator. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-18I	Vanport Township EOC	F.1.b F.1.d. F.2.

Issue: One telephone was located at the reception desk and one telephone was located at the police desk in another room. This arrangement required EOC staff members to leave their work stations in order to either initiate or answer telephone calls. (Objective 4)

Recommendation: It is recommended that either the existing telephones be relocated or additional telephones and lines be added in the EOC to make the telephone readily accessible to all EOC staff members.

Problem ID	Location/Activity	NUREG Element
BVX92-19I	Vanport Township EOC	H.3

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials did not operate the generator for 30-90 minutes. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-20I	Washington County EOC	H.3

Issue: Although an adequate back-up generator was available, it was not actually demonstrated for 30-90 minutes. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-21I	West Virginia State EOC	H.3

Issue: Times shown on status board may not have been clearly understood by all staff members since the times shown were not specificized as "Time Declared" or Time Received." (Objective 5)

Recommendation: It is recommended that the times logged onto the status board appear in two columns entitled "Time Declared" and "Time Received."

Problem ID	Location/Activity	NUREG Element
BVX92-22I	Pennsylvania Field Sampling Team A	I.8

Issue: Current plans say that agricultural and radiation protection agencies will assist each other, but each agency's responsibilities are not defined. Detailed sampling procedures, such as the acquisition of soil and pasture grass, etc, were not available. Also, procedures did not include use of a micro-R-meter for surface radiation measurements. (Objective 27)

Recommendation: Plans and procedures should spell out the current practice of utilizing BRP vehicles with radio capability, BRP supplied dosimetry and KI, as well as sample containers and other supplies. The list of radiation-measuring equipment should include a micro-R-meter. Sampling procedures should be spelled out for milk, forage, dry feed, and silage. Also, sample handling procedures, including double-bagging, should be spelled out.

Problem ID	Location/Activity	NUREG Element
BVX92-23I	Pennsylvania Field Sampling Team B (DER) (Surface Water)	I.8

Issue: The water sampling plan and procedures lacked detail and did not address the acquisition of water from public water supplies, i.e., household tap water nor the use of a micro-R-meter for background measurements. (Objective 27)

Recommendation: A more detailed water sampling plan and procedures needs to be written. It should include information regarding the interaction of Department of Environmental Resources functioning under the Emergency Response Team, and the interface with other organizations, such as the Department of Agriculture. It should also incorporate BRP radiological procedures. The completed plan (with procedures) should be submitted to FEMA for exercise evaluation purposes.

Problem ID	Location/Activity	NUREG Element
BVX92-24I	Armstrong County EOC	H.3

Issue: The back-up generator for the new county annex building had not been connected; therefore, a demonstration of back-up power capability was not accomplished. (Objective 5)

Recommendation: It is recommended that the back-up generator become integrated into the system it supports.

Problem ID	Location/Activity	NUREG Element
BVX92-25I	Fayette County EOC	H.3

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials elected not to operate the generator. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-26I	Greene County EOC	H.3

Issue: The facility was equipped with a generator capable of serving the needs of the EOC; however, officials chose not to operate the generator. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-27I	Westmoreland County EOC	H.3

Issue: The facility was equipped with a generator capable of serving the needs of the facility. However, officials chose not to operate the generator. (Objective 5)

Recommendation: Exercise demonstration should be in compliance with the expected demonstration.

Problem ID	Location/Activity	NUREG Element
BVX92-28I	West Virginia Field Sampling Team	I.8

Issue: Record forms with full information on the samples accompanied the samples to the laboratory, but copies of these forms were not kept and the sample reception group maintained only partial information, which did not include systematic sample location information, on a log sheet. (Objective 27)

Recommendation: Additional training should be provided to field team members instructing them on the proper procedures to follow for radiological exposure control.

Problem ID	Location/Activity	NUREG Element
BVX92-29I	Marshall County EOC	H.3

Issue: The OES telephone number is not required by the plan to be included in local EBS announcements. (Objective 15)

Recommendation: The OES should consider amending its plan to include the OES telephone number in local EBS announcements in order to facilitate the resolution of concerns and issues generated at the public level.

