

SEP 17 1985

Docket Nos. 50-387
50-388

Pennsylvania Power & Light Company
ATTN: Mr. H. W. Keiser
Vice President
Nuclear Operations
2 North Ninth Street
Allentown, Pennsylvania 18101

Gentlemen:

Enclosed is the FEMA report for the Susquehanna Steam Electric Station exercise which was conducted on May 1, 1985. FEMA observed two deficiencies which, because of their potential impact on emergency preparedness, will require correction through appropriate remedial exercises, drills, or other actions.

The Commonwealth of Pennsylvania has been requested to prepare a schedule of corrective actions, and to schedule a remedial exercise. We request that you continue to coordinate your planning efforts with those of the Commonwealth and local emergency planning authorities to assure that these deficiencies are expeditiously corrected.

We also request that you be prepared to discuss your progress in these efforts during the meeting scheduled for September 24, 1985 at 1:00 p.m. in the FEMA Region III Offices.

If you have any questions concerning this matter, please contact Mr. T. L. Harpster of my staff at (215) 337-5208.

Sincerely,

Original Signed By:
Thomas T. Martin

Thomas T. Martin, Director
Division of Radiation Safety
and Safeguards

Enclosure: As stated

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9/16/85

FEDERAL EMERGENCY MANAGEMENT AGENCY

REGION III

EXERCISE EVALUATION REPORT

FACILITY: SUSQUEHANNA STEAM ELECTRIC STATION
Salem Township, Luzerne County, Pennsylvania

LICENSEE: PENNSYLVANIA POWER AND LIGHT COMPANY

EXERCISE DATE: May 1, 1985

REPORT DATE: July 26, 1985

PARTICIPATING
JURISDICTIONS: State, Risk and Support Counties, Risk Municipalities
and Risk School Districts as noted in Exercise Summary

NON-PARTICIPATING
JURISDICTIONS: Fishing Creek Township, Columbia County

~~85-68280-53~~ 247 pp.

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EXERCISE SUMMARY

Activation and Staffing

At the State EOC, BRP Headquarters, EOF, and Joint Media Center, adequate capability was demonstrated for notifying and mobilizing staff, manning all positions, and maintaining round-the-clock operation.

Both risk county EOCs also displayed adequate capability in this regard, with Columbia County demonstrating additional staffing than is identified in the plan.

At the municipal level, the most serious problem occurred at Fishing Creek Township, where officials had decided prior to the exercise not to activate their EOC or otherwise participate. This has resulted in the need for a remedial exercise.

Notification of key officials representing the twenty-six participating municipalities was generally not directly observed, but EOC activation and staffing occurred in a timely manner. Over half (fourteen) of the municipalities failed to demonstrate full first-shift staffing, and/or capability for full second-shift staffing. This is considered an Area Requiring Improvement, as opposed to a Deficiency, because there was no evidence that the capability to protect the public health and safety was seriously impaired. Lack of staffing for two full shifts has also been noted as a planning deficiency for many of these municipalities.

Five risk school districts, each with at least one school located within the 10-mile EPZ, participated in a sub-scenario conducted out-of-sequence with the main exercise events (three other school districts, with schools located outside the EPZ, but with students residing within, were not included). With one exception, school district staff participation was adequate to demonstrate the emergency actions and responsibilities. At the Hazelton Area School District, however, the Superintendent and key staff did not play, and the exercise was conducted by the Transportation Coordinator.

Six support counties, responsible for activating EOCs and providing reception and mass care centers for evacuees, also participated. Staffing and activating of the various centers was generally sufficient at four of the counties, but Lycoming and Union counties did not activate and staff facilities designated for reception and mass care. Instead, these counties conducted a tabletop exercise, involving some of the key staff, at their respective EOCs. This did not provide a suitable opportunity for a definitive evaluation.

Emergency Operations Management

At the State EOC, effective leadership, decision making, and coordination were generally displayed, although there are some recommendations for improvement. PEMA terminated State-level play rather abruptly, and at a time when the counties and municipalities were at the height of their

evacuation activities. It is recommended that PEMA maintain at least a minimal EOC staff, and continue to monitor local activities until all protective action related responsibilities are implemented. The State EOC staff members were well-trained and performed their duties professionally. Good internal communications and interaction were also evident. Notification of emergency status changes were timely, with the exception of the Site Area Emergency declaration, receipt of which was inexplicably delayed for almost 30 minutes.

Operations at other State-level locations, including BRP Headquarters and the EOF, were well managed, with competent leadership and staff members.

Operations at the risk county EOCs were also generally characterized by capable leadership and competent, well-trained staff. This was especially true at Luzerne County, where there are no operations-related deficiencies. Columbia County, however, committed a serious blunder late in the exercise. When informing the municipalities of the activation time for the alert and notification system, county officials failed to advise the municipalities that this was being done to implement a general EPZ evacuation. This oversight was never corrected, as the county terminated exercise play without ever officially advising the municipalities to evacuate. This has been categorized as a Deficiency.

Municipal emergency operations management was generally very good, especially as this was the first exercise for about half of the municipal participants. The local coordinators and their staff members were uniformly well-trained and knowledgeable, as evidenced by the dearth of training-related deficiencies and recommendations. The most serious operations management deficiencies were committed by the Columbia County municipal officials. Although not officially instructed to evacuate, the EOC staffs intercepted Luzerne County radio traffic which indicated that an evacuation had been directed. Instead of immediately contacting Columbia County to verify this unofficial information, the local coordinators either delayed or neglected to perform confirmation at all.

The School District Superintendents, with one exception, demonstrated good capability to implement their district plans for evacuation. At Hazelton Area School District, where the Superintendent and other key staff did not participate, adequate transportation arrangements were demonstrated, but many other aspects of the evacuation were not addressed.

Facilities

The facilities available at the State EOC, BRP Headquarters, the EOF, both the State and Joint Media Centers, and the risk counties provided very good to excellent accommodations.

Although most municipal EOCs lack the habitability features necessary to support extended operations, they were generally found to be quite suitable for their intended function. Two EOCs, however, lack even indoor plumbing, and efforts should be made to upgrade these. A more pervasive problem, and certainly one with a greater potential for adverse impact, is the lack of emergency electrical generators. At least eleven municipal EOCs are without ready access to auxiliary generators to power lights and communications equipment in the event of a power failure. This situation was identified as a deficiency at the last Susquehanna exercise, and it remains an unresolved problem more than two years later.

Another previously-identified municipal EOC problem, which has been addressed, is that most are located within the 10-mile EPZ, but lack inherent protection from radiation exposure. The municipal plans have been amended to provide for relocating EOC operations to a designated site outside the EPZ. This relocation is to be accomplished upon completion of the general evacuation. Procedures were simulated during the exercise.

The reception and mass care centers which were demonstrated by the risk and support counties during the exercise, were found to provide adequate accommodations for evacuees.

Communications

The State EOC and the various other State-level locations are equipped with excellent communication resources, including a variety of backup and secondary systems. A notable exception is PEMA's teletype system. This has great potential as a means for conveying hard copy of emergency messages and news release text, but its usefulness was compromised by delays of up to an hour experienced at the receiving locations.

A significant upgrade in the communications capability has been made at the county/municipal level, with the recent installation of a combination pager/radio system. This provides both initial notification of key municipal officials (via the pager, which can deliver a one-way voice message from the county EOC) and general communications capability (via the radio) upon activation of the municipal EOC. Unfortunately, problems with interference, mainly experienced in Columbia County, prevented the system from performing at its full potential. Once these development problems are sorted out, however, the system should significantly improve the deficient communications capability which was found to exist at the previous exercise.

A more mundane communications deficiency still exists at three municipal EOCs, which have less than one fully operational, private telephone line. Eight other municipal EOCs are served by only one telephone. While this is considered minimally acceptable, it is recommended that additional telephone lines be installed, if possible, to provide simultaneous incoming and outgoing call capability.

RACES/ARES operators were present at most locations to provide backup communications, but operators never arrived at five municipalities, and were late getting to four others. Both risk counties should review the assignment procedures.

Dose Assessment and Protective Action Recommendations

BRP did not demonstrate radiological monitoring in the field, as the personnel who are assigned to the teams were committed to an actual radiological problem. However, BRP field monitoring teams have adequately demonstrated their capability in past exercises.

The staff at BRP Headquarters also demonstrated, once again, their capability to efficiently perform the dose assessment function. They considered all appropriate factors in arriving at plume and ingestion zone protective action recommendations, which were promptly forwarded to PEMA. PEMA officials, in consultation with the "Governor," decided to accept BRP's recommendation for a general evacuation of the entire EPZ within 12 minutes of its receipt.

Public Alerting and Instruction

State officials provided only five minutes between the time of the evacuation decision, and the time it was to commence. Despite the limited time frame, PEMA successfully completed the necessary coordination with the risk counties, and the counties, in turn, successfully completed the necessary coordination with the municipalities. The primary public alert and notification system (sirens/EBS) was activated on schedule. Although it was apparently not the intent of State officials to provide such a limited time span for this activity, PEMA and the counties demonstrated that, if necessary, the coordination required prior to activating the public alert and notification system at Susquehanna can be accomplished in as little as five minutes. However, the resulting fast pace may have been the cause of Columbia County's failure to direct the municipalities to implement evacuation.

The municipalities dispatched route alert teams to perform secondary alerting of the general public, and to notify the hearing-impaired. Lists of hearing-impaired residents were available at the EOCs.

Emergency public instructions were drafted by PIOs at the State Media Center, and at both risk county EOCs. They were generally released in a timely manner, and were clear and appropriate to the situation.

Protective Action

At the State EOC, PEMA and the other State agency representatives adequately directed and coordinated all necessary actions to implement the evacuation, control access to the evacuated area, and, based upon BRP's recommendations, implement ingestion pathway protective actions.

The Pennsylvania State Police demonstrated (out-of-sequence) their procedures for activating personnel and establishing Access and Traffic Control Posts. These activities were performed in a well-organized and effective manner.

The reception and mass care centers demonstrated by the risk and support counties were generally adequate regarding staffing (where demonstrated) and operations, and three hospitals demonstrated good capability to provide medical support for incidents involving radiological contamination.

The evacuation support activities performed by Luzerne County, such as coordinating and assigning the ambulance and bus requirements of the municipalities and health care institutions, were adequately demonstrated. Despite failing to direct the municipalities to implement evacuation, the Columbia County staff also demonstrated adequate capability to perform this function.

Activation of TCPs by the municipalities was generally adequate, although unmet equipment needs, and questions regarding the availability of sufficient personnel to man the posts should be resolved at some municipalities. With few exceptions, the municipal EOCs had written lists of identified mobility-impaired residents, where applicable.

Radiological Exposure Control

BRP made an appropriate decision to recommend use of KI for emergency workers, but failed to advise PEMA, and the action was never approved and implemented. At the risk counties, a number of exposure control inadequacies were identified. In accordance with the scenario, the distribution of dosimetry and KI from the counties to the municipalities was simulated. Columbia County was found not to have the medium range (0-20R) self-reading dosimeters (CDV-730 or equivalent) which the plans specify are to be provided to emergency workers. The Radiological Officers at both risk counties demonstrated adequate capability, but the Columbia County Agricultural Agent, responsible for distributing dosimetry to farmers and certifying them as emergency workers, was not sufficiently familiar with radiological exposure control procedures. There were discrepancies regarding the quantity of dosimetry/KI kits needed by some municipalities.

Both risk counties were to demonstrate emergency worker decontamination stations, but Columbia County's demonstration did not occur as scheduled, precluding an evaluation. Luzerne County's capability to perform this function was adequately demonstrated.

The municipal EOCs were provided with one each of the designated complement of self reading dosimeters for training and demonstration purposes. Municipal radiological officers and staff almost universally demonstrated adequate knowledge and training regarding radiological exposure control, as evidenced by the fact that there is only one recommendation for additional training at the municipal level. The plans for all municipal EOCs located within the EPZ designate alternate operational locations, and simulated evacuation to these sites was demonstrated by most municipalities. There was a discrepancy between Nescopeck Borough and Luzerne County as to the municipality's EOC relocation site.

Radiological exposure control measures for emergency workers at the mass care centers established by the risk and support counties were generally adequate, with two exceptions - Northumberland County did not have TLDs, and monitors at Schuylkill County were not provided a full complement of dosimetry and demonstrated a need for more training.

Media Relations

Very good facilities were provided for media representatives at the State and Joint Media Centers, and at the county EOCs. The State and county PIOs demonstrated a good capability to keep the public and media representatives informed through briefings and press releases. Coordination of information and news releases between the PIOs at the various facilities, however, was not adequately demonstrated. Rumor control measures by the State and counties were adequate, but additional training is recommended for the utility's rumor control staff at the Joint Media Center. Contingency plans for the evacuation of the Joint Media Center, which is located within the EPZ, have not been demonstrated.

Recovery and Reentry

Activities relating to reentry and recovery were not included in the scenario.

BACKGROUND

Federal requirements dictate that periodic Radiological Emergency Response Preparedness exercises be conducted in support of nuclear power plants to evaluate major portions of emergency response capabilities. The exercises test the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. The exercises simulate a coordinated response by State and local authorities, along with the utility, to include mobilization of personnel and resources adequate to verify the capability to deal with an accident scenario requiring responses up to, and including evacuation. This was the third full participation exercise for the Susquehanna Steam Electric Station and the various offsite organizations.

The purpose of this report is to record the capabilities of State and local governments to respond to an accident at the Susquehanna Steam Electric Station based upon the actual demonstration or simulation of their abilities during the May 1, 1985 joint, full participation exercise. Deficiencies will be identified from this exercise and corrective actions will be recommended which would help to improve preparedness and response capabilities.

The exercise was observed by a team made up of 48 individuals from FEMA Region III, along with members of the Regional Assistance Committee, Argonne National Laboratory, and the American Red Cross.

A draft version of this report, dated May 31, 1985, was provided to Pennsylvania for review and comment. The State was requested to provide a listing of corrective actions, and a schedule for their implementation, by June 26, 1985, to facilitate the release of this final Regional report by July 1. The State's response, received July 18, 1985, did not adequately address most of the identified inadequacies, and did not specify projected dates for completion of corrections. The response did, however, result in several revisions of Areas Requiring Improvement identified in the draft report. One item, involving staffing at the State Media Center, was eliminated; another, concerning improvements for two municipal EOCs, was reclassified as an Area Recommended for Improvement.

The Regional Director, in a letter to the Director of the Pennsylvania Emergency Management Agency dated July 19, 1985, has advised that the Susquehanna exercise cannot be considered successfully concluded until an acceptable Schedule of Corrections has been submitted, and the specified actions have been completed.

EXERCISE PARTICIPANTS

State

Pennsylvania Emergency Management Agency and 17 other State agencies and organizations.

Plume EPZ Jurisdictions

Columbia County

Beaver Township
Berwick Borough
Briar Creek Borough
Briar Creek Township
Mifflin Township
North Centre Township
South Centre Township

Luzerne County

Black Creek Township
Butler Township
Conyngham Borough
Conyngham Township
Dorrence Township
Hollenback Township
Hunlock Township
Huntington Township
Nanticoke City
Nescopeck Borough
Nescopeck Township
New Columbus Borough
Newport Township
Nuangola Borough
Salem Township
Shickshinny Borough
Slocum Townsip
Sugarloaf Township
Union Township

Plume EPZ School Districts

Berwick School District
Central Columbia School District
Hazelton School District
Nanticoke School District
Northwest School District

Support Counties

Lackawanna County
Lycoming County
Northumberland County
Schuylkill County
Union County
Wyoming County

Other Participants

American Red Cross
RACES
Berwick Hospital
Geisinger Medical Center
Nanticoke Hospital

NON-PARTICIPATING JURISDICTIONS

Plume EPZ Municipalities

Fishing Creek Township (Columbia County)

FEMA was advised prior to the exercise that Fishing Creek Township officials had decided not to participate. The reason for this decision was not specified.

OBSERVER ASSIGNMENTS

Observers-at-Large

Paul Giordano, Regional Director
James R. Asher, RAC Chairman

State EOC

Steve Hopkins, FEMA, Team Leader

State Media Center

Diana Diaz, FEMA

BRP Headquarters

Bill Belanger, EPA

Susquehanna EOC

Jim Hawxhurst, NRC

Joint Media Center - Berwick

Hugh Laine, FEMA

Columbia County EOC

Karen Larson, FEMA, Team Leader
Tom Majusiak, FEMA

Beaver Township
Berwick Borough
Briar Creek Borough
Briar Creek Township
Mifflin Township
North Centre Township
South Centre Township

Marty Frengs, FEMA
Steve Adukaitis, FEMA
Patty Arcuri, FEMA
Guy Brackett, FEMA
Elliott Levine, ANL
Frank Kay, ANL
Phil Kier, ANL

Luzerne County EOC

Janet Lamb, FEMA, Team Leader
Darrell Hammons, FEMA

Black Creek Township
Butler Township
Conyngham Borough
Conyngham Township
Dorrance Township
Hollenback Township
Hunlock Township
Huntington Township
Nanticoke City
Nescopeck Borough
Nescopeck Township
New Columbus Borough
Newport Township
Nuangola Borough
Salem Township
Shickshinny Borough
Slocum Township
Sugarloaf Township
Union Township

Joe Gavin, FEMA
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Francesca DiCosmo, FEMA
Jim Opelka, ANL
Karen Oakley, FEMA
Roman Helo, FEMA
Bill Vinikour, ANL
Jerry Staroba, ANL
Rick Kinard, FEMA
Tony Foltman, ANL
Sue Ann Curtis, ANL

Emergency Worker Decontamination/Monitoring Stations

Columbia County

Hank Mitskas, FDA

Luzerne County

John Wells, HHS

Reception and Mass Care Centers

Dale Petranech, FEMA, Team Leader

Red Cross District Office

Dale Petranech, Red Cross

Wyoming County

"

Lackawanna County

"

Lycoming County

Joe McCarey, FEMA

Union County

"

Schuylkill County

Steve Massey, Red Cross

Northumberland County

Fred Schmauk, FEMA

Columbia County

Roman Siletsky, FEMA

Luzerne County

Joe Zagone, FEMA

Hospitals

Geisinger Medical Center

Hank Mitskas, FDA

Nanticoke Hospital

John Wells, HHS

Berwick Hospital

"

Field Monitoring Teams

Water and Milk Sampling

Cheryl Malina, USDA

School Districts

Berwick School District

Roman Siletsky, FEMA

Central Columbia School District

Elliott Levine, ANL

Northwest School District

Jerry Staroba, ANL

Hazleton School District

Tony Foltman, ANL

Nanticoke School District

Darrell Hammons, FEMA

Pennsylvania State Police

Access and Traffic Control Points

Walt Adams, DOT

Coordination

Judy Jones, FEMA

EVALUATION CRITERIA

Evaluation criteria for this exercise consisted of the planning standards contained in NUREG-0654/FEMA-REP-1, Rev. 1; the Commonwealth of Pennsylvania Disaster Operations Plan, Annex E - Fixed Nuclear Facilities, dated November, 1981; the Radiological Emergency Response Plans for Incidents at the Susquehanna Steam Electric Station for the risk counties of Columbia and Luzerne, both dated September, 1983; the Radiological Emergency Response Plans for Incidents at the Susquehanna Steam Electric Station for each of the twenty-six participating municipalities, the Fixed Nuclear Facility Support Plans for Incidents at the Susquehanna Steam Electric Station for the counties of Lackawanna, Lycoming, Northumberland, Schuylkill, Union, and Wyoming; and the Radiological Emergency Response Plans for Incidents at the Susquehanna Steam Electric Station for Berwick Area School District, Central Columbia School District, Greater Nanticoke Area School District, Hazelton Area School District, and Northwest Area School District.

EXERCISE OBJECTIVES

1. Test and evaluate the capabilities of State, counties and municipalities to interface and coordinate with each other in the following areas:

- a. Notification of Officials and Staff

The adequacy of the nuclear incident notification and alert procedures from the fixed nuclear facility to PEMA, BRP, risk counties and municipalities and support counties.

- b. Public Alert/Notification and Information

The ability of State, county, and municipal authorities to alert, notify and update the public of incidents within the plume exposure pathway emergency planning zone, to include actual use of sirens, EBS announcements, route alerting and other communications means available.

- c. Communications

The adequacy of and/or the need for all planned internal and external communications systems among and between the participants to include backup communications systems, EBS and RACES.

- d. Emergency Operations Center (State/County/Municipal)

The adequacy of the emergency operations centers with respect to security, space, comfort, staffing and function for managing responses to nuclear facility incidents.

- e. Direction and Control

The ability of key State, county, and municipal emergency response personnel and elected officials' support for the initiation and coordination of timely and effective decisions and their ability to provide resource requirements for incidents.

- f. Emergency Plans

The adequacy and capability of implementation of State, risk and support counties and municipal emergency response plans.

- g. Public Information

The adequacy of the interface of State, county and nuclear facility public information systems with the news media, to include news media briefing rooms, rumor control measures, etc.

h. Accident Assessment (Bureau of Radiation Protection)

The effectiveness of State BRP nuclear facility accident assessment system, to include adequacy of equipment, personnel staffing and competency skills with respect to reporting, dose projection, field measurement, coordination and communications.

i. Protective Measures

The capability of the State, county and municipal emergency response systems to implement sheltering or evacuation and to take actions to activate such support functions as reception centers, mass care/reception centers, decontamination stations, risk school district procedures, ambulance services, bus operations, and pickup points.

j. Radiological Exposure Control

The capability of State, county and municipal emergency response personnel to implement access control points and traffic control points, the issuance of dosimetry and KI and the record keeping and decontamination procedures.

SCENARIO SUMMARY

Projected Time	Event	Actual Time
1300	UNUSUAL EVENT (contaminated injury) Extraction Steam Line Break Extraction Steam Line Isolated Main Steam Stop Valve Steam Leak	1325
1500	Turbine Building release at ALERT level Main Steam Stop Valve Leak isolated Rod Drop Accident Reactor SCRAM (Main Steam Line Hi-Rad) Leak in drywell from main steam line Hi drywell pressure of 1.69 psig and increasing Turbine Building release continues to decrease to near background Drywell pressure 20 psig Reactor coolant activity increasing SBGT SPING alarm (Containment vent valves leaking)	1510
1730	SITE EMERGENCY Dose rates at plant boundary calculated to be at "site" level Drywell pressure trending down	1720
1930	GENERAL EMERGENCY Containment vent valves fail to open Dose rates at plant boundary calculated to be at "general" level	1925
1945	Governor directs evacuation	1950
2100	Termination	2013

DEMONSTRATION OF RESOURCES

- State, county, and participating municipal and support county EOCs
- Communications systems and equipment
- Staffing of facilities
- Prompt notification system, including siren system and EBS
- Route alerting by various municipalities
- State and Joint Media Centers, including rumor control
- Field sampling teams (water, agriculture) and equipment
- Designated reception and mass care centers
- Designated emergency worker decontamination stations
- Designated hospitals (risk and host)
- Designated access control and traffic control points
- Designated risk nursing homes
- Self-reading dosimeters (both actual and simulated), dose records, and simulated TLDS and KI for emergency workers

PREVIOUS DEFICIENCIES

The following previous deficiencies were identified at the last Susquehanna exercise, conducted March 23, 1983. They were classified into Major and Minor categories, in accordance with FEMA's procedures at that time. Each deficiency is followed by PEMA's response, a discussion of findings, as demonstrated during the May 1, 1985 exercise, and a determination of the present status. Those previous deficiencies which were not fully resolved are identified as present inadequacies.

Major Deficiencies

1. Communications systems at many municipal EOCs were found to be deficient due to a lack of adequate commercial telephone capacity. The needs for the various municipal EOCs should be determined, and adequate telephone capacity installed, in order to establish a workable communications system. Ref: NUREG-0654 II.F.

State Response:

This deficiency has not yet been resolved. A Task Force consisting of PP&L, Commonwealth Telephone, and Bell Telephone personnel has been established and is working to arrive at a reasonable solution. They have reached a point where all that remains to be resolved are the financial commitments. Work is continuing on this matter.

Finding:

Rather than upgrading the telephone capacity, a superior system, a combination radio/pager, has been installed to improve communications capability. This provides both initial notification of key municipal officials (via the pager, which can deliver a one-way voice message from the county EOC) and general communications capability (via the radio) upon activation of the municipal EOC. Unfortunately, problems with interference, mainly experienced in Columbia County, prevented the system from performing to its full potential. These development problems appear to be readily correctable. When the system is operating properly at all locations, it should significantly improve the deficient communications capability which was identified at the previous exercise. The municipal plans continue to identify telephones as the primary means of communication. Both county and municipal plans should be amended to describe and indicate the status of the new system. The need still exists for telephones at the municipal EOCs, however, and three were found to have less than one fully-workable, private telephone line, which is considered minimally adequate.

Status:

This deficiency has been addressed, but is not yet fully resolved. Interference problems experienced at some municipal EOCs with the new radio/pager system should be corrected; the county and municipal plans should be revised to identify the capability and status of the new system; and telephone upgrades should be completed at three municipal EOCs.

2. Several problems were identified regarding communications and coordination between the county and municipal EOCs. Communications procedures should be revised and/or altered to provide (1) a greater flow of information from the counties to the municipalities, (2) explicit wording of messages, and (3) verification and/or confirmation of important messages. Ref: NUREG-0654 II.E., F.

State Response:

County communication procedures have been reviewed and revised. This was completed by September, 1983. The necessary training and drills to assure that these procedures will be adhered to were completed in April, 1984.

Finding:

Capability for effective communications and coordination with the risk municipalities were satisfactorily demonstrated at the Luzerne County EOC, where officials provided adequate information to the municipalities, messages were verified, and no miscommunications were noted. Some municipalities expressed a desire for more detailed radiological and meteorological information; while it is recommended that county officials consider providing this, such information is not essential for municipal operations.

At Columbia County, despite any revised communications procedures and attendant training and drills which may have occurred, county officials failed to properly coordinate and communicate the most significant message of the exercise - the directive to the municipalities to commence evacuation. Message verification was performed, but it served only to confirm message receipt, rather than verify message content. Additional measures are needed to ensure that protective actions and other critical information messages are rapidly transmitted to, and understood by, the municipalities.

Status:

Luzerne County, resolved. Columbia County, not resolved.

3. Operations management at some of the municipal EOCs suffered from lack of assertive leadership and insufficient training of staff. Additional training, greater familiarity with plans and procedures, and further experience should improve this situation. A training program should be provided for the staffs at Mifflin, North Centre, Conyngham, Nescopeck and Sugarloaf Township, and Nescopeck Borough aimed at improving operations management. Ref: NUREG-0654 II.O.

State Response:

The training necessary to assure that all municipal emergency management coordinators are thoroughly familiar with their duties and responsibilities was completed by April, 1984. Such training continues to be provided to assure that all personnel involved remain thoroughly familiar with their duties and responsibilities.

Finding:

An extensive training program was conducted by the utility for municipal EMCs and their staffs. As a result, operations management at the municipalities was generally very good. The local coordinators and their staff members were uniformly well-trained and knowledgeable, as evidenced by the dearth of training-related inadequacies and recommendations.

Status:

Resolved.

4. A demonstration of State Police-manned access and traffic control points was largely a failure due to the lack of a specific activation procedure. A workable procedure for activating these control points, agreeable to PEMA, the county EMAs and PSP, should be developed and future exercises should include a coordinated demonstration of access and traffic control. Ref: NUREG-0654 II.J.

State Response:

The Pennsylvania State Police (PSP) have corrected what was obviously an administrative mixup regarding the manning of access and traffic control points. They have demonstrated quite well that this mixup has been corrected by their activities in subsequent exercises.

Finding:

The PSP demonstrated all aspects of their procedures for establishing access and traffic control, including their activation procedures, which are related to the emergency classification level. The activation procedure was found to be well-organized, effective, and thorough.

Status:

Resolved.

Minor Deficiencies

1. Eleven of the twelve municipal EOCs observed are located within the 10-mile EPZ, but none provided inherent structural protection from exposure to radiation. The municipal plans state that, in the event of evacuation, the governing bodies will relocate to alternate sites, to be identified by the respective counties. The plans do not address the relocation of the emergency management agencies, and this situation was also ignored during the exercise. The municipal plans should be revised to provide for relocation of municipal EOC operations, alternate EOC locations should be specifically identified, and future exercises should include a demonstration (or simulation) of such relocation. Ref: NUREG-0654 II.H.

State Response:

As indicated in our June 21, 1983 letter, the municipal plans will be revised to provide direction for EOC relocation with EOC alternate locations identified. This will be demonstrated during the next exercise for SSES.

Finding:

The plans for the municipalities which have EOCs located within the 10-mile EPZ have been revised to specify alternate EOC locations, and provide for evacuation to the alternate sites. Municipalities simulated such evacuation as part of the exercise.

Status:

Resolved.

2. Deficiencies were noted in facilities and/or resources at most of the municipal EOCs. A common problem, for example, was the lack of capability for 24-hour per day operations. Although correction of the noted deficiencies would be beneficial, most are not serious enough to hamper operations. However, one problem, lack of capability for backup power, is also common to many EOCs, and could result in significant disruption of operations. All municipal EOCs should obtain an emergency generator, or similar source of backup electrical power.
Ref: NUREG-0654 II.H.

State Response:

An assessment of available emergency generators in Luzerne and Columbia counties has been made. There are sufficient generators available to meet municipal needs during emergency conditions. These generators are listed in the respective county resource manual.

Finding:

A lack of readily-available emergency generators continues to be a problem for at least eleven municipal EOCs. Although this response states that sufficient generators are available, the resource lists referred to are not included in the county plans. The exercise did not provide sufficient evidence to confirm the availability of the generators, either, as fulfillment of municipal requests for generators (and other equipment) was simulated. The response also raises a number of questions concerning who owns the equipment, where it is located, how it will be delivered, and how long the delivery will take. It is recommended that each municipal EOC be provided with an emergency generator on a permanent basis. If this is not practical, then procedures addressing the questions noted above should be established for making the generators available.

Status:

Not resolved.

3. EOC activation and staff mobilization were delayed at many municipal EOCs due primarily to conflicts between the regular jobs of volunteer staff members and their emergency duties. Full staffing was eventually achieved at such locations, and this is not considered a serious problem. However, Beaver, Mifflin, Conyngham and Huntington townships experienced more serious mobilization problems, including deficient mobilization procedures, lack of full staffing for the initial shift, and failure to demonstrate capability for a full second shift. These deficiencies should be corrected. Ref: NUREG-0654 II.A., E.

State Response:

Full municipal staffing was not achieved in all cases due to the fact that this was an exercise and all staff personnel, especially volunteers, were not able to leave their work for exercise purposes. These people would be available, however, if there was an actual emergency. Where additional staff personnel are needed to provide 24-hour staffing capability, such personnel have been included in the plans. Training and drills for such personnel were completed by April, 1984.

Finding:

Contrary to the information contained in the response, the plans for twenty-six of the twenty-seven risk municipalities failed to demonstrate the capability to man two full shifts for all EOC positions (only the Nescopeck Township plan indicates this capability). Staffing capability demonstrated during the exercise was somewhat better, as fourteen municipalities did not demonstrate full, first-shift staffing, and/or the capability for a full second shift. This has been noted as an Area Requiring Improvement, rather than a Deficiency, because there was no evidence that the absence of one or two staff members seriously impaired the capability to protect the public health and safety, as participating staff members were able to perform the functions of those absent. The recommended corrective actions for the municipalities are as follows: (a) recruit and train additional staff members, as necessary, to establish two-shift capability for all specified staff positions, or (b) eliminate some staff positions which do not warrant exclusive manning, and reassign the functional responsibilities to other staff positions, or (c) implement a combination of (a) and (b).

Status:

Not resolved.

4. There was no evidence of any direct involvement by the Luzerne County Commissioners during the exercise. As they were responsible for making decisions affecting the safety and protection of county residents, they should participate in future exercises. Ref: NUREG-0654 II.A.

State Response:

Luzerne County Commissioners have always demonstrated their involvement in actual emergencies in the county. Unfortunately, previous commitments prevented them from participating in this exercise.

Finding:

Luzerne County Commissioners participated in the EOC activities throughout the exercise.

Status:

Resolved.

5. Vehicles used for route alerting at Beaver, Mifflin, North Centre, Conyngham and Nescopeck townships were not equipped with public address systems or bullhorns for broadcasting instructions to the public. In order to perform effective and efficient route alerting, all municipalities should be provided with such equipment. Ref: NUREG-0654 II.E., J.