V. PRIOR ISSUE STATUS

The following previous inadequacies were identified at the November 19, 1986; October 25, 1988; and May 1, 1990, BVPS exercises. Each item is followed by a discussion of its status as the result of the June 9-11, 1992, exercise.

A. Previous ARCAs Resolved

BVX90-1R Joint Information Center

Although supplies for the displaying of ECLs were available (a large dry eraser board and a flip tablet and easel) in the government work room, they were not employed to permanently display ECLs. It is recommended that available status boards be used to permanently display all critical information. (Objective 5)

Status: Resolved. A status board was maintained and regularly updated in the government work room. This corrects the prior issue because information displayed included the current ECL as well as plant status.

BVX90-2R Joint Information Center

Only one display size map was available in the media presentation area, showing the 50 mile EPZ for Ohio, and none were available in the government work area. Additional display size maps with identification of plume EPZ areas, evacuation routes, radiological monitoring points, relocation centers, and ingestion EPZ are recommended for use in the media briefing area and the government work area. (Objective 5)

Status: Resolved. Displays including the 10- and 50-mile EPZ maps and the evacuation routes by county, were numerous in both the government work area and media presentation area.

BVX90-4R Pennsylvania State EOC

When the decision was made to evacuate the 10-mile EPZ and to activate the siren and EBS system, the communicator informed the conferees on the call (West Virginia EOC, Hancock County, Ohio, Columbiana County, and Beaver County) that the test of the 15 minute public notification system (sirens and EBS) began at 2015, with sirens to sound at 2025 and EBS at 2028. No mention of the Pennsylvania protective action decision was made until the communicator was questioned as to what the EBS message was. His answer at that time was "evacuate". Since activation of the sirens and EBS was the means used to inform the public of the Governor's protective action decision (in this case evacuate 360 degrees out to 10 miles), it would be logical to begin the instructions to the other governmental agencies involved with the

statement: "The Governor of Pennsylvania directs the evacuation of the Pennsylvania 10-mile EPZ, 360 degrees." and then continue with the siren and EBS activation times. (Objective 12)

Status: Resolved. The second EBS message prepared by PEMA and transmitted to the risk counties did contain the statement "The Commonwealth of Pennsylvania directs the evacuation of the Pennsylvania 10-mile EPZ, 360 degrees".

BVX90-6R Beaver County EOC

The primary means of communications between the County EOC and the municipal EOCs was via the RACES/REACT radio network. Although the system appeared, from the county perspective, to be well-organized and effective, there were problems in at least 11 of the municipal EOCs. Some municipal EOCs experienced delays of up to an hour in sending and/or receiving messages due to heavy message traffic. Furthermore, as noted under Deficiency BVX90-2D, some municipal EOCs did not receive the entire evacuation message, causing delays in evacuation. County officials should consider replacing the amateur radio system with a dedicated emergency management radio system. Such a system would provide a more effective primary link between the county and municipal EOCs. Such systems have been installed at the other four Pennsylvania nuclear power plant sites and have been very beneficial. (Objective 4)

Status: Resolved. The Beaver County EOC now has a primary link between the County EOC and municipal EOCs. PEMARS has been installed in all 20 municipal EOCs.

BVX90-9R Aliquippa Borough

The RO stated that the municipality needed only 80 units of dosimetry when the plans state that 107 units are necessary. Either the plan should be changed to reflect the correct number of dosimetry units required for this municipality or the RO should order the number listed in the plan. (Objective 6)

Status: Resolved. Appropriate plan revisions have been made.

BVX90-12R Center Township EOC

Shift changes were not conducted for the following township EOC staff positions: the Police Services Officer, Fire and Rescue Officer, Medical Services Officer, and Transportation Officer. The Center Township EOP directs that the EOC staff "must be capable of maintaining 24 hour operations" (V.A.5, page 4). (Objective 34)

Status: Resolved. A shift change was demonstrated at the Center Township EOC. Four new staff personnel had been added. Each

agency representative had a trained individual available for relief.