State Response:

The public address equipment or bullhorns is an unmet requirement. The list of unmet requirements consists of priority items of equipment that will be made available during an emergency. Future funding to reduce this requirement may become available through the use of FEMA's warning and communications systems program allocation, a part of FEMA's Integrated Emergency Management System.

Finding:

Since the last exercise, FEMA's technical review contractor has evaluated the primary public alert and notification system (the siren system) and determined that it meets the required performance criteria. A secondary alert system, such as route alerting, is therefore not required in order to comply with FEMA's regulations. It follows that inadequacies involving lack of the physical means to perform such a system cannot be considered to be situations requiring correction.

Status:

This situation is currently considered a nondeficiency.

6. Completion of alert routes in some municipalities took too long to be considered prompt, and at least one community had a variance of 55 minutes between completion of the shortest and longest routes. Municipalities should review the route times when driven at a realistic speed (5-10 mph in residential areas) and make adjustments to provide the shortest time possible. It is recommended that 45-60 minutes be considered as a prudent maximum. Ref: NUREG-0654 II.E., J.

State Response:

Municipal plan route alert times have been reviewed and appropriate revisions made. These revisions were completed in January, 1984.

Finding:

See Finding for Minor Deficiency 5, above.

Status:

This situation is currently considered a nondeficiency.

7. Emergency information, particularly for transients, should be developed and distributed. Ref: NUREG-0654 II.G.

State Response:

Emergency information for transients will be developed and available for demonstration at the next SSES exercise.

Finding:

Emergency information that has been developed and distributed since the previous exercise has been evaluated in plan reviews and found to be adequate.

Status:

Resolved.

8. A schedule should be established and implemented for the regular calibration of the radiological monitoring equipment used by the BRP field team. Ref: NUREG-0654 II.H.

State Response:

The radiological monitoring equipment used by the BRP field team is calibrated according to a regular schedule. This was an administrative mixup. It has been corrected as has been demonstrated by BRP in subsequent exercises.

Finding:

BRP field teams were not demonstrated in this exercise, but the teams' capability and procedures, including calibration schedules, have been evaluated in recent exercises at other nuclear facilities, and have been found to be adequate.

Status:

Resolved.

9. A procedure for coordination between the utility and the risk county EMAs regarding the evacuation of non-essential personnel should be established and demonstrated in future exercises. Ref: NUREG-0654 II.J.

State Response:

Procedures to evacuate non-essential SSES personnel have been revised and are in place. This was accomplished by September, 1983.

Finding:

The procedures referred to in the response are not contained in the risk county plans. However, coordination of the onsite evacuation between Luzerne County and the utility was demonstrated during the exercise and found to be adequate.

Status:

Resolved.

10. The evacuation support activities performed by the counties and municipalities, such as providing bus and ambulance resources, were largely simulated. Although there is nothing inherently unacceptable with simulating such activities, the level of detail was not sufficient to provide an especially convincing demonstration. A more realistic demonstration (or simulation) should be provided in future exercises. Ref: NUREG-0654 II.N.

State Response:

Demonstration of evacuation support services for exercises only is both costly and hazardous, particularly when these services must be obtained from some distance. On a day-to-day basis, the availability of these responses is demonstrated during school snow days and localized emergency drills. Availability of funds for exercises would enable demonstration of these services.

Finding:

The school districts and risk counties have primary responsibility for making transportation arrangements in the event of an evacuation. Demonstrations for obtaining bus and ambulance transportation included contacting the providers of these services to determine actual availability at the time of the exercise. This is the type of simulation which was expected.

Status:

Resolved.

11. The radiological monitoring teams at some of the mass care reception centers should receive additional training in radiological monitoring and decontamination. Locations where deficiencies were noted include the Fred Diehl School, Bucknell University, Tunkhannock High School, and the Fair Lane Village Mall. Ref: NUREG-0654 II.J., 0.

State Response:

The training in Union County regarding radiological monitoring and decontamination was completed by August, 1983. Similar training in Schuylkill County was completed by November, 1983. Montour County, as mentioned in our June 21, 1983 letter, is capable of performing its decontamination mission.

Finding:

Although some of the previously-identified locations were not activated in this exercise, all six support counties and both risk counties demonstrated, to some extent, the capability for monitoring and decontaminating evacuees and emergency workers (an exception is the Columbia County emergency worker decontamination, which was not evaluated. However, Columbia County was not deficient in this regard at the previous exercise). No deficiencies were noted regarding radiological monitoring and decontamination procedures at any of the evaluated locations.

Status:

Resolved.

12. Some municipalities did not have written information concerning non-ambulatory residents. All municipalities should identify non-ambulatory individuals and compile written information concerning their location and special needs. Ref: NUREG-0654 II.J.

State Response:

The non-ambulatory lists for all municipal RERPs were completed by August, 1983. These lists are updated semi-annually by the municipal coordinator.

Finding:

Only two of the participating municipalities were deficient with regard to written lists of mobility impaired residents. The recommended corrections are for South Centre Township and Union Township to prepare and maintain such lists, and for Union Township, in addition, to take more definitive steps to confirm that there are no hearing-impaired and mobility-impaired residents.

Status:

Not resolved for South Centre Township and Union Township. Resolved for other municipalities.

13. The emergency workers at many municipal EOCs were not adequately familiar with maximum radiation doses and when and where to report for monitoring and decontamination. Additional training should be provided to the staff members, and future exercises should demonstrate these procedures. Ref: NUREG-0654 II.K.

State Response:

All training for emergency workers was completed by April, 1984. This type of training continues to be offered to maintain a high level of effectiveness.

Finding:

The training which has been conducted has evidently been effective, as only one municipal radiological officer (a recent appointee) was identified as needing training. All other radiological officers and EOC staff were found to possess at least adequate knowledge and familiarity with the use of dosimetry and other radiological exposure control considerations.

Status:

Resolved.

OBJECTIVES TO BE ACHIEVED

The following objectives have not been tested:

- Demonstrate the adequacy of reentry/recovery decision process.
- Demonstrate the ability of the EOF to make reentry recommendations based upon dose assessment.

The following objectives were tested, but were not effectively achieved due to noted inadequacies:

- Demonstrate that internal message and information flow (collection, consolidation, and dissemination) in the EOCs ensures coordination with all affected agency representatives.
- Demonstrate the ability to establish and operate rumor control in a coordinated fashion.
- Demonstrate that EOCs can be staffed in a timely fashion.
- Demonstrate the existence and adequacy of emergency facilities and equipment to support the emergency response.

STATE-LEVEL ACTIVITIES

State EOC

I. Activation and Staffing

In accordance with the plan, activation of PEMA's EOC was initiated by receipt of the Alert notification (at 1522) from BRP. After verification, appropriate staff were notified and mobilized through the use of written call lists. As this occurred during normal working hours, the PEMA staff were on duty at PEMA Headquarters. The plan specifies that during non-working hours, a duty officer will receive the notification call, and initiate staff notification.

Representatives from other State agencies and organizations were called in, and the EOC was fully activated, with virtually complete staffing, by about 1630. By 1700 the remainder of staff members were in place, and the following agencies/organizations were represented: PEMA, BRP, Health Department, Commerce Department, Transportation Department, Agricultural Department, Public Welfare Department, Insurance Commission, Department of Community Affairs, Department of Aging, Department of Labor and Industry, Department of Environmental Resources, Department of Military Affairs, Department of General Services, Governor's Energy Council, Public Utilities Commission, State Police and American Red Cross.

II. Emergency Operations Management

The PEMA Operations Officer was effectively in charge of coordinating the State's emergency response activities during the exercise. He was competently assisted by the Shift Leader, who directly oversaw the activities of two liaisons assigned to coordinate with, respectively, the risk counties of Columbia and Luzerne. At 1600, PEMA and BRP exchanged liaisons; the BRP representative at the EOC was also directly under the oversight of the Shift Leader. Periodic briefings of the entire staff were performed, as appropriate, by both the Operations Officer and Shift Leader. Agency representatives were involved in decision making and other activities as necessary. Copies of plans, procedures and checklists were available and consulted. Message handling and routing was very efficient. In addition to the message forms, a message journal was maintained, which served as a log of internal and external executive-level messages, and included the message text (or summary). The Shift Leader maintained a written record of telephone communications, and this information was included in the message journal.

EOC security was established during the Alert phase, enforced by a Capitol Police Officer. PEMA issued I.D. badges, and these were checked throughout the exercise as staff members circulated among the EOC rooms.

Although the Governor was not directly represented at the EOC during the exercise, the Lt. Governor's office was informed of significant actions and changes in status. PEMA's Deputy Director played the role of the Governor for exercise purposes. These included issuance of a Proclamation of Disaster Emergency within the risk and support counties, and the decision to implement a general evacuation. The disaster declaration permitted the affected jurisdictions to suspend normal procurement and spending procedures, and authorized activation of the National Guard.

The times for the occurrence of significant events at the PEMA EOC are as follows:

		(Declared by Utility)
Receipt of Utility's Unusual Event Declaration	1335	(1325)
Receipt of Utility's Alert Declaration	1522	(1510)
Receipt of Utility's Site Area Emergency Declaration	1748	(1720)
Governor's Proclamation of Disaster Emergency	1830	----
Receipt of Utility's General Emergency	1935	(1925)
Governor's Decision to Evacuate	1950	----
Activation of Alert and Notification System, Evacuation Implementation	1955	----
Exercise Termination	2013	----

The above schedule reveals an excessive delay (of almost 30 minutes) between the utility's Site Area Emergency declaration, and notification of PEMA by BRP. It was several more minutes before PEMA notified the counties, and the counties notified the municipalities. The cause of the delay cannot be determined. The time of BRP's receipt of the notification from the utility was not noted by the Federal observer, and the delay was not noted in the EOF observer's report. PEMA and BRP should investigate this matter in coordination with the utility to determine the origin of this delay, and implement corrective actions, if appropriate.

The above schedule also demonstrates that State officials allowed only five minutes between the time of the Governor's evacuation decision, and the time it was to commence. Within this brief span, PEMA had to notify the counties of the decision and instruct them to activate the Alert and Notification system; each county had to convey this same information to all risk municipalities, and confirm their receipt of the messages; and the appropriate county personnel had to be directed to sound the sirens, activate EBS, and go on the air with an appropriate emergency message. To their credit, the participants completed these actions within the allotted five minutes.

It is well known to Pennsylvania authorities that FEMA's NUREG regulations specify that no more than fifteen minutes are to elapse between the time of a protective action decision, and the time that the public is alerted and notified as to that decision. In the past, failure to meet this deadline has resulted in A-level deficiencies at REP exercises for other Pennsylvania nuclear facilities. At Susquehanna, however, the State and local authorities have successfully demonstrated that, should it be necessary, the capability exists to accomplish this in as little as five minutes. FEMA is now in the ironic position of recommending that, if the situation permits, State officials allow several more minutes for this activity than provided during the exercise. This would permit more thorough coordination with the risk jurisdictions, and allow time to resolve any questions or misunderstandings which authorities in those communities might have concerning the protective actions.

Emergency actions were effectively coordinated, where appropriate, with the State EOC staff, Media Center, PEMA's Eastern and Central Area Offices, BRP, and the risk counties. Plant status information was conveyed in the form of Situation Reports, which included meteorological data and dose rates. Progress of the risk counties on completing their major responsibilities was monitored through the Site Area Emergency stage by the use of a primary action board, on which were recorded the times, as reported to the county liaisons, for completion of significant actions. This served as a prompt to the counties to perform activities which they may otherwise have overlooked. Unfortunately, operations at PEMA slacked off after the staff confirmed that the counties had activated the alert and notification system, and the primary action board was not maintained throughout the General Emergency, to the conclusion of the evacuation events. As a consequence, Columbia County's failure to notify the municipalities to evacuate remained uncorrected at the time of exercise termination. It is recommended that the PEMA county liaisons continue to monitor the counties' primary actions throughout the General Emergency to assure that all local protective action-related responsibilities are implemented in a timely manner, and satisfactorily concluded.

In a related situation, PEMA terminated the State-level participation somewhat early, less than 20 minutes after the time specified for implementation of the evacuation. By 2002, the county liaisons confirmed that both Columbia and Luzerne counties had activated the alert and notification system on schedule, and had no unmet needs to report. Activity at the PEMA EOC slacked off, and at 2013 PEMA officials concluded that State objectives had been demonstrated. In notifying the counties, PEMA advised them to continue play until local objectives had been demonstrated. While this did not occur in Columbia County, Luzerne County did maintain operations until the risk municipal EOCs had simulated relocation to the designated alternate sites.

PEMA's decision to terminate came at the time when the local jurisdictions were (or should have been) at the peak of their evacuation activities. While the decision is not considered a deficiency, it is recommended that, in future exercises, at least a minimal staff remain at the State EOC until all local actions have been completed. This would maintain a capability to continue coordination and respond to requests for unmet needs.

III. Facilities

PEMA has reconfigured the EOC layout somewhat since the last REP exercise observation, and further improvements are planned. The State EOC remains an excellent facility in terms of space, furnishings, equipment, lighting, telephones, etc. Status boards were maintained, and all appropriate EPZ maps were either posted or available.

IV. Communications

The PEMA EOC has excellent communications capability, with numerous redundant and secondary systems for communicating with action locations, in the event the designated primary system(s) fails. During the exercise, the primary system for communicating with the PEMA Eastern and Central Area Offices, and the two risk counties, was dedicated phone lines. Conferencing was available on this system, with the capability of linking any or all of these locations. Backup was provided by commercial telephone and radio. During the exercise, the dedicated line to Columbia County was inoperable through the Alert stage, and commercial phone was substituted without problem. This line was repaired at about 1720, and was used for the remainder of the exercise.

Communications between PEMA and BRP Headquarters were facilitated by a separate dedicated phone system, with commercial phone designated as a backup. The State EOC was linked to the facility via a hot line system. In accordance with the plan, this was used for direct notification of PEMA at the initial (Unusual Event) and General Emergency classification.

Transmission of hard copy from the State EOC was available via teletype. This was used during the exercise to convey hard copy of telephone communications and news release text to the risk counties, PEMA Area Offices, and Joint Media Center in Berwick. The effectiveness of this system was compromised by delays of up to an hour between the time messages were entered, and the time they were sent. Some means should be established to provide more immediate availability of these hard copy messages at the specified receiving locations.

V. Dose Assessment and Protective Action Recommendations

BRP has primary responsibility for performing dose assessment and recommending protective actions to PEMA, for final determination by the Governor. BRP's activities regarding this responsibility are discussed elsewhere in this report.

PEMA received BRP's recommendation for a general evacuation of the entire ten-mile EPZ at 1938. As the Operations Officer began discussing the situation with the "Governor," the Shift Leader contacted the risk counties to coordinate a mutually agreeable time for implementation. The Governor's final decision to proceed with the evacuation was reached at 1750, twelve minutes after receiving BRP's recommendation.

VI. Public Alerting and Instruction

As specified in the plan, PEMA's role in alerting and notifying the public during the exercise was one of coordinating the siren-sounding and EBS activation with the risk counties, which are responsible for actually performing these actions. As noted previously, State officials allowed only five minutes in which to complete this coordination, as the simulated Governor's evacuation decision at 1950 included instructions to implement the evacuation at 1955. Despite this very limited time frame, PEMA successfully completed the necessary coordination, and the sirens and EBS were activated by the risk counties on schedule. Although providing such a limited time was apparently not the intention of State officials, PEMA did demonstrate that, if necessary, the coordination needed to activate the alert and notification system at Susquehanna can be accomplished in as little as five minutes. But as the brisk pace allowed no margin for question or clarification on the part of the counties and municipalities, the possibility for errors in transmitting or interpreting instructions was great (this may have been the cause of Columbia County municipalities not being directed to evacuate). It is recommended that, where the situation permits, additional time be allotted for this function, to allow for more thorough coordination. This is also discussed in the Emergency Operations Management section.

The preparation and distribution of PEMA news releases occurred at the State Media Center. These activities are described elsewhere in this report.

VII. Protective Action

PEMA and the other State EOC representatives adequately demonstrated their roles in implementing the evacuation to the extent required by the scenario.

Appropriate actions were taken to control access to the EPZ by road, rail and air. At 1807, during Site Area Emergency, the Pennsylvania State Police (PSP) liaison officer was directed to begin activating the Access Control Posts and Traffic Control Posts (ACPs and TCPs), as specified in the plan (note - this activity was simulated; the actual ACP/TCP demonstration occurred earlier in the day, out-of-sequence, and is described under the PSP heading). Previously, during the Alert phase, the Department of Transportation, Bureau of Aviation simulated notifying the Federal Aviation Administration, and requesting a restriction of air space. The Public Utility Commission, through its Bureau of Rail Transportation, simulated notifying railroads operating in the risk counties, and advised them of the emergency situation.

The State's primary role in implementing protective actions is to support the counties, and provide unmet needs, such as buses, ambulances, manpower, or mass care supplies, which are beyond the capability of the counties to supply. The simulated Governor's Proclamation of Disaster Emergency, declared at 1830, authorized all State agencies to provide such assistance, and provided for activation of the National Guard. Although PEMA questioned the risk counties throughout the exercise regarding unmet needs, no such requests were received from the counties prior to exercise termination.

Appropriate actions were implemented to protect the public within the fifty-mile ingestion zone. On the advice of BRP, the Department of Agriculture simulated dispatching agents to collect samples of milk, feed, water, and forage for analysis by BRP. This precautionary measure occurred at about 1820, following the Site Area Emergency declaration, and the utility's report that a release had occurred. Shortly after, farmers within the ten-mile EPZ were advised to shelter livestock, and begin using stored feed and water. Farmers beyond ten miles were advised to begin protecting feed and water.

The Department of Environmental Resources simulated notifying water sampling teams at 1615. (For demonstration purposes, however, actual deployment of both water and milk sampling teams occurred out-of-sequence. Field team operations are evaluated under the Field Sampling Teams heading.)

Further instructions for farmers regarding livestock sheltering were issued by the Department of Agriculture following the evacuation announcement. Residents within the fifty-mile ingestion zone were provided appropriate advice regarding the use of fresh produce, as well as unpackaged, pre-packaged, and frozen foods. All food processors and packagers were notified to take precautions against the possible contamination of their products.

Messages describing these actions were directed by the Department of Agriculture to appropriate State agency representatives and the risk counties; the actions were announced to the general public via news releases.

VIII. Radiological Exposure Control

No distribution of dosimetry or KI for use by emergency workers is to occur at the State EOC, but instructions regarding some aspects of radiological exposure control were provided.

At the time of the Site Area Emergency announcement, BRP recommended to PEMA that emergency workers be issued KI as a precaution. PEMA issued instruction to the appropriate organizations to distribute KI, along with a reminder that the KI was not to be used without the authorization of the Secretary of Health. PEMA also advised the Health Department representative at the EOC that the Secretary may be called upon for such approval. However, no final recommendation regarding KI was provided by BRP, and its use was never authorized for emergency workers. Although BRP officials were primarily at fault for failing to notify PEMA of their decision, PEMA should have been aware of the situation, and requested a recommendation when none was provided.

IX. Media Relations

These activities are evaluated under the State Media Center heading.

X. Recovery and Reentry

Demonstration of recovery and reentry was not an exercise objective.

State EOC Deficiencies/Recommendations

1. There was a delay of almost 30 minutes between the utility's Site Area Emergency declaration, and notification of PEMA by BRP. The two State agencies, in coordination with the utility, should investigate this matter to determine the origin of the delay, and implement corrective actions, if appropriate.
2. State officials allowed only five minutes between the time of the Governor's evacuation decision, and the time it was to commence. Due to the complexity of events, culminating in the alert and notification of the public, which must occur during this period, it is recommended that State officials utilize more of the allowable 15 minutes for this activity.
3. PEMA did not continue monitoring risk county primary response actions beyond the Site Area Emergency stage. As this activity may have corrected a serious deficiency in Columbia County, it is recommended that the county liaisons continue monitoring county activities to assure the completion of all local protective action events.

4. PEMA terminated State-level participation in the exercise at the time when the counties and municipalities were (or should have been) at the peak of their evacuation activities. It is recommended that PEMA maintain at least minimal staffing until all local exercise activities have been completed.
5. Transmission via teletype of hard copy of telephone communications and news release text to the county and PEMA area EOCs and Joint Media Center was delayed up to an hour, thus compromising its effectiveness. A means should be established for providing more immediate availability of these hard copy messages at the receiving locations.

State Media Center

I. Activation and Staffing

Organizations represented by Acting PIO's included the Pennsylvania State Police, the Department of Aging, the Department of Agriculture, the Department of Insurance, the Bureau of Corrections, and the Department of Transportation. An Acting Director of Press Operations was appointed in the absence of the Governor's Press Secretary, who was at the Joint Media Center (JMC) in Berwick. Mobilization procedures were demonstrated and staffing was completed by 1700.

The PIO's present displayed adequate training and knowledge. The Director, who allocated duties among the PIOs, displayed an excellent grasp of media functions and press operations, and maintained continuous coordination with the JMC.

Capability for 24-hour staffing was demonstrated by double staffing.

Adequate clerical help was available for message handling, duplicating and support activities in the press area, message center and operations center.

II. Facilities

The State Media Center is colocated with PEMA's Emergency Operations Center (EOC) in Harrisburg. This facility provided adequate furnishings and excellent lighting for TV crews. A separate news center room provided reporters with access to typewriters, teletypes, copiers, tape recorders and tape-caster services. Two phone lines were designated for media use. During an actual emergency, space would be provided for PIOs to confer and conduct interviews. Maps and displays were not exhibited in the Media Center.

Backup power was available in the form of generators in the State EOC; however, they were not demonstrated.

III. Communications

Telephone and telefax were the primary means of communication with the Joint Media Center and the county EOCs.

IV. Informational Functions

No media kits were provided during this exercise at the State EOC Media Center, and briefings were conducted on a "simulated" basis, as there were no media representatives in attendance. There were two briefings, at 1815 and 1915, both accurate and complete. Technical jargon was avoided.

Acting PIOs were located in the same area and exchanged information with each other to avoid duplication. PIOs included "specialists" (from agencies directly involved in State response), and "generalists" (from agencies not directly involved but effected by it). Media Center people were in constant contact with agency command personnel who were located in the operations area. There was good coordination in releasing information.

Radio and TV broadcasts were not monitored, as the emergency did not directly effect the Harrisburg area.

V. Public Instruction

A total of 13 news releases, covering all major events, were prepared for distribution. They were generally clear and appropriate to the situation.

Prescribed, as well as original messages were used for releases. According to the Director, prescribed messages were used as guidelines. In keeping with the intent of the State and county REP plans, the PEMA releases did not include detailed information or instructions, such as identifying evacuation routes or describing how to obtain transportation. This level of detail is to be provided by the county PIOs, who are responsible for preparing EBS messages. Where appropriate, the PEMA releases advised residents to monitor local radio, television and EBS stations for further developments and details.

VI. Rumor Control

Rumor control numbers were activated at 1715. The 800 hot line, or "Action Center," operated out of the Governor's office. During the exercise, only one person was manning the Action Center. In an actual emergency, the observer was informed that supplemental lines and staffing would be augmented as required. The Action Center would be capable of handling 3,000 calls per day, and would be operated on a 24-hour per day basis.

Press releases were hand-carried from the State EOC Media Center to the Governor's Office in the Capitol to provide the operator with a basis to answer questions.

State Media Center Deficiencies/Recommendations

None identified.

Bureau of Radiation Protection Headquarters

I. Activation and Staffing

The initiating call, the Unusual Event notification, was received at 1325 from the utility. Since this is the middle of the normal workday, BRP was already fully staffed. Notification was verified by voice recognition. A nuclear engineer was already at the plant on other business, so the EOF was immediately staffed with a BRP representative. This is normally a two hour drive from Harrisburg. The staff demonstrated more than adequate training and knowledge, and there were sufficient personnel for 24-hour coverage.

II. Emergency Operations Management

As designated in the plan, the BRP Director was in charge. He held periodic meetings to update the staff on the situation. Message handling and record keeping was done efficiently. Appropriate actions to coordinate emergency activities were simulated at the appropriate times.

III. Facilities

BRP is located in central Harrisburg, so there are adequate public facilities (as well as employees' homes) available to support extended operations. Food is available in the building and a refrigerator is in the BRP office. Facilities are adequate for all foreseeable operations in connection with the Susquehanna Plant. Adequate maps of the EPZ are available; a large map was posted for the purpose of dose assessment. Other maps of population, evacuation routes, etc. are available in a copy of the emergency plan kept in the office.

IV. Communications

Dedicated land lines, commercial lines and a radio link are available to the EOC and the EOF. The dedicated line to the EOF was out of service at the beginning of the exercise, so the commercial backup was used. The dedicated line was repaired at about 1715, during the Alert stage, and was used for the remainder of the exercise. No communication with contiguous states was needed for this exercise. Radio links are used to communicate with monitoring teams. Since no teams were sent out, this communication was not demonstrated. In general, BRP communication facilities demonstrated during the exercise were adequate.

V. Dose Assessment and Protective Action

Dose assessments were derived from data generated by the plant. Hard calculations were demonstrated by BRP. These were checked for accuracy and done correctly. The Evacuation recommendation was based primarily on plant conditions. The plume was correctly defined. Decisions were

based on EPA's PAGs and were reached for both plume and ingestion hazards. All appropriate factors were considered and were reviewed and updated as conditions changed. BRP's recommendation for emergency workers to take KI was simulated, but PEMA was not notified. The dose assessment function was adequately demonstrated and recommended protective actions were consistent with the plan and with Federal guidance.

VI. Radiological Exposure Control

This item was not exercised by BRP since field monitoring teams were not dispatched.

VII. Recovery and Reentry

This was not an exercise objective.

Bureau of Radiation Protection Headquarters Deficiencies/Recommendations

1. Although BRP officials made a decision to recommend that emergency workers be authorized to take KI, they failed to inform PEMA. BRP officials should be instructed to notify PEMA of all protective action recommendations regarding emergency workers and the general public, so that they may be properly implemented.

Susquehanna Emergency Operations Facility

I. Activation and Staffing

According to the REP plans, the Bureau of Radiation Protection (BRP) provides technical information and recommendations to PEMA, which, in turn, presents these recommendations to the Governor for his protective action decision. One BRP nuclear engineer and one alternate are assigned to each nuclear power plant site in Pennsylvania. Upon activation of the utility's Emergency Operations Facility (EOF), the assigned nuclear engineer is dispatched to the site. The supervisor (senior nuclear engineer) may also go to the site at his discretion.

During the exercise, the BRP representatives at the EOF provided an independent assessment of plant conditions and technical information as needed to BRP headquarters office in Harrisburg, Pennsylvania. Twenty-four hour staffing was demonstrated by double staffing; however, emergency response from Harrisburg to the EOF was not demonstrated, as the BRP personnel were prepositioned at the EOF prior to activation. The representatives were knowledgeable and demonstrated that they understood their roles and responsibilities, but they did not have copies of their emergency plans and procedures.

II. Facilities

The space and equipment provided at the EOF were adequate for state response personnel to perform their emergency functions.

III. Communications

The utility provides both a technical and radiological dedicated phone line from the Emergency Response Facilities (ERFs) to BRP's Harrisburg office. During the early stage of the exercise, these primary communication lines were not operable. The backup communication system, commercial telephone, was used instead. The utility reported that both lines had been checked the previous day and were operational. Corrective actions were initiated by the utility and a telephone service person was able to restore service to the radiological phone line. Communications were switched back to the primary system at approximately 1715.

The dedicated phone line for technical communications was never placed back in service and commercial phones were used throughout the exercise. Conferencing was available through the Harrisburg office, according to BRP personnel, but was not demonstrated as part of the exercise.

IV. Informational Functions

Neither the utility nor BRP representatives at the EOF are responsible for clearing or composing press releases. Public information activities are performed at the Joint Media Center in Berwick or at PEMA's Media Center in Harrisburg.

V. Rumor Control

Rumor control was not demonstrated at the EOF.

VI. Protective Action Recommendations

BRP personnel perform independent dose calculations at BRP Headquarters in Harrisburg. The EOF representatives are not responsible for this activity.

Protective Action Recommendations were developed by the utility after consulting with the BRP representative. These recommendations were then forwarded to PEMA. The utility provided both radiological and meteorological data via status boards to all offsite representatives (BRP, NRC, etc.). Field monitoring data was also presented in this fashion, however, raw radiological field data (expressed in units of micro Curies/cc) was posted, without being converted into a more useful dose rate format. Furthermore, status boards were not kept updated. This hindered the BRP representatives in the EOF in making comparisons between field measurements and dose projections of iodine concentrations. The utility's recommendations were based on dose projections, EPA exposure guidelines, confirmatory field measurements, and an understanding of the Pennsylvania evacuation policy. The utility recommended a full 360 degree, ten-mile EPZ evacuation at 1935. The BRP representatives concurred in this recommendation based on the ongoing release.

Emergency Operations Facility Deficiencies/Recommendations

1. BRP representatives at the EOF did not have copies of their plans and procedures. It is recommended that the EOF staff members have the BRP plans and procedures available for reference.
2. Field monitoring data presented to offsite officials was not in a useable format; and hindered confirmation of projected dose calculations; furthermore, status boards used to convey this information were not kept up-to-date. It is recommended that the utility convert the field data into a format which will facilitate comparisons with iodine dose projections, and present this information in a timely manner.

Field Sampling Teams

I. Field Team Mobilization

The activation of the agricultural and water sampling teams occurred out of sequence with the scenario. Mobilization procedures were not demonstrated, as both teams were prepositioned. The Department of Environmental Resources water sampling team was dispatched from the Shickshinny Municipal Building and the Department of Agriculture's sampling team was deployed from the Luzerne County Courthouse. Sampling equipment was packed for rapid deployment, and both teams arrived at their sampling points in a timely manner.

II. Field Team Equipment

Both teams had the required equipment to take milk, water and vegetation samples. The vehicles used by the teams were adequately equipped to support their emergency activities.

III. Field Team Technical Operations

The water sampling team visited five monitoring points, collecting water samples from municipal surface water supplies within one to four miles of the plant.

The agricultural sampling team visited two monitoring points, collecting milk, water, feed and vegetation (hay) within 30 and 40 miles from the plant and within the 50-mile ingestion pathway EPZ. Both teams exhibited the ability to use proper sampling techniques. All samples were properly bagged, marked, logged and sealed. Both teams were familiar with the region to which they were dispatched and were able to find their sampling points without any difficulty.

Water samples were taken to Wilkes-Barre and transferred to the Pennsylvania Department of Environmental Resources, Bureau of Laboratory Services in Harrisburg, Pennsylvania for analysis. Water samples would be analyzed for gross alpha, beta, tritium and gamma concentrations. The agricultural samples were delivered (simulated) to a mobile field laboratory van.

IV. Field Team Communications

Primary communication between the DER water sampling team and the DER Regional Director in Wilkes-Barre was via DER radio. Vehicles are equipped with a mobile multi-band radio. Due to the mountainous terrain of the EPZ, some dead spots were found, necessitating the use of a repeater to maintain contact with the Regional Director.

Primary communication between the agricultural sampling team and the Department of Agriculture would be via PEMA radio. Since the issuance of the radio by PEMA was simulated, communications with the field team was not demonstrated.

V. Field Team Exposure Control

Both sampling teams demonstrated an adequate knowledge needed for exposure control. However, the actual distribution of the issuance of self-reading dosimeters, TLDs and KI tablets was simulated. All team personnel were aware of the maximum allowable dose, as well as procedures to follow if there is a need for decontamination. Also, all team members were aware of the procedures for the issuance and use of KI.

Field Sampling Teams Deficiencies/Recommendations

None identified.

Joint Media Center - Berwick

I. Activation and Staffing

The Joint Media Center in Berwick was well-staffed by professional public information personnel representing the SSES and the Pennsylvania Emergency Management Agency. Adequate clerical help was present at all times following the center's activation at 1550, and a call-down list indicated that a twenty-four hour staffing capability exists. The PIO's displayed adequate training and knowledge.

II. Facilities

The Joint Media Center provided excellent accommodations, with sufficient space and equipment for utility and State staff as well as for the media representatives. It was obvious that much planning and funding went into the development of the Berwick Joint Media Center.

Visual displays were of high quality and sufficient to assist media representatives in the preparation of their news stories.

The Media Center is within the ten-mile EPZ, being located only 5.5 miles from the facility. Contingency plans for evacuation due to plume exposure, if available, were not demonstrated. This issue should be addressed in future exercises.