BVX90-13R Chippewa Township EOC

The RO needed to consult with the EMC when questioned by the FEMA evaluator on specific exposure limit guidelines for the township emergency workers. Also, the radiological officers failed to adequately explain procedures guiding the ingestion of KI by township emergency workers (including the origin of authority and proper dosage). Furthermore, when questioned on this matter, the EMC indicated that the decision to direct emergency workers to ingest KI could be made locally, based upon personal dosimeter readings. Although the EMC did not direct emergency workers to ingest KI during the exercise, the understanding of KI procedures by township staff is not consistent with plan directives, which state that KI will be taken "only upon the advice of the Secretary of the Pennsylvania Department of Health, notification of which will be received through emergency management channels" (page I-8). Further training and plan familiarization addressing emergency worker exposure control is recommended for the appropriate township EOC staff members. (Objectives 6 and 16)

Status: Resolved. The ROs were familiar with procedures concerning exposure limits and the authority to administer KI.

BVX90-14R Chippewa Township EOC

The initial dispatching of the route alerting teams at 1930 hours was not coordinated with the county, and was done in the absence of siren activation and provision of an EBS message, contrary to Township Plan provisions (pages B-4 and E-4 of the Township SOPs). In the future, route alerting should be conducted upon the direction of the County EOC after the activation of sirens and accompanied by an EBS broadcast. (Objective 12)

Status: Resolved. The initial dispatching of the route alerting teams was coordinated with the county, and was done just after siren activation and EBS message broadcast.

BVX90-15R Hanover Township/Frankfort Springs Borough EOC

At 1912 hours and again at 2021 hours, the EOC (Fire Services Coordinator) petitioned the County EOC for five vehicles and operators to conduct route alerting. No message copy indicates that this request was answered or met by the county. This request is not consistent with stated plan provisions, where the municipal Notification and Resource Manual indicates that four vehicles and 22 personnel are available in Hanover Township for route alerting (pages 10 and 11, respectively). This discrepancy should be further investigated and remedied by the county and municipal emergency management officials. (Objective 12)

Status: Resolved. Route alert teams were actually dispatched and completed routes within the time requirement.

BVX90-16R **Georgetown Borough/Greene Township/Hookstown
Borough EOC**

All EOC staff positions conducted a shift change, with the exception of the RO, who was not relieved during the exercise. A shift change is not complete without the replacement of this key EOC position. (See page I-2 of the municipal SOPs).
(Objective 34)

Status: Resolved. Since the last exercise, an additional RO had been recruited and trained. During this exercise, the RO performed a shift change and demonstrated an in-depth knowledge of his responsibilities and an ability to execute the duties of his position.

BVX90-17R **Hopewell Township EOC**

The township did not coordinate its initial dispatching of route alerting teams with the county's activation of sirens and the EBS message (as called for in the Township plan, page E-4), but instead, dispatched its teams at 1840 hours during SAE. In the future, the township should strictly adhere to its plan prescriptions and await a county directive before dispatching route alerting teams. (Objective 12)

Status: Resolved. The township implemented route alerting in accordance with the emergency plan.

BVX90-18R **Independence Township EOC**

Due to the fact that the township has only one police officer (who served as the Police Services Representative in the EOC), it was necessary for the EMC to contact the county EOC and request that the three TCPs designated as township responsibilities be posted by the PSP. Given this lack of township police personnel, it is recommended that the township and county plans be modified to reflect an anticipated need to staff all township TCPs with PSP officers. (Objective 20)

Status: Resolved. Plan changes were incorporated in Section D.1.2 page 5.

BVX90-19R **Industry Borough EOC**

The primary communications link with the County EOC, the REACT radio, did not function properly. At times the Borough EOC was receiving only partial messages from the County EOC and at other times could not transmit to the county. No back-up system, including commercial telephone, was utilized effectively to

recover or confirm disrupted messages. This caused significant delays in the processing of messages and inhibited the EOC's crucial reception of protective action decisions from the county. (Objective 4)

Status: Resolved. The ability to communicate with all appropriate locations, organizations, and field personnel was demonstrated during this exercise. The primary communications systems were able to handle communications flow without delay. There were no communications failures or breakdowns. All communication links functioned properly. REACT operators served as back-up support to the primary communications and experienced no delays or problems.

BVX90-20R Midland Borough EOC

Although the borough properly briefed and outfitted a route alerting team with route maps and a written message and actually conducted a run in 20 minutes, the dispatching of the team at 1846 hours was done in the absence of a county directive and sirens and EBS activation violating borough plan provisions (E-4). (Objective 12)

Status: Resolved. The borough properly briefed and outfitted a route alerting team with route maps and a written message and conducted a route run. The team was dispatched after receiving word from the Beaver County EOC via PEMARS at 2125 hours. The route alerting was conducted in accordance with the borough's plan and this issue has been corrected.

BVX90-21R Potter Township EOC

Following the previous exercise, the responsibility for manning the three TCPs within the township was transferred from the township police force to the PSP. This change is reflected in the Beaver County plan, and was properly demonstrated during the exercise. However the version of the Potter Township plan assigned responsibility for the TCPs to the township police.

Status: Resolved. The recent revision of the Potter Township Plan (Attachment D-1) assigns responsibility for its TCPs to the PSP.

**BVX90-24R South Beaver Township/Glasgow Borough/Ohioville
Borough EOC**

The EOC facility used during the exercise, the combined police/fire station located on Route 251, was not the facility identified in the plan. The emergency plan should be changed to correctly identify the EOC. (Objective 5)

Status: Resolved. The EOC is located in the South Beaver Township Fire Station 2, Route 251, South Beaver, Pennsylvania and this is correctly shown in the plan.

BVX90-25R Butler County Mass Care Center

Insufficient space was allocated to adequately perform the monitoring functions and to limit the spread of contamination (no hot line was established). Decontamination procedures were not demonstrated. The only facilities identified for decontamination were located inside the mass care area which would necessitate contaminated individuals going into the mass care area for decontamination. The Slippery Rock Middle School can be an acceptable facility for monitoring and decontamination. For instance, the school contains two gymnasiums and associated shower facilities. It should be possible to restructure the current floor plan to utilize one of the gyms for the monitoring/decontamination functions and to provide shelter to evacuees while waiting to be monitored. Multiple monitoring lanes could be set up to speed up the monitoring process. (Objective 21)

Status: Resolved. Sufficient space was allocated to adequately perform the monitoring functions and to limit the spread of contamination (a hot line was established). Decontamination procedures were demonstrated. Other areas were identified for decontamination so that individuals requiring decontamination would not have to be decontaminated at the mass care center.

BVX90-26R Butler County Mass Care Center

Although officials state that 40 people have been trained as monitors, the two monitors used did not demonstrate adequate monitoring and decontamination control procedures. Additional training for the monitors participating in this exercise is necessary. (Objective 21)

Status: Resolved. The monitors observed during the 1992 Beaver Valley exercise demonstrated adequate monitoring and decontamination control procedures.

BVX90-27R West Virginia Field Air Sampling Team

When questioned about how the sample would be taken to a laboratory for analysis, the team stated that it would be mailed. Mailing a sample to a laboratory would not be adequate to obtain a prompt analysis. Procedures should be developed to deliver the sample to the laboratory to ensure decision makers have all the applicable information to make appropriate decisions as quickly as possible. (Objective 9)

Status: Resolved. The issue was resolved by the Hancock County Deputy Sheriff's simulation of transportation of the sample to

the Jefferson County Ohio Emergency Service Office which would, in turn, arrange for delivery of the samples to its laboratory in Columbus, Ohio, for analysis.

BVX90-28R West Virginia Field Air Sampling Team

The State Department of Health Field Air Sampling did not bring the instruments and equipment as identified in the plan to Hancock County. Only one pair of rubber gloves and one suit of protective clothing was available. No face respiration equipment or tweezers or containers for handling samples was contained in the kit. Only one Eberline Beta-Gamma detector was available. In addition, the team did not have a form on which to record times of communication, field data, or dosimetry readings. The field team should bring the appropriate equipment to perform their duties at the next exercise. (Objective 7)

Status: Resolved. This issue was resolved by the teams' supply of instrumentation, equipment, materials, and supplies being in agreement with those identified in the plan. Also, there were forms available in the kit for recording field data and dosimeter serial numbers and readings.