III. Communications

Commercial telephones, teletype and telecopiers made up the communications system. Televisions were available to monitor news reports.

There were ample telephones and typewriters available for media use.

Telecopier and teletype provided for hard copy transmission.

IV. Information Functions

Media kits were available and briefings were held hourly or whenever special events warranted them. Briefings were accurate and complete. Technical jargon, when used, was explained.

There was excellent cooperation and exchange of information between the utility and PEMA information staff.

V. Public Instruction

Emergency public information instructions were drafted by staff in Harrisburg. Prescribed messages were used as guides. The messages were clear and well written.

Due to the compressed time frame of the exercise, there was a backlog in transmitting hard copy messages. That was a communications system or equipment short-coming, as the releases were provided for distribution in a timely manner. In a real life situation it is unlikely that so many releases would be distributed in such a short time frame. More likely, the information would be provided by live briefings.

Due to the significant delay in receiving hard copy transmission of press releases from PEMA's Media Center, the evacuation notice did not arrive at the Joint Media Center prior to the observer's leaving, after the end of the exercise.

VI. Rumor Control

The State's rumor control number was publicized early in the exercise. Rumor control is in the Governor's Office and staffed there.

The utility also established a rumor control line coincident with the Joint Media Center. The line, a three drop rotary, was manned by personnel from the utility's Public Information Office. The number was available on news releases disseminated at the Media Center.

The observer in the EOF initiated a call to check rumor control. A person responded to the call promptly, but was uncooperative and provided little information. The observer repeatedly requested advice concerning the proper emergency response for transients in the area should an actual incident occur and the sirens sound - the response was always, "this is a drill and no action is required." As the utility has accepted the responsibility to coordinate with PEMA in providing information to the general public, the State should request that additional training be provided for the utility's rumor control staff.

The Pennsylvania Emergency Management Agency has a very capable information/public relations staff and has the authority to call upon any other State agency information staff for support. That support group participate in the exercises and are, therefore, kept up-to-date should they be called upon in a real disaster situation.

Joint Media Center Deficiencies/Recommendations

1. Although the Joint Media Center is located only 5.5 miles from the facility, contingency plans for evacuation due to plume exposure, if available, were not demonstrated. This issue should be addressed in future exercises.
2. The utility's rumor control operator at the Joint Media Center was not able to provide specific information as requested. It is recommended that PEMA request the utility to provide additional training for their rumor control staff members.

Traffic and Access Control Posts

As per the exercise plan, the Pennsylvania State Police (PSP) played their portion of the exercise out of sequence. Three PSP staging areas (Wyoming, Hazelton and Bloomsburg) are included in the plan. Only the Wyoming area was activated for this exercise; however, PSP officers from all three areas participated in the exercise.

The exercise scenario called for the PSP out-of-sequence Alert to occur at 0745 and Site Area Emergency to occur at 0800. However, these times passed without the PSP being contacted by PEMA regarding these readiness levels. At 0815 the PSP initiated the exercise by calling PEMA.

At 1000 all PSP officers assigned to man Traffic Control Posts (TCPs) and/or Access Control Posts (ACPs) assembled, signed in, were given room assignments and were issued dosimetry equipment and KI pills. The assembled officers were then given a thorough briefing by the staging area coordinating officer that covered the following areas:

- Dosimetry
- KI instructions
- TCP and ACP responsibilities
- Radiation precautions
- Communications
- Decontamination and reception centers
- Distribution and content of relevant portions of the plan

The officers were dispatched to their respective ACP/TCPs at 1130. Six ACPs and six TCPs were manned from 1200 to 1400; however, three of these were co-located, so there were nine locations. The federal observer visited seven of the nine locations and interviewed the officers regarding their particular responsibilities at these locations. All officers displayed a good understanding of their duties and precautions necessary for this type of an emergency. Overall, the PSP demonstrated the ability to perform their responsibilities in a well organized and effective manner.

A critical part of access and traffic control in the event of an actual emergency at the Susquehanna Plant will be controlling traffic on affected interstate routes. The PSP demonstrated their ability to properly man these locations. However, the availability of appropriate traffic control devices (i.e., barricades, cones, signs, etc.) would be particularly important at these locations. Pennsylvania Department of Transportation should demonstrate their responsibility to support the PSP at these critical locations in future exercises, by providing these devices.

Access and Traffic Control Posts Deficiencies and Recommendations

1. The Pennsylvania Department of Transportation did not participate in the establishment of ACP/TCPs during this exercise. In future exercises, DOT should demonstrate their responsibility to support PSP by providing barricades, cones, signs, etc.

RISK COUNTY ACTIVITIES

Columbia County EOC

I. Activation and Staffing

The Columbia County Emergency Operations Center was activated following a 1526 telephone call, via the dedicated line from PEMA, which informed the Emergency Management Coordinator (EMC) that the Susquehanna Steam Electric Station had reached the Alert emergency classification level. The EMC, with aid from the Administrative Assistant, promptly initiated activation of EOC staff following notification of Alert status, using up-to-date call lists. The EOC was fully staffed at 1705; representatives included the EMC, Deputy EMC, Staff Group Chief, police, fire, medical, transportation, radiological, County Agricultural Agent, Public Works, mass care, PIO, Red Cross, EOC communications staff, RACES, County Commissioners and other EOC support staff. Round-the-clock staffing of these positions was demonstrated via double staffing of some positions, a shift change (communications personnel) and by presentation of a roster. However, the plan should be updated to reflect round-the-clock staffing and changes to specific EOC positions. In general, the staff displayed adequate knowledge regarding emergency response procedures. The Agricultural Agent was uncertain, however, of specific protective actions to be completed by farmers as emergency workers. According to this representative, no training in the use of dosimetry would be provided at the time of issuance and dosimeters were to be read upon leaving the evacuated area, with no need to read the dosimeters during the farmers' stay in the evacuated area. Additional training with regard to appropriate protective actions and use of dosimetry by farmers should be provided to this individual.

II. Emergency Operations Management

The Emergency Management Coordinator was very knowledgeable and effectively in charge of the entire operation, as designated in the plan. The EOC Administrative Assistant was of great assistance to the Coordinator in the completion of EOC administrative procedures. Briefings were held periodically to update the entire staff on the progress of the exercise. Each person in the plan was provided a copy of the plan for easy reference, along with a list of written procedures to be followed at each emergency classification level. Although not contained in the county REP plan, the Public Works Representative had in his possession a detailed listing of available county resources.

The message handling system adopted at the EOC proved somewhat cumbersome during the exercise. The system involved the use of an alphabetic code to identify the originating/receiving agency within the EOC. However, as the number of messages increased, the system tended to deteriorate; the numbering of messages and application of the agency codes soon was curtailed and message forms were not consistently filled-out. The county should review its internal message control system and modify the system where necessary.

Access to the EOC was well-controlled by a uniformed officer and was handled effectively throughout the exercise. The EOC was notified of the 1510 Alert classification at 1526; of the 1720 Site Area Emergency at 1750; and of the General Emergency at 1936. The Evacuation message, intended for the entire ten-mile plume EPZ, was received at 1950 and was to be implemented at 1955 in concert with the activation of the EBS and siren systems. However, although the county verified that the risk communities received notification of siren and EBS activation (reportedly complete at 1958), the county did not verify that the risk municipalities understood that siren and EBS activation were being initiated to implement the evacuation. As reported by the municipalities, the message they received did not include the Governor's evacuation directive. The county should take the necessary measures to ensure that information regarding protective actions is effectively and rapidly transmitted to municipal EOCs.

Although the County Commissioners were present at the EOC, they were not involved in decision making processes.

In lieu of Fishing Creek Township's participation during the exercise, county officials executed some of the municipality's emergency responsibilities. These included activation of Orangeville Fire Department to perform route alerting and man traffic control points within the township. In an attempt to legitimize these actions, county authorities presented a copy of a recently-prepared Fishing Creek Township Support Plan to the Federal observer during the exercise. This document does not reference codes, statutes, or other legal basis, and contains no authorizing signatures. More significantly, the support scheme appears to represent a major alteration of the established legal and planning basis for emergency response actions in Pennsylvania. It is FEMA's understanding that the governing bodies of all municipalities within the State are required to establish and implement an emergency response capability in order to protect the health and safety of municipal residents. Until the legal validity of this support scheme is attested to by PEMA, and the appropriate plans are formally submitted for evaluation in accordance with FEMA's regulations, FEMA will continue to identify the non-participation of a risk-EPZ municipality as a deficiency.

At 2015 the county received notification from PEMA that State-level play had terminated. However, the message indicated that activities at the county "may continue if needed." EOC staff were immediately notified of the termination, although most staff persons completed the activity in which they were currently engaged. However, notification of completed alert routes was not received at the county, as the exercise terminated prior to completion of all routes.

III. Facilities

The facilities at the EOC were adequate. Although space was very limited, layout of the EOC was well planned for a coordinated operation. The message board was clearly displayed and visible to most of the EOC staff. According to the EMC, the EOC is sufficiently equipped to support round-the-clock operations for a two week period.

Backup power is reportedly available, but was not demonstrated. The maps described in the county plan (plume EPZ, evacuation routes, relocation centers, access control points, and radiological monitoring points) were clearly posted. The population by area was available in the plan.

IV. Communications

The primary communication system between the county and State EOCs was a dedicated phone line, with backup communications provided by the Pennsylvania Emergency Management Agency Radio System (PEMARS). However, the dedicated phone line was out of service until 1715, and additional backup was provided by teletype and commercial phone lines. The primary means of communication to the local EOCs was the new county radio system which had just been placed into service; the exercise reportedly constituted the first testing of the new system. During the course of the exercise it became evident that problems existed in the use of this system, particularly due to interference from the Luzerne County radio system, which, as reported by EOC staff, operated on the same frequency as the Columbia system. There were also reports to the county of some system down-time at several local EOCs at various times during the exercise. The county employed commercial land lines and RACES networks as backup communications, although both police and fire radios were also used. A dedicated land line was the primary communications link with the utility, with commercial lines serving as backup.

The communication system used to contact the EBS station was a commercial land line, while a remote radio system served as backup. Commercial lines served as the primary communication system to the media center, with teletype as backup (although teletype messages were occasionally delayed). Commercial land lines also served as the primary link to support hospitals, while the county communication center's radio network served as backup. The county radio network also served as the primary communication system for ambulances. A dedicated land line was available for conferencing between Columbia, Luzerne, PEMA and the EOF.

The county had available for EOC staff use approximately ten private commercial lines, along with a private commercial line solely for the Coordinator's use. The EOC also used a system of walkie-talkies which consisted of a small receiver/sender with an earphone and microphone which all key members of the county staff utilized. Using this system, it was possible for the EMC to direct and coordinate staff activities in various rooms at the same time without leaving a particular work station, and simplified the briefing of staff. This system was used extensively and apparently very successfully.

Overall, the communication network is adequate to serve the needs of the county. Technical difficulties with the new county radio equipment should be addressed. However, the backup communication systems were effectively used by the EOC staff.

V. Dose Assessment and Protective Action Recommendations

This is not a county responsibility.

VI. Public Alerting and Instruction

County officials adequately demonstrated activation of the primary alert and notification system, however, as indicated under the "Emergency Operations Management" section of this report, failed to direct the municipalities to evacuate. At 1950, the county received PEMA's notification of the Governor's evacuation decision, with instructions to sound the sirens and to activate EBS at 1955. The county notified the local EOCs immediately, and reported having received verification of message receipt by 1954 from all municipal EOCs. At 1954 the Coordinator contacted the Luzerne County EOC to coordinate the sirens and they jointly activated the system at 1955.

Emergency public instructions were drafted at the county EOC in a timely manner and were clear and appropriate to the situation. Several news releases directing protective actions to farmers were developed at appropriate times and were approved by the EMC. However, no coordination with the Pennsylvania Emergency Management Agency or Media Center was observed for any of the releases. Public Information Officers were aware of prescribed messages available within the county RERP which could be used during actual emergencies.

The timing of public instruction via activation of the Emergency Broadcast System was simultaneous with the timing of the siren systems, occurring at 1955. The EBS message was aired over two of the three local EBS stations; WCNR did not transmit the message as its transmitter was off the air.

To assist in the public notification (route alerting) and access control processes at the municipal level, requests were received from several municipalities for county unmet needs, i.e., Briar Creek Township requested one bullhorn at 1647, North Centre Township requested four portable radios and three bullhorns at 1655, and Beaver Township requested twelve bullhorns at 1721. All requests were met with a simulated dispatch to that location within approximately 30 minutes. Municipalities were contacted by the county at several times during the exercise to determine if any outstanding needs were required at each location.

VII. Protective Actions

A. Evacuation and Access Control

The manning of traffic and access control points is not the responsibility of the county. However, confirmation that Pennsylvania State Police posts has been established was made at 1825. A simulated message requesting traffic control at the Central Columbia School mass care center was received at 1824, which was responded to with a simulated contact and forwarding of this request to the South Centre Township Police Department at 1838.

The demonstration of mass care center activation was, in general, simulated during the course of the exercise, as this activity was demonstrated out of sequence earlier in the day. The mass care representative made initial simulated arrangements to establish mass care centers, with support from the Bloomsburg and Berwick Red Cross Offices, at 1617. Key mass care staff were placed on standby at 1758, following notification of the Site Area Emergency classification, and decontamination monitors were requested to man the centers at 1828.

B. Special Evacuation Problems

The responsibility for the identifying, notifying, and evacuation of mobility-impaired and hearing-impaired individuals resides with the municipalities; the responsibility for meeting transportation requirements for special evacuation needs resides with the county. Requests for ambulances and/or buses were received at various times from the municipalities (Briar Creek, 1620; Beaver, 1701; Mifflin, 1739; and Berwick, 1827) Bus companies were contacted and the availability of buses to meet these needs were identified. In addition to municipal requirements, the Berwick Hospital was notified, special transportation needs were identified, and transportation means (buses, trucks, and ambulances) were placed on standby.

School activities were demonstrated out of sequence from the ongoing exercise. Although no direct communication with schools was observed during the exercise, the EMC was knowledgeable of these procedures in general, and had copies of the school plans available at the EOC.

C. Implementation of Ingestion Pathway Protective Actions

Current information regarding dairy farmers and water intake points was not available at the EOC, but according to the Agricultural Agent, would be available at their office location. Also, the "USDA Emergency Food and Facility Listings," which is maintained at the ASCS Office, and updated each September, would be used to obtain information regarding food processors within Columbia County.

Recommendations regarding ingestion pathway protective actions were received from the State and forwarded to the public via simulated news releases and EBS announcements, in accordance with the county RERP.

VIII. Radiological Exposure Control

The county inventory list presented to the observer during the exercise indicated that the following dosimetry equipment and KI were available to meet the needs of the county, the municipal EOCs, and Berwick Hospital (in accordance with the county RERP, adequate amounts of KI have been pre-distributed to the Berwick Hospital): 1434 CDV-742s, 40

CDV-750s, 70 CDV-700s, 726 bottles of KI, 762 TLDs, 1434 report forms, 28 Decontamination Monitoring Report Forms and 140 "Farmer Emergency Worker Certifications." There was no evidence that CDV-730 dosimeters were available. The county indicated that instructions for use of dosimetry and KI had previously been provided to all municipal EOCs. The RADEF Officer was, in general, knowledgeable in the use of dosimetry and KI. Following a directive from the State EOC, the municipalities were advised, at 1810, to distribute KI to emergency workers, but that KI was not to be administered until authorized. For the purpose of this exercise, distribution of KI and dosimetry to the municipalities was simulated.

As the EOC was located outside of the ten-mile EPZ, no protective measures were necessary for the EOC. Overall the county staff was generally familiar with radiological exposure control.

IX. Media Relations

A separate room, equipped with commercial land lines and adjacent to main operations room, was utilized by PIO staff during this exercise. No formal briefings were provided to the media, although PIO staff demonstrated adequate knowledge with regard to the RERP and appropriate contacts for the transmission of news releases and EBS messages. A generic EBS message was transmitted in coordination with the sirens, PIO staff were well aware of the existence and use of prescribed EBS announcements available within the RERP, but use of these messages was not demonstrated.

Coordination with PEMA or the Media Center was not observed prior to the EBS message activation. The EBS message was initiated at 1955, and originated directly from the EOC by the PIO.