BVX90-29R Hancock County EOC

The communications and the RACES staffs did not receive notification of upgrade to GE in a timely fashion. Communications staff were advised at 2000 hours and the RACES staff at 2034 hours. Procedures should be established to ensure that these staffs who are located in separate rooms be advised of changes in plant status through the use of duplicate status boards or messengers. (Objective 1)

Status: Resolved. The RACES staff located on the second floor was immediately notified of ECL changes through the use of a message center runner between the EOC and the RACES location.

BVX90-30R Hancock County EOC

County officials were unable to produce any documentation to verify the required calibration and inventory, in accordance with the plans (Hancock County Emergency Plan, Annex N). These records are kept at the State office in Charleston, West Virginia. When required calibration and inventory are accomplished by the State, a copy of documentation should be provided to the County OES. (Objective 6)

Status: Resolved. The Hancock County RO had a list in the radiological cabinet showing the calibration dates and number of dosimeters in inventory.

BVX88-12R Hanover Township/Frankfort Springs Borough EOC

Only about 1/3 of the township and borough was covered by pre-designated routes for route alerting teams. One route was activated which took 53 minutes to complete. In order to ensure that the entire township and borough is fully covered by route alerting teams within 45 minutes, the routes should be replanned and divided and included on the route alerting maps to be provided to each route alerting team. (Objective 12)

Status: Resolved. Four route alerting teams went out and completed alerting within the required time frame.

BVX88-16R Independence Township EOC

The plan for Independence Township calls for the township to staff three TCPs. The EMC stated that with only one police officer, he would never be able to staff these points. He requested assistance from Beaver County. The plan should be reassessed and modified to assign personnel to staff these TCPs through the county or State resources. (Objective 20)

Status: Resolved. According to the revised township plan, the ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas was the responsibility of the PSP.

BVX88-17R Potter Township EOC

The Potter Township Plan calls for the police department to staff three TCPs. However, Potter Township only has a three man police force; therefore, (according to the EMC) the township will not be able to staff these points. The plan should be reviewed and these duties assigned to the county or State resources. (Objective 20)

Status: Resolved. The recent revision of the Potter Township Plan (Attachment D-1) assigns responsibility for its three TCPs to the PSP.

BVX88-19R Bulter County - Reception and Mass Care

Only one person was trained in the procedures for monitoring and decontamination of evacuees. Training should be provided to all team members. (Objectives 21 and 22)

Status: Resolved. A three person monitoring and decontamination team was present to monitor and decontaminate evacuees. Additionally, other team members were listed and trained in accordance with SOPs.

B. Previous ARCAs Unresolved

BVX90-3R Joint Information Center

The West Virginia State Representative at the JPIC did not demonstrate a shift change. The State of West Virginia should demonstrate this capability at the next biennial exercise. (Objective 34)

Status: Unresolved. Although this objective was not identified for demonstration at the 1992 exercise, West Virginia demonstrated a shift change capability by double-staffing its position in the JPIC government work room. However, according to the State representative, the position would be staffed by two persons for normal operations. Therefore, a shift change was not strictly demonstrated, and therefore, this remains an open issue.

BVX90-5R Pennsylvania Public Information

News Release 8, which was disseminated at 2040 hours, contained contradictory and conflicting information regarding protective action decisions. This error is a result of the computer word processing operator, who mistakenly included two paragraphs from a prior release. Care should be taken in the editing of news releases to ensure that the appropriate updates and changes have been made. (Objective 14)

Status: Unresolved. PEMA News Release 7 contained a header indicating a release time of 1956 hours but the lead sentences concern actions which followed the declaration of the GE ECL at 2010 hours. This resulted from the practice of listing the release time as the time of preparation of the draft news release. After the draft is prepared, it may be modified with newer information before approval and release. Although the types of conflicting information in the previous exercise and this exercise may differ, the problem is the same.

BVX90-7R Beaver County Emergency Worker Decontamination Station

There were several problems with the facility, and the way it was set up that could result in contamination control difficulties. The radiation monitoring station was located in the center of the building, and the one small shower facility that was available was entered by a narrow hall. The radiation monitoring station should be located close to the entrance door, in order to reduce the size of the contamination control area; a portable shower, placed over an existing drain, would greatly enhance decontamination efforts. (Objective 25)

Status: Unresolved. The same co-located EOC and emergency workers decontamination facility was utilized for this exercise.