The rumor control number for the county is listed in the RERP; it is the responsibility of the PIO to handle incoming inquiries over the rumor control number. This capability was not demonstrated, although the PIO was knowledgeable in appropriate procedures.

X. Recovery and Reentry

Not applicable.

Columbia County EOC Deficiencies/Recommendations

1. Although the staffing list contained in this county plan does not indicate that full staffing is available for 24-hour per day operations, this capability was demonstrated during this exercise. The Columbia County RERP should be updated to reflect round-the-clock staffing capability and to accurately depict current staff assignments.
2. Problems with the internal message procedures were experienced at Columbia County. Officials should review the internal message control system and consider actions to streamline this system where possible. EOC representatives should be instructed to accurately complete all exercise message forms.

3. Problems were experienced with the new radio system, which was intended to be the primary means of communication between the county and municipal EOCs. The problems should be investigated and repairs/alterations to this system should be completed to ensure effective operation.
4. The Agricultural Agent was not sufficiently familiar with radiological exposure control procedures for farmers. Additional training with regard to personal protective actions for farmers should be provided to the Agricultural Agent.
5. The Columbia County PIO did not coordinate the release of news items with PEMA representatives at either the State or Joint Media Center. County staff should ensure that all public information releases are coordinated with the State EOC prior to official release, as designated in the county plan.
6. Columbia County did not demonstrate the availability of low range (0-20R) self-reading dosimeters (CDV-730 or equivalent) which the plans specify are to be provided to every emergency worker. The county should obtain the appropriate number of such dosimeters for distribution to county and municipal emergency workers.
7. As evidenced by municipal reports of activity within Columbia County, notification of the recommended protective action to evacuate the ten-mile EPZ was not transmitted to the townships and boroughs by the county at the appropriate time. The county should take the necessary measures to ensure that information regarding any and all recommended protective actions is accurately and rapidly transmitted to municipal EOCs.
8. The Columbia County staff discontinued exercise play after being advised by PEMA that State-level play had been terminated. In future exercises, the county should continue exercise play until all county and municipal activities and objectives have been completed and fully demonstrated.
9. A RACES operator never arrived at the North Centre Township EOC during the exercise. The county, in coordination with RACES, should review the assignment procedures to ensure that a RACES operator is provided to all locations.
10. There were discrepancies at two Columbia County municipalities regarding the number of required dosimetry/KI kits, as identified during the exercise, and as reported in the plans. These discrepancies should be resolved in coordination with the municipalities, and the plans revised accordingly.

Columbia County Mass Care Center

I. Activation and Staffing

The mass care center at the Central Columbia Middle School played out-of-sequence. By 1520 the mass care center was fully staffed and operational.

II. Registration and Monitoring of Evacuees

Staff included the County Radiological Officer and two assistants, who effectively demonstrated radiological monitoring techniques for evacuees. The surveys were thorough and included checking the soles of the evacuees feet. If an evacuee were found to be contaminated he was instructed to shower, after which the evacuee was again checked. In the event that showering failed to remove the contamination, provisions would be made to transport the victim to the hospital in Bloomsburg. The mass care center was equipped with suitable containers for disposing of contaminated clothing. The County Radiological Officer had a two-way radio for communicating with the county EOC in Bloomsburg. RACES operators (2) were also on hand; these operators were dispatched by the county EOC to provide backup communications.

Red Cross personnel were represented by a Shelter Manager, Disaster Chairman, rescue workers and nurses. The school also employs a full time nurse and maintains a nurse's office and infirmary. The Red Cross nursing staff presented a current active staffing list for sustained long period manning of the facility. The Shelter Manager and Disaster Chairman provided the observer with staffing lists to demonstrate capability for 24-hour operations.

III. Congregate Care of Evacuees

Evacuees were registered by the Red Cross staff. A Red Cross Registration Form was used to record all pertinent information.

The middle school, which normally feeds a student body of 500 daily, provides an ideal mass care center. The senior high school is also located on the site and would be used if the Vo-Tech capacity were exceeded.

The mass care center is located two miles beyond the plume EPZ. Players at the mass care center explained that the center was specifically designated to facilitate families of emergency workers. Shelter staff were not aware of how many evacuees were expected, but knew their capacity is 450 evacuees. If the shelter capacity were to be exceeded, the senior high school would be activated. This would at least double the mass care capacity, with the senior high school having equivalent resources.

Although cots were not observed, Red Cross and county personnel on hand were confident that the county has them available and would provide them.

Communications consisted of RACES radios and a two-way radio which the County Radiological Officer possessed and was in direct contact with the county EOC. The school also has an amateur HAM radio club which was operational.

Columbia County Mass Care Center Deficiencies/Recommendations

None identified.

Emergency Worker Decontamination Station - Columbia County

A scheduled emergency worker decontamination demonstration, to take place at the Columbia-Montour Area Vo-Tech School, did not occur as specified, and was therefore not observed. According to pre-exercise information provided by PEMA, the decon station was to have been activated (out of sequence) at 1630. When the observer arrived at 1645 the building was closed and there was no activity. Custodians reported that they believed the demonstration occurred earlier in the day.

Emergency Worker Decontamination - Columbia County Deficiencies/Recommendations

1. The emergency worker decontamination demonstration did not occur as scheduled, precluding an evaluation of Columbia County's capability to perform this function. This capability should be demonstrated in future exercises.

Luzerne County EOC

I. Activation and Staffing

A call was received by Luzerne County at 1522 advising them of Alert status and initiating EOC activation. The call was received from the Pennsylvania Emergency Management Agency over the dedicated telephone; verification was therefore not required. The new county pager system was used to notify and mobilize both county EOC staff members and municipal Emergency Management Coordinators (EMCs). All municipal EMCs and county workers called into the EOC to verify receipt of the pager notification.

All county staff were present and all municipal EOCs activated by 1542 except Union Township, which was officially activated by 1710 because the Coordinator was delayed by work responsibilities. The following organizations were represented in the EOC:

- County Commissioners
- Emergency Management Coordinator
- Operations Officer
- Assistant Operations Officer
- Communications Coordinator
- Fire Coordinator
- Police Coordinator
- Medical Coordinator
- County Agricultural Agent
- National Guard Representative
- Transportation/Engineer Coordinator
- Radiological Officer
- Red Cross Representative
- RACES Coordinator
- MARS Coordinator

All staff members displayed the excellent training and knowledge needed to carry out their emergency response functions. Round-the-clock staffing capabilities were demonstrated by presentation of a roster and by double staffing of all positions except the Red Cross Representative.

II. Emergency Operations Management

The Operations Officer proved to be an excellent coordinator for all county and municipal response functions. Briefings to county and municipal staffs were given hourly. Some municipalities were interested in receiving weather and dose projection information. As this information was provided to the county by PEMA, it is suggested that this information could be included in the hourly update briefings.

Copies of the plan and Standard Operating Procedures were available and utilized by each staff member.

Messages were logged and directed to the Operations Officer, who then routed them to the appropriate staff person. Message handling was quick and efficient.

Two Sheriff's deputies guarded the entrance to the EOC. Persons entering the EOC were required to identify themselves, sign in and out, and were provided a badge to wear during their stay in the EOC. The EOC was notified of Unusual Event at 1339, Alert at 1522, Site Area Emergency at 1749 and General Emergency at 1929. At 1950 PEMA informed Luzerne County that the Governor had ordered that sirens should be activated at 1955, followed immediately by EBS announcements, route alerting, as necessary, and evacuation. All municipalities were informed of this decision and verified receipt of the message by 1954.

Before terminating the exercise, Luzerne County insured that all municipal EOCs had relocated their operations outside the EPZ, thereby bringing the exercise to a logical conclusion.

Elected officials were present during the exercise.

III. Facilities

The Luzerne County EOC had sufficient furniture, space, lighting and telephones. Traffic flow was arranged to allow efficient operations. Separate rooms were provided for fire/police/ambulance communications, siren and EBS communication, RACES and MARS communication. Telephones were located outside the operations area as well, thereby keeping noise to a minimum. Status boards were clearly visible to all staff members with emergency classification posted in over-sized letters. A separate status board was posted for municipal EOC actions. All status boards were updated as appropriate.

Maps reflecting the plume EPZ, evacuation routes, pickup points, relocation centers, mass care facilities, and traffic control points were posted.

IV. Communications

The Luzerne County EOC has more than adequate communications capability to deal with any emergency. The primary means of communications with the Pennsylvania Emergency Management Agency and the utility is via dedicated landlines. There are two backup systems with PEMA - PEMA Radio and commercial telephone; and two backup systems with the utility - VHF Radio and commercial telephone.

A new VHF/UHF two-way voice and pager system has been installed in the county and 19 municipal EOCs. Initial notification to municipal Emergency Management Coordinators and county emergency response staff is via a pager tone signal with one-way voice message and telephone verification. Once the municipal EOCs are mobilized, the two-way voice system is activated. During the exercise there were some problems with the new radio system. Some of the municipal EOCs were cut out of

Luzerne County broadcasts by Columbia County. Luzerne County contacted Columbia County and asked them to broadcast on a different frequency. This appeared to correct the problem to some extent. The new radio system, on the whole, worked well in Luzerne County.

In addition, Luzerne County has fire, police, and ambulance radio communications; RACES, which was dispatched via computer; MARS, which was used at reception and mass care facilities and a toll-free telephone line into the county EOC.

Although communications were not a problem during the exercise, four municipalities never received a RACES operator. Assignment of RACES operators, a county responsibility according to the plan, was delegated to a RACES representative. The county, in coordination with RACES, should review the assignment procedures to insure that RACES operators are available to all municipalities as a backup communications system.

There is also a remote pickup unit in the EOC which provides the capability of EBS broadcasts directly from Luzerne County EOC.

V. Dose Assessment and Protective Action Recommendations

This is not a county responsibility.

VI. Public Alerting and Instruction

The Luzerne County EOC plays a major role in public alerting. Upon notification and coordination with PEMA, Luzerne County is responsible for siren and EBS activation, issuing instructions to municipal EOCs for route alerting and notification of hospitals, schools, reception and mass care centers.

During the exercise PEMA notified Luzerne County at 1950 of the Governor's decision to evacuate and activate the sirens and EBS system at 1955. All notification messages to municipalities and other organizations were completed by 1954. Sirens were activated at 1955 and EBS announcements followed at 1957. The appropriate prescribed EBS announcements are contained in the county plan. The route alert teams were instructed to inform the public to tune to their EBS station for further instructions.

VII. Protective Actions

A. Evacuation and Access Control

Some traffic control and access control posts (those located along main evacuation routes) are the responsibility of the state police. The manning of these points was simulated at 1945. Other TCPs and ACPs are municipal responsibilities.

B. Special Evacuation Problems

Evacuation of on-site personnel was completed at 1650 during the Alert stage. The utility establishes their own decontamination station. The evacuation of on-site personnel was coordinated with the county. Site personnel use a different evacuation route and present no traffic problem to the local community.

The evacuation of mobility-impaired and hearing-impaired individuals is a municipal responsibility, however, ambulance and bus requirements were coordinated and assigned through the medical group chief and transportation group chief at the county EOC. An exercise involving school districts and the evacuation of students was played out of sequence earlier in the day.

C. Implementation of Ingestion Pathway Protective Actions

The County Agricultural Agent was present in the EOC and had the proper information identifying the location and names of farms in the area. At 1625 locations for processing farmers as emergency workers were activated. The State Department of Agriculture sent out protective action recommendations for sheltering of livestock at 1800. At 1826 further instructions advised placing animals on stored feed. The protective actions for livestock were sent out from the State EOC via telephone and through news releases. All information was relayed to municipal EOCs.

VIII. Radiological Exposure Control

For this exercise Luzerne County simulated the distribution of dosimetry and KI kits. At 1530, after receiving the Alert notification, the dosimetry distribution points were activated and municipal EOCs informed to pick up their dosimetry kits at the pre-determined distribution points. Dosimetry requirements for each municipality, monitoring station, etc. are pre-packaged and marked for distribution to the proper location. A kit includes: one medium-range and one high-range dosimeter, charger, record keeping cards, permanent record dosimeter and a 14 day supply of KI with written procedures for use.

During the exercise, many municipalities requested numbers of dosimetry kits that were different than those listed in the municipal plans. In addition, dosimetry requirements listed in the county plan do not match those in municipal plans. The Luzerne County EOC staff and municipal EOC staffs should review dosimetry requirements and update plans to indicate the numbers actually needed.

The Radiological Officer was well-trained in the area of radiological exposure control. Emergency workers knew when and where to go for monitoring and decontamination. The Luzerne County EOC is not located in the 10-mile EPZ, therefore measures to protect EOC personnel were neither demonstrated, nor required.

IX. Media Relations

The county has set aside a room in the courthouse for press briefings. At 1700 a briefing was given to the press and a camera crew came through the EOC. Briefings were accurate and complete based on information received from PEMA. Luzerne County received only two of the news releases sent out by PEMA during the exercise. No coordination was observed between the Luzerne County PIO and PEMA PIOs at either the State or the Joint Media Centers. More coordination is needed between the State and county PIOs. Rumor control was handled through the county 800 telephone number.

X. Recovery and Reentry

Not applicable.

Luzerne County Deficiencies/Recommendations

1. RACES operators never arrived at four Luzerne County municipalities, and arrived late at four others. The county, in coordination with RACES, should review the assignment procedures to ensure that a RACES operator is provided to all locations.
2. Many municipalities requested information concerning weather and radiological data. This information could be included in the hourly updates the county provided to the municipalities.
3. There was no coordination demonstrated between the Luzerne County PIO and PEMA PIOs, regarding county news releases, as required by the plan. More coordination is needed by the PEMA PIO with the Luzerne County PIO.
4. Some municipal requests for dosimetry/KI did not correspond to their needs as identified in their plans; municipal dosimetry/KI requirements listed in the Luzerne County Plan do not match those in some municipal plans. All municipal dosimetry/KI requirements should be reevaluated, in coordination with the county, and all plans revised accordingly. The quantity of dosimetry/KI units in Luzerne's pre-packaged municipal kits should be adjusted as necessary.
5. Some Luzerne County municipalities experienced interference in using the new radio/pager system. These problems should be resolved to establish an efficient communication and notification link to the risk municipalities.

Luzerne County Reception and Mass Care Centers

County EOC

I. Activation and Staffing

The Luzerne County EOC began an out-of-sequence demonstration of reception center activation and operation at 1230. The EOC Operations Officer simulated a call from the State headquarters, and called the American Red Cross (ARC) to notify them to start reception operations. The ARC dispatched volunteers to the Pocono Downs Race Track. A written call list was used and initial notification was through the Luzerne County Emergency Management Agency (LEMA) beeper system. The EOC staffing was simulated, and was completed at 1300. There were representatives of ARES and MARS at the EOC, but others were not there because of the out-of-sequence operation. (The EOC was fully staffed later for the main exercise events.) The reception centers were activated by 1300. The EOC staff showed adequate training and knowledge. The mass care centers were also activated out-of-sequence. They were activated at 1700 by the EOC Operations Officer. He simulated receiving a call from State headquarters. No deficiencies were observed.

II. Communications

The county's central dispatch operates 24-hours, with police, fire and EMT channels. ARES and MARS operators were available, with telephone backup. Communications to the State EOC were not demonstrated at this time. Communications to the ARC were demonstrated through the beeper system and call back by phone from the ARC. There was also MARS and ARES available for backup. The EOC also had a remote pick up unit to the EBS station. No communications were demonstrated to support hospitals, ambulances, and radiological monitoring teams for this part of the exercise. No deficiencies were observed.

III. Radiological Exposure Control

The EOC included a display on identifying and using radiological equipment. Direct-read dosimeters (0-200R), chargers, record keeping cards, and TLDs were available. The equipment was pre-packaged for the municipalities and decontamination and monitoring teams. Also, there was an adequate supply of KI and there would be a doctor there to direct its use. The Operations Officer was also knowledgeable in its applications. No deficiencies were observed.

Reception Center

Activation of the reception station was out-of-sequence. The demonstration activation was timely, taking about 20 minutes for ARC personnel to arrive at the reception station at Pocono Downs Race Track. The staff consisted of seven ARC volunteers and one MARS/ARES radio operator. The center was set up on the driveway of the parking area of the race track, offering easy entry-exit for vehicle traffic. The Township of Plains Police Department provided traffic control.