The two operations are not separated by any wall, causing considerable noise and the potential movement of individuals between operations, thus possibly spreading contamination. The area allocated for the emergency worker decontamination procedures is small and badly configured for monitoring activities. Although the monitors accomplished their job, it would be far easier with a better/larger facility.

BVX90-8R Hopewell Area School District

A discrepancy exists between the anticipated school district unmet needs for buses listed as 14 in Annex E of the Beaver County Plan (page E-14-7) and the Hopewell Area School District Plan which indicates that no buses are required from the county (page C-1). This discrepancy should be researched and corrected. (Objective 19)

Status: Unresolved. Aspects of Objective 19 were not evaluated during this exercise as agreed to by FEMA and the Commonwealth of Pennsylvania.

BVX90-10R Brighton Township EOC

When the Brighton Township EMC received the message at 2019 hours concerning siren and EBS system activation, no attempt was made to ascertain why the system was being activated through confirmation of the message content with Beaver County (Brighton Township EOP, SOP-B, page 10). Additional training on the overall concept of siren and EBS activation and confirmation of message content is needed. (Objective 3)

Status: Unresolved. The same situation occurred during the June 9-11, 1992, exercise.

BVX90-11R Brighton Township

A complete 24-hour shift change was not demonstrated by the Communications Operator and the EMC. The EMC stated that the second shift operator was new and in training, therefore, the first shift operator would remain in the EOC to assist and help train the second shift person. The first shift EMC was still an active part of EOC operations after the shift change. Both these positions should demonstrate a shift change during the next scheduled exercise. (Objective 34)

Status: Unresolved. A complete 24 hour shift change was not demonstrated by the Brighton Township EOC because Objective 34 was not scheduled to be evaluated at this exercise.

BVX90-22R Raccoon Township EOC

Although the township obtained the quantity of dosimetry/KI kits identified in both the municipal and Beaver County Plans, township officials determined that this was not sufficient and requested an additional 25 kits during the exercise. Township officials should pre-determine the quantity of dosimetry/KI kits that are required and coordinate this need with Beaver County; the plans for both jurisdictions should be changed accordingly. (Objectives 6 and 16)

Status: Unresolved. The plan calls for 23 dosimetry kits, but the RO determined that 50 dosimetry kits were needed in order to cover two shifts of emergency workers.

BVX90-23R Raccoon Township EOC

The ability to maintain staffing on a continuous 24-hour basis by an actual shift change was not demonstrated. A shift change was not demonstrated for the Transportation, Radiological, Fire and Medical positions. Township officials should ensure that there are sufficient trained individuals to man all EOC positions on a 24-hour basis; the capability for performing a complete shift change should be demonstrated in future exercises. (Objective 34)

Status: Unresolved. Objective 34 was not demonstrated during this exercise.

BVX86-25R Aliquippa School District

RACES did not participate at this school district, consequently, no back-up means of communication was available.

Status: Unresolved. Aspects of Objective 19 were not evaluated during this exercise as agreed to by FEMA and the Commonwealth of Pennsylvania.

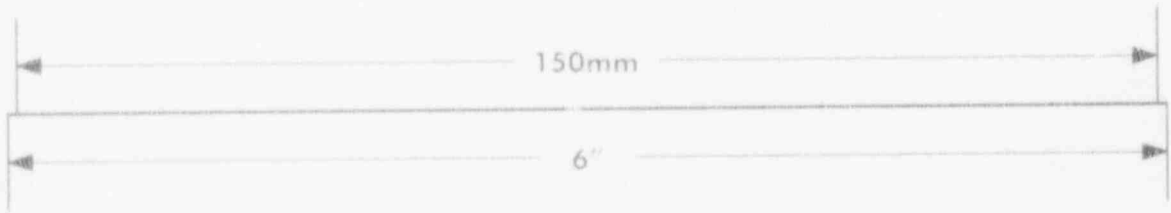
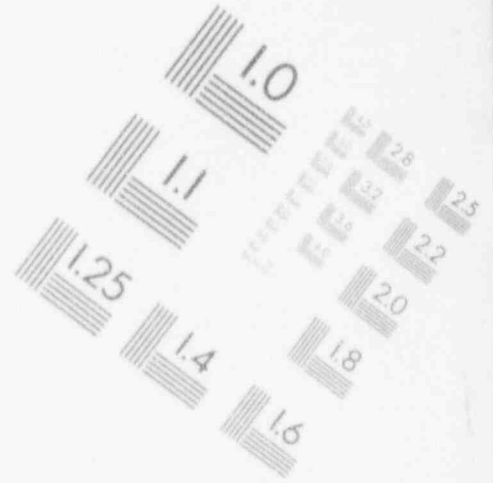
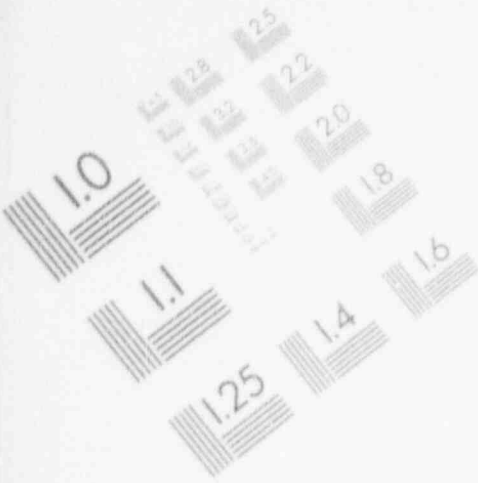
BVX86-29R Midland School District

Consideration should be given to providing a radio system (such as RACES) as a back-up to the commercial telephone system.

Status: Unresolved. Aspects of Objective 19 were not evaluated during this exercise as agreed to by FEMA and the Commonwealth of Pennsylvania.

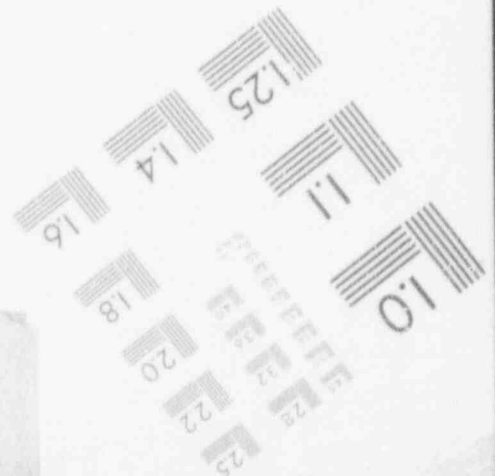
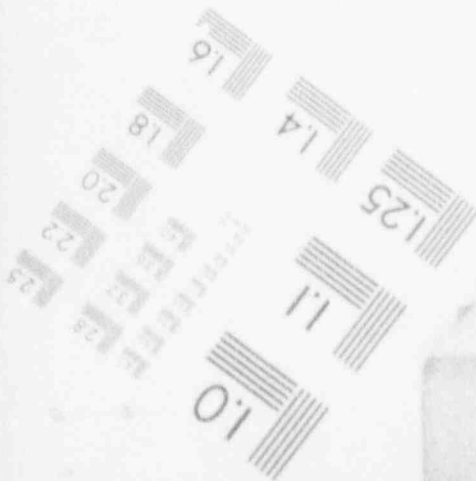
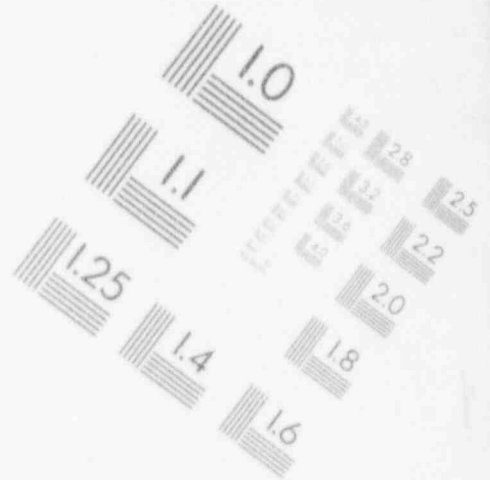
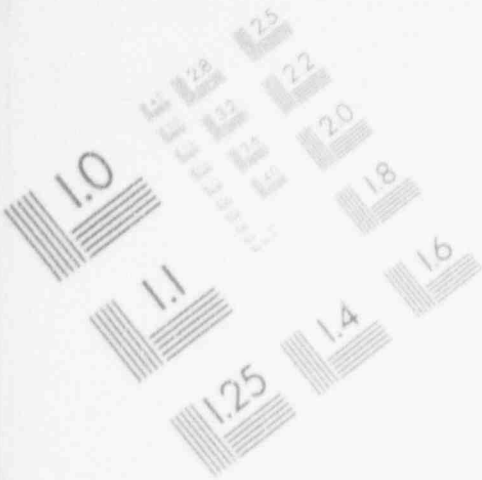
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IMAGE EVALUATION TEST TARGET (MT-3)