Only one station was set up for this demonstration, but there were plans that call for additional stations as traffic increases. All staff were knowledgeable in their operations. Their positions were: Station Manager, Chief Nurse, Assistant Nurse, Receptionist, Dispatcher, and helpers. The staff ran the PEMA observer through the station to demonstrate how a healthy evacuee would be handled and dispatched, and then ran him through again simulating he had a broken leg. Proper procedures were followed in both cases, with dispatch cards being issued and a call for an ambulance for the "injured" party, and dispatch card and map to the mass care center at Pittston High School to the "healthy" individual. The MARS/ARES operator demonstrated communications to the Luzerne County EOC, but not to the mass care center because of the sequencing problem.

No major deficiencies were observed, but several minor problems were identified. The first of these was the lack of shelter and support facilities for the staff out on the parking driveway: there was no shelter in case of inclement weather; no commercial electric power was available for lights and radios; there were no toilet facilities or source of water. Second: neither the ARC Station Manager nor the race track manager were familiar with the specifics of the agreement as to what facilities were available for use, and the county plan does not contain a copy of the agreement for reference.

Mass Care Center

I. Activation and Staffing

The mass care center was demonstrated out-of-sequence. The Luzerne County EOC simulated a notification from PEMA headquarters to evacuate, and notified the ARC Chapter, which then dispatched the mass care center staff. The notification was through the LEMA beeper system with call back; also backup with the MARS/ARES radios. The mass care staff arrived and set up at the Pittston Area High School in about 25 minutes. They were activated about 1700 and operational at 1725. There was a list of staff members which showed sufficient numbers of staff for three shifts per day thus demonstrating round-the-clock staffing capability. The staff were well trained and knowledgeable. The staff consisted of seven ARC people, a MARS/ARES radio operator, and a decontamination team of five members. The ARC staff consisted of the Center Coordinator, Chief Nurse, Assistant Nurse, Commissary Operator, Space/Bedding Operator, Emergency Lodging/Special Services Operator, and assistants. The staff would be augmented by the school staff; both faculty, maintenance and kitchen. This is reportedly written into the agreement with the school. No deficiencies were observed.

II. Registration and Monitoring of Evacuees

The observer was treated as an evacuee to demonstrate the mass care center procedures. The card from the reception center was checked and collected at the front door, and the "evacuee" was directed to the decontamination team, where he was monitored for contamination with CDV-700 meters. That was followed by a registration interview by the

center staff. They assigned space, bedding, etc. For contaminated evacuees, the decontamination team would have issued plastic boots, and directed them to the shower room in the gym for scrubbing. Suitable containers were on hand for contaminated clothing; however, there was no provision for contaminated personal property (money, radios, wallets, handbags, etc.). The staff did not demonstrate clothing issue, but said that it would be available. For this demonstration, only one decontamination team was activated. They would have two operating during real operations, with a capacity of checking about 40 people per hour. Each team has four CDV-700s. There were no major deficiencies observed; however, a contaminated person could walk from the front entrance to the monitoring area and leave contamination along the way for uncontaminated evacuees to pick up.

III. Congregate Care of Evacuees

The relocation center was located at the Pittston Area High School, which is about 20 miles from the plume EPZ. The center could accommodate 2,000 to 5,000 evacuees, and could overflow to the Wyoming Area High School if necessary (additional 2,000 capacity). The food supplies on hand at the center could feed 2,000 people per day for 10 days. A similar supply is available from the Wyoming Area High School. The cots, blankets, and bedding are stored at Fort Indiantown Gap, near Annville, Pennsylvania. They would be available and transported to the mass care center within 24 hours by the National Guard. The center had ramps and handicapped toilet facilities and was able to handle handicapped evacuees. The school nurse's station was available for use and doctors were scheduled to be available, although this was not demonstrated. The center had a rescue van, that could serve as an ambulance, parked outside to provide quick transport to hospitals. The school newspaper facilities could be used to produce a newsletter for evacuees, however, this was not demonstrated. The staff did not seem to have a good knowledge of how many evacuees to expect, but felt they had enough flexibility to handle any load. The center had communication with the Luzerne County EOC through MARS and ARES radio, and commercial telephones. They had telephone communications with hospitals. Their communications with ambulances and the State EOC was through the county EOC. There were no major deficiencies observed.

Luzerne County Reception and Mass Care Centers Deficiencies/Recommendations

1. At the Luzerne County reception center (Pocono Downs Race Track) there was a lack of shelter and support facilities for the staff: there was no shelter in case of inclement weather; electric power was not available for lights and radios; there were no toilet facilities or sources of water. County officials should investigate the possibility of providing or arranging for these support facilities.

2. Neither the ARC Reception Center Manager nor the race track manager were familiar with the specifics of the agreement as to what facilities were available, and a copy of the agreement was not available in the plan for reference. Copies of the agreement should be included in the county plan, and should be provided to the Reception Center Manager.
3. At the Luzerne County Mass Care Center, contaminated evacuees could contaminate the area between the entrance and the monitoring location, leading to the spread of contamination within the building. It is recommended that the monitoring location be established at the entrance.

Emergency Worker Decontamination Station - Luzerne County

The Luzerne County decontamination center was located in the Plymouth Township Municipal Building. This facility was established to provide monitoring and decontamination for local and State emergency workers. The Chief of the Plymouth Fire Company did not know the capacity of the facility in persons/hour.

The Plymouth Fire Company is responsible for staffing the center. According to the Fire Chief, the company had just completed the training program and this was the first full exercise for them. Activation of the decon station occurred promptly. The notification call to establish the center was received from the county EOC at 1910. The staff were mobilized at 1915 and were set up at 1922.

The company has been provided with three CDV-700 survey meters which were stored at the fire station with pre-packaged disposable equipment and supplies. The members of the company adequately demonstrated the method of monitoring vehicles and people; they used appropriate procedures and used appropriate forms to record their findings.

Should decontamination be necessary, the building provides separate shower facilities for males and females. There is a circulation problem at the shower entrance, in that there is only one door to each facility by which both entering (contaminated) and exiting (decontaminated) persons must pass. The observer was told that the township has plans to install a second door to each facility which would allow separation of the newly decontaminated persons from those entering. Otherwise, the building allows for a good traffic pattern, with several check and recheck points.

According to the staff, contaminated vehicles would be isolated for later decontamination. Personal clothing would be collected and stored in a locked isolated room in the building. The fire company has plastic bags for the storage of contaminated materials.

The fire company was organized into six teams, three will work on six hour rotations with the other three. A member of the company will go to the EOC to get KI when notified by the EOC.

Emergency Worker Decontamination - Luzerne County Deficiencies/Recommendations

1. The entrance to the shower facility does not allow separating contaminated from decontaminated workers. The doors for the exiting of decontaminated persons should be installed in the shower facilities.

RISK MUNICIPALITY ACTIVITIES Columbia County

Beaver Township EOC

I. Activation and Staffing

At approximately 1530 one of the Township Supervisors was alerted via the "pager" system and responded by calling the Bloomsburg EOC to verify that the emergency classification status was at the Alert stage. By 1615 all key personnel were at the township EOC except for the Radiological Officer, who arrived at 1715 from work. The staff was enthusiastic and knowledgeable and consisted of the EMC, fire/rescue, medical, radiological, communications and transportation representatives. The security guard and the Fire-Police Chief were not present due to other commitments. Their duties were performed without incident by other volunteers. Round-the-clock staffing was demonstrated for some positions via double staffing and by presentation of a roster; however, all positions were not formally assigned a backup individual to ensure 24-hour support operations. It is recommended that a full complement of staff be established and that the plan be revised to reflect this change.

II. Emergency Operations Management

The designated Emergency Management Coordinator was in charge throughout the exercise and, along with two Township Supervisors and the President of the Board of Supervisors, carried out the activities as required in the township RERP. Access to the EOC was controlled, briefings were held, and message handling was adequate. The county EOC notified the township EOC of the following events as follows:

Alert	1520
Site Area Emergency	1754
General Emergency	1940

At 1945 the township called the county EOC to request that they be informed when the sirens were activated, as the sirens are difficult to hear from within the EOC. The county immediately called back to inform Beaver Township that the sirens and EBS were to be activated at 1955. However, the township did not infer from this message that evacuation activities had been ordered. A RACES transmission (origin unknown) was overheard at 2003 which indicated that evacuation had been ordered for the ten-mile EPZ. However, municipal officials delayed calling the county EOC until 2020 to request clarification regarding the evacuation order. The exercise was terminated at 2021, prior to a receipt of a response from the county, and evacuation capability was not demonstrated. The township should be prepared to immediately verify communications with the county when any confusion exists regarding recommended protective actions. Also, message receipt/verification should include content confirmation.

III. Facilities

Adequate furniture, lighting and space were available at the EOC to support emergency operations. Also, the EOC was equipped with kitchen and sleeping accommodations to support extended operations. However, only one telephone line was available for EOC use; this was a party line which was shared with two other parties. Staffing was consequently delayed somewhat due to some difficulty in obtaining an outside line. The EOC should be provided with at least one private telephone line.

No emergency backup power was available, although according to EOC staff, they are investigating the procurement of an emergency generator.

Maps were posted indicating the location of evacuation routes, plume EPZ, relocation centers, access control points, radiological monitoring points and population by area.

IV. Communications

Until the EMC arrived at the EOC at approximately 1600 with the county two-way radio supplied by Columbia County, the one telephone (a three-way party line) was the primary form of communications. Some mechanical problems were encountered with the county radio system initially, but these problems were quickly corrected. At 1648 the township telephoned the county EOC and requested a RACES operator as a backup to their radio. The RACES operator arrived at 1738. It is recommended that a separate telephone line be set up at the EOC, and that the township verify with the county that a RACES operator is enroute to the township at the Alert stage, in accordance with both the township and county plans.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Route alerting was undertaken by the township, as called for in the plan, at 1956 in concert with the sounding of the EBS and sirens. Route alert teams went door-to-door on their designated routes with the following prescribed message: "Tune to your EBS station for directions." Because the sirens are reportedly difficult to hear throughout Beaver Township, the EMC requested that the county EOC contact the township by telephone prior to siren activation. At 1952 a telephone call was received from Bloomsburg stating that the sirens would be sounded at 1955. At 1956 the sirens were sounded, but were most difficult to hear from within the EOC. At 1721 Beaver Township requested 12 bullhorns for the purpose of completing route alerting. The response from the county was that bullhorns had been pre-distributed (simulated) prior to the exercise. This, consequently, required door-to-door notification of residents. It is recommended that bullhorns, and other unmet needs, be provided for route alerting activities within the township.

VII. Protective Action

The township manned their own traffic control points upon the sounding of the siren. The Medical Officer had an updated list, by location, of all mobility-impaired, hearing-impaired and other persons having special needs. The EOC staff indicated that adequate vehicles and personnel were available to cover traffic and access control functions. Because the township never received word from the county to evacuate, a simulated evacuation was not observed. The evacuation of school children and ingestion pathway protective actions are not a responsibility at the municipal level.

VIII. Radiological Exposure Control

The Radiological Officer did an excellent job distributing (simulated) dosimetry and instructing emergency workers in the use of the dosimetry equipment and KI. He was aware of decontamination procedures and where the decontamination center is located. However, the Radiological Officer works for the nuclear facility and in a real emergency, there was expressed some question as to whether or not he would be released to perform his duties at the township EOC.

IX. Media Relations

No interaction between the EOC and the media was observed during this exercise.

X. Recovery and Reentry

Not applicable.

Beaver Township Deficiencies/Recommendations

1. Township officials delayed contacting the county EOC for almost 20 minutes to verify an evacuation report overheard of RACES. Township EOC staff should be prepared to immediately verify communications with the county when any confusion exists regarding recommended protective actions. Also, message verification should include content confirmation to facilitate emergency communication.
2. The only available telephone line at the EOC, a three-way party line, was not adequate for even exercise purposes. At least one private telephone line should be installed at the EOC.
3. Full EOC staffing did not occur, and capability for a second full shift was not demonstrated. The township should establish two full shifts for all positions designated in the plan; the staffing lists contained in the plan should be revised, and updated as necessary, to indicate 24-hour capability and maintain currency; 24-hour staffing capability, in accordance with the official staffing list, should be demonstrated in future exercises.

4. Unmet needs not provided for included an emergency generator. This should be acquired or otherwise provided to the township.
5. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.

Berwick Borough EOC

I. Activation and Staffing

Activation of EOC staff commenced when the EMC received notification of an Alert at the Susquehanna Steam Electric Station from the county through the Berwick communications center at 1527. The EMC arrived at the EOC at 1543 and promptly began notifying his staff using existing written call lists. He was assisted in these efforts by the first-arriving staff members. All participating staff were present by 1706.

The EOC was staffed by all the organizations stated in the plan except for public works, public information and military coordination. Public works' issues were handled by the Transportation Officer. Round-the-clock staffing was demonstrated for those positions present by use of double staffing. All staff members displayed adequate training and knowledge.

There have been, or are planned, many changes in the EOC staff; the plan should be revised accordingly.

II. Emergency Operations Management

The person in charge of EOC operations was the EMC, as designated in the plan. Periodic briefings were held to update the staff regarding the situation and to permit coordination of effort. EOC staff were involved in all decision making steps related to their area of responsibility. Plans and action checklists were available and frequently used.

Message logs were properly kept and handled. The EOC was notified of Alert at 1527, Site Area Emergency at 1751 and General Emergency at 1938. The EOC was never informed of the order to Evacuate. They did receive notification regarding siren and EBS activation at 1950. A 2003 RACES transmission was overheard regarding the recommended evacuation; the county EOC was contacted at approximately 2013 to confirm this recommended protective action, but an affirmative response was not received prior to exercise termination.

Access to the EOC was effectively controlled. No elected officials participated in the exercise.

III. Facilities

The EOC area was on the third floor of the City Hall and possessed sufficient furniture, space, lighting and telephones. Backup power was available and offered for demonstration.

Emergency classification levels were posted on a status board clearly visible to all staff and was kept current with regard to exercise activities. Maps were posted of the entire borough showing the routes for use by route alerting teams, evacuation routes, traffic control points and pick up points. The PEMA ten-mile EPZ map was posted, in addition to a chart showing the location of evacuation routes, host school, reception center, traffic control points and two decontamination centers. There also was a chart with information on dosimetry usage.

It is noted that the EMC stated that he has proposed to move the EOC to the second floor of the separate police department building.

IV. Communications

The primary method of communication with the county EOC was the recently-installed county radio net. This system did not work well at this location. Since both Columbia and Luzerne counties were reportedly on the same frequency, transmissions from Luzerne County "walked on" Columbia County messages and severely limited the use of the system. The backup systems of telephone and the RACES network thus became a primary system at times. This problem may be resolved by either: (a) use of separate frequencies for the two counties or (b) use of the separate A and B channels on the existing frequency.

The RACES network proved invaluable to the EOC. Part of this network was the relaying to the EOCs of messages from the PEMA Eastern Area EOC in Hamburg to the two risk county EOCs. These messages were monitored and relayed to the Berwick EOC, often before the county EOC would send its message. The RACES operators also had established and hoped to demonstrate a new digitalized (as opposed to voice) radio system with memory and hard copy capability. Full demonstration was hampered when the county EMC appropriated the RACES-owned antenna for the county EOC.

In addition to the equipment problems noted above, message transmissions from the county to Berwick EOC also had content problems. Specifically, the notification messages at Site Area Emergency and General Emergency contained the wording, "No further information available." Yet, because of the RACES monitoring of the PEMA Eastern Area EOC transmissions, the Berwick EOC staff knew that information about plant conditions, radiological measurements and projections, etc. had been sent to the county. This information was not relayed to the municipal EOCs, although EOC staff indicated an interest in receiving this type of more complete information coverage.

Finally, the Berwick EOC never received the order to Evacuate from the county. They had heard about it over the RACES monitoring network, had called the county for confirmation at 2013, but had not received confirmation by the time the exercise ended.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The EOC did dispatch its five route alerting teams immediately after the sirens sounded. This effort was well coordinated by the Fire Officer. The drafting of public instruction is not, by plan, accomplished at the municipal level.

VII. Protective Action

The EOC staff were prepared to activate traffic control points when appropriate. This effort was well coordinated.

The Transportation, Ambulance and Medical Officers executed all proper steps to prepare to evacuate those requiring assistance, resources were assessed, unmet needs were reported to the county and these requests were monitored, and the staging area was readied. The borough maintains a list of mobility-impaired persons.