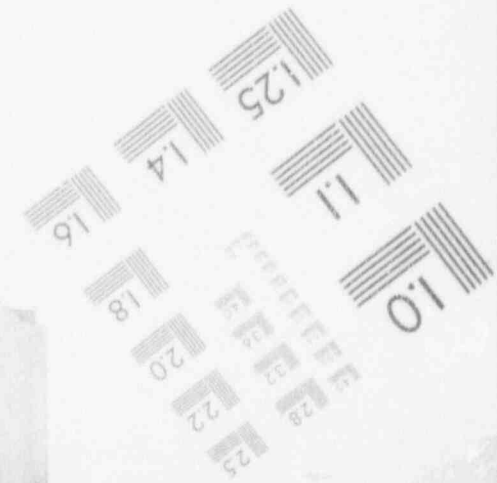
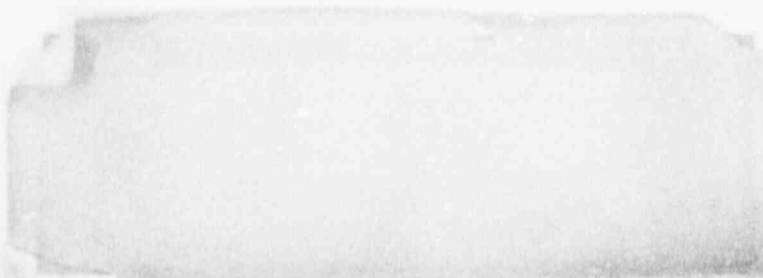
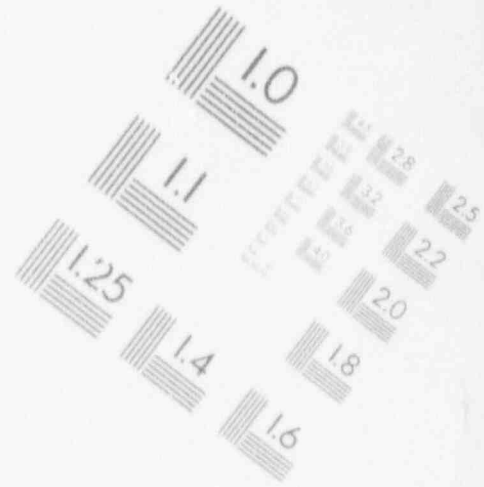
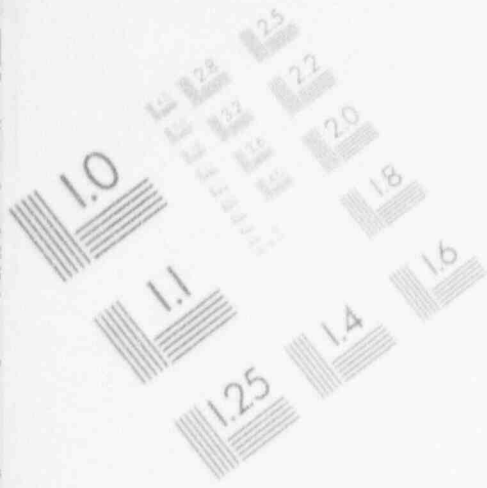
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IMAGE EVALUATION TEST TARGET (MT-3)



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IMAGE EVALUATION TEST TARGET (MT-3)



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IMAGE EVALUATION TEST TARGET (MT-3)