VIII. Radiological Exposure Control

Dosimetry and KI were simulated as being pre-distributed to the borough. The initial supply of dosimetry for the borough, as indicated in the plan, was reassessed and found to be inadequate; this unmet need was reported to the county. This requirement should be formally assessed and reflected in the plan.

The Radiological Officer was thoroughly versed in his responsibilities and demonstrated them well. All EOC staff were aware of the procedures for use of KI.

IX. Media Relations

A newspaper reporter and a television film crew were permitted access to the EOC. Although no formal briefing was given, the EMC was able to respond to questions accurately and professionally.

X. Recovery and Reentry

Not applicable.

Berwick Borough Deficiencies/Recommendations

1. Changes in EOC staff personnel have not been accompanied by corresponding revisions to the staffing list contained in the plan. The Berwick Borough REP plan should be updated as necessary to reflect current personnel assigned to designated EOC staff positions.

2. Full EOC staffing was not demonstrated, although staffing lists indicate that 24-hour capability exists. All EOC staff persons and elected officials should actively participate in future exercises, to demonstrate full staffing capability.
3. Borough staff delayed contacting the county EOC for ten minutes after intercepting a RACES message which indicated that an evacuation had been ordered. EOC staff should be instructed to immediately request a clarification/verification with the county EOC, whenever there is a question regarding important information.
4. Borough officials discovered that their previously-identified dosimetry/KI requirements, as specified in the plan, are not adequate. Dosimetry and KI requirements should be reassessed in coordination with the county and the plan revised as necessary.
5. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.

Briar Creek Borough EOC

I. Activation and Staffing

The Emergency Management Coordinator received a call from the Columbia County EOC advising of an Alert emergency classification at the Susquehanna Steam Electric Station at 1530. The EMC reported verification of the message immediately following notification, and then contacted the President of the Council who, in turn, notified the remaining Council Members and the EOC staff. These steps were not observed as each was accomplished prior to actual activation of the EOC. The EMC arrived at the EOC at 1538. The EOC was staffed and operational at 1555, although the RACES operator arrived at 1618, and no police representation was at the EOC. The following is a list of positions staffed at the EOC:

- Coordinator (Mayor)
- Deputy Coordinator (Council Member)
- Fire Rescue Officer
- Medical Transportation Officer (Council Member)
- Communications Office (Council Member)
- Deputy Communications Officer
- Radiological Officer (President of Council)
- Route Alert Team
- RACES Operator

Adequate knowledge of respective responsibilities was clearly demonstrated by each staff person.

Twenty-four hour EOC staffing capability has not been established; there are no pre-identified individuals for a second shift. According to the EMC, if twenty-four hour coverage was needed, the same individuals would staff the EOC, with backup responsibilities assigned at that time, i.e., the Deputy Coordinator would act on behalf of the EMC.

II. Emergency Operations Management

The EMC coordinated activities very effectively and kept the entire staff informed of current response actions. Checklists and copies of the plan were used by each staff person. However, the plan used by the EOC staff was an updated version of the copy available to the observer. Message logs were kept and messages were distributed appropriately. The EMC was notified of the Alert status at 1530, Site Area Emergency at 1754, and of General Emergency at 1940. A message that sirens would sound at 1955 was received at 1951. Notification of the recommended evacuation and the Governor's Proclamation of a

Disaster Emergency was not received from the county. Information regarding the evacuation was overheard on a RACES transmission from Luzerne County. The borough called the county to confirm the Evacuation Order at 2022 (after the exercise had been terminated). However, the county did not confirm the Evacuation Order until 2053, and at that time it was (erroneously) reported that Evacuation had been ordered simultaneously with General Emergency notification (at approximately 1936).

III. Facilities

The EOC is located in a former two-room schoolhouse. While there was adequate furniture, space and lighting, there is no plumbing. There is no backup power capability. This has been identified by the EMC as a potential issue, and a generator has been listed as an unmet need. The borough is hopeful of modernizing the EOC by supplying it with water and sewage facilities, in addition to obtaining a generator and an additional commercial telephone. A status board was clearly visible and was promptly updated.

A map which indicated evacuation routes was posted and information regarding the mass care center location, sirens and alert sector was available.

IV. Communications

Primary communications to the county EOC were primarily via the new county radio equipment recently received by the borough. There was only one commercial telephone available at the EOC, and backup communications was accomplished through RACES. Problems with the new equipment were experienced in that message transmissions from the county were not received well. At 1830 the borough advised the county EOC that messages were garbled and that Luzerne County's transmissions were stepping over Columbia County's messages. It was discussed that this problem might be resolved when the VHF antenna is received and/or if the counties are provided different frequencies. RACES, though present, was not utilized to its fullest potential to compensate for the communications breakdown. All message contents were not consistently confirmed, which resulted in the borough staff not immediately identifying that they had not received notification of a protective action recommendation. An intercepted Luzerne County radio transmission indicated that an evacuation had been ordered, but the borough delayed verifying the evacuation report until 2022, by which time the exercise had been terminated. Columbia County informed the borough at 2053 that General Evacuation had been announced simultaneously with the General Emergency classification, although in actuality it had occurred approximately twenty minutes later.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Route alerting was accomplished by the borough in accordance with the REP plan. Route alerting was begun at 1958 and finished at 2047. A two member team in one vehicle with a bullhorn was utilized during the route alerting. When the team returned they reported that they had covered only three-quarters of the identified route. In order to minimize the length of time required to complete the route alert activity, the borough may consider dividing the route and establishing a second route alert team. The borough was monitoring WHLM for EBS messages; however, in order to hear the sirens, the radio was turned down and the EBS drill message was not heard.

VII. Protective Action

A listing identifying mobility-impaired and hearing-impaired individuals is maintained at the borough EOC. However, the list actually identifies three individuals that reside out of the range of the siren. These individuals are contacted by the route alert team prior to deployment. There are no hearing-impaired and/or non-ambulatory people identified at the present time. The borough does not maintain a listing of names of those people needing transportation. They have estimated a requirement for transportation for approximately 30 people (15 at the Municipal Building pick up point, and 15 at the Rittenhouse and U.S. 11 pick up point), resulting in one bus being identified as an unmet need. Also, the identification of one ambulance as an unmet need was based on an anticipated, but unidentified requirement.

VIII. Radiological Exposure Control

Two dosimeters (DCA-622 and CDV-742) were actually on hand at the EOC. There was expressed confusion regarding the demonstration of dosimetry distribution for the exercise in that the EMC felt that the municipalities were to assume that adequate dosimetry and KI was already distributed and on-site. Therefore, no requests were made to the county regarding anticipated needs. Adequate supplies of both dosimetry and KI were simulated. The Radiological Officer was very knowledgeable and instructional in the use of the dosimetry equipment and KI. Although the borough's revised plan estimates a need for 15 units of dosimetry/KI, this does not represent the total number of emergency workers currently available, but is rather a target number at which the borough is aiming.

Instructions were also given to emergency workers regarding the location of the decontamination center at the Columbia-Montour Vo-Tech school.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Briar Creek Borough Deficiencies/Recommendations

1. Full staffing did not occur, and capability for a full second shift was not demonstrated for all EOC positions identified in the plan. The municipality should establish full, two-shift staffing capability for all designated EOC positions and demonstrate this capability in future exercises. The staffing list contained in the plan should be revised as necessary.
2. The borough EOC lacks plumbing, and does not have a backup generator. The borough should continue its efforts to upgrade the facilities at the EOC so as to support extended emergency operations.
3. Although borough officials intercepted a message indicating that evacuation had been ordered, they delayed contacting the county EOC for verification. The borough should immediately certify and/or clarify unclear messages or directions, especially regarding recommended protective actions.
4. Only one telephone line was available for use by the EOC staff. It is recommended that at least one additional telephone line be installed to allow simultaneous incoming and outgoing call capability.
5. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.

Briar Creek Township EOC

I. Activation and Staffing

A call was received at 1527 from the Columbia County EOC via the county radio link notifying the EMC that an Alert status was declared at the Susquehanna Steam Electric Station at 1510. The EMC verified this call with the county. Using a call list contained within his REP plan, the EMC used the commercial telephone system to contact some of the EOC staff and utilized a paging system for fire fighters to contact the remaining staff. The system was adequate for staff notification and mobilization. The EOC was fully staffed by 1730.

The EMC (and his deputy) can be notified at any time to activate the EOC and call-up staff using a paging system in place for notification of fire and other emergencies.

Representatives present in the EOC to conduct their duties included the EMC, Deputy EMC, Communications Officer, Radiological Officer, Police Coordinator, Fire and Rescue, Transportation Officer, RACES operator, Deputy Communications Officer and Deputy Radiological Officer.

The entire staff displayed adequate training in their job and, in many cases, cross-training in other skills. They were thoroughly familiar with the plan for Briar Creek Township.

Round-the-clock staffing was not demonstrated. The EMC acknowledged that there was no schedule for replacing all positions, but felt that selective manning during a real incident would be adequate.

II. Emergency Operations Management

The EMC was effectively in charge of the EOC as specified in the township plan. The EMC kept the staff aware and involved in the decision making process. The EMC relied on the staff to manage their duties and consulted with them as needed. Copies of the plan were available and were consulted by the staff. Message logs were kept by the Communications Officer and major status changes were posted for all participants to see, in addition to general announcements made by the EMC concerning status and actions expected.

Access to the EOC was controlled by posting a guard at the only entrance. The EOC received notification of Alert status at 1527, Site Area Emergency at 1755 and General Emergency status at 1943.

The EOC did not receive notice of evacuation from the Columbia County EOC. Through use of a scanner, a Luzerne County radio message was intercepted at 1955, which indicated that a general evacuation was to be implemented. The township officials accepted this notification as official, and did not verify the information with Columbia County EOC.

Calls were placed to the Columbia County EOC to activate ambulance and bus companies on standby.

Briar Creek Township officials were dissatisfied with the limited amount of information received from Columbia County EOC concerning the exercise situation and response activities. Radio transmissions from Luzerne County were overheard, and the township relied on this information for situation updates.

There was no participation by elected officials despite efforts to involve them.

III. Facilities

The EOC provided sufficient space, and was equipped with more than sufficient tables and chairs and was adequately lighted. It is currently equipped with only one telephone, but this did not pose a problem during this exercise. Noise levels at the EOC were not excessive. A kitchen is available to support extended operations, but bunks and showers were not observed; however the RERP calls for the relocation of police, fire and municipal EOC activities in the instance of evacuation. Backup power is available by utilizing a portable generator from the fire equipment and connecting it to a pre-wired receptacle on the building.

A status board was maintained which presented the emergency classification level and significant events.

Maps showing evacuation routes, relocation centers and access control points were posted for all participants' use.

IV. Communications

The municipal EOC demonstrated communications with Columbia County EOC by the new radio system and by telephone. Some problems were encountered with the new radio system in that the Luzerne County EOC communications continually walked on the broadcast from the Columbia County EOC and responses from Briar Creek to Columbia County.

A RACES operator was assigned to the township, but was not integrally involved or utilized extensively by the township as a means of backup communications. Portable radios were available and were used to scan message traffic within the county.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The route alert teams for Briar Creek Township were assembled at the EOC during the Site Area Emergency, were given dosimetry and KI, and provided appropriate instructions. The Search and Rescue Chief briefed

his team regarding their routes and special instructions concerning the hearing-impaired. The four teams were dispatched as soon as the sirens were sounded at 1955.

The instructions to the public were prescribed and informed the populace to tune to their EBS stations for specific information. This instruction was accomplished by vehicles equipped with PA or bullhorns. The route alert teams were supplied with the addresses of the hearing-impaired persons. The EOC has developed a list of mobility-impaired and hearing-impaired persons from a survey which was recently conducted. The list is maintained in the personal computer owned by the EMC.

During the exercise the drivers were instructed to stop at the home of each hearing-impaired person for one minute to simulate knocking and displaying a printed message which was in each folder given to the route driver.

VII. Protective Actions

Instructions to evacuate were overheard from a Luzerne County radio transmission at 1955 and traffic control points were immediately activated. The EOC staff believes that evacuation routes can be kept open despite impediments to travel which could occur.

The EOC does not participate in controlling access to contaminated areas.

The EOC distributed instructions to the public along its routes by use of vehicles equipped with PA and bullhorns. As a result of previous testing and timing of the alert routes, the township had recognized its alert routes and was interested in observing the effectiveness of the runs. However, the exercise was terminated before the routes were complete.

At 1620, arrangements for transportation needs for buses and ambulances were reported to the Columbia County EOC.

VIII. Radiological Exposure Control

An adequate supply of simulated mid and high-range dosimetry equipment was available, as well as a charger, record keeping cards and TLDs.

All emergency workers were given appropriate and detailed instructions regarding the use of the dosimetry and KI. They were instructed as to maximum exposures allowed and where to report for decontamination.

No demonstration of protective measures for the EOC were observed, although the EMC was aware of the relocation site designated in the plan.

IX. Media Relations

No space was set aside or needed for press briefings as there were no contacts by the media. Normally it would be expected that media inquiries would be directed at the county or State levels.

X. Recovery and Reentry

Not applicable.

Briar Creek Township Deficiencies/Recommendations

1. Capability for full, second-shift staffing of all EOC positions identified in the plan was not demonstrated. The municipality should establish a full, second-shift staffing capability for all EOC designated positions, and demonstrate the capability to man two full shifts in future exercises. The staffing list contained in the plan should be revised as necessary.
2. No township elected officials participated in the exercise. Elected officials should be encouraged to participate in all future exercises, as they are charged with ultimate responsibility for protecting the township residents.
3. Township authorities learned of the evacuation from an intercepted Luzerne County radio transmission, but never contacted Columbia County for official confirmation or instructions. EOC personnel should be instructed to immediately verify unclear or unofficial instructions and/or recommendations for protective actions with the Columbia County EOC.
4. Despite some communications equipment problems, the EOC staff did not make effective use of the RACES operator, who was available for backup communications. RACES involvement should be more extensively tested and utilized during future exercises.
5. Only one telephone line was available for use by the EOC staff. It is recommended that additional telephone lines be installed to establish simultaneous incoming and outgoing call capability.
6. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.

Fishing Creek Township EOC

Fishing Creek Township authorities decided prior to the exercise not to activate the EOC or otherwise participate. In taking this action, Fishing Creek Township authorities failed to provide reasonable assurance that they can and will implement adequate measures to protect the health and safety of the public, as required by State law and in accord with the provisions of the Township's Radiological Emergency Response Plan.

Fishing Creek Township Deficiencies/Recommendations

1. Fishing Creek Township did not participate in the exercise. Township officials must demonstrate their capability to protect the health and safety of the public in future exercises.

Mifflin Township EOC

I. Activation and Staffing

Activation of the Mifflin Township EOC began with a radio pager message to the Acting Emergency Management Coordinator at 1529. The call was sent from the Columbia County EOC to indicate an Alert emergency status at the Susquehanna Steam Electric Station. A telephone call-back to the county verified the call. In accordance with the RERP, the EOC's first shift staff and Township Supervisors were called by the EMC, but were not at their homes. A call list was used to reach staff. At 1753, after the condition had degraded to a Site Area Emergency, the staff arrived. All positions were filled by 1806. At that time the positions of manager, communications, fire, medical, police, transportation, and a RACES operator were present. The radiological task was given to the Transportation Coordinator as the former Radiological Officer had recently resigned. All tasks, including the radiological exposure control task, were performed professionally and orderly by knowledgeable and dedicated staff. The staff knew their designated tasks and demonstrated adequate use of task checklists.

Round-the-clock staffing was demonstrated by presentation of a roster of second shift personnel. However, the township should establish a formal replacement for the radiological position, and revise the RERP to reflect 24-hour staffing capability.

II. Emergency Operations Management

Mifflin Township EOC management was excellent. The Chairman, Board of Supervisors, acted as EMC and had the EOC prepared before the staff arrived. Another Township Supervisor assumed the coordinator's role upon arrival. The arriving manager was very effective at systematically checking that all tasks were being performed in a timely manner, that tasks were delegated and coordinated so as to be completed at the proper time, and, in general, addressing problems as they arose.

Message handling was efficient. The Alert status was received at 1529; the Site Area Emergency at 1753 and the General Emergency at 1940. At 1952 the county notified the township that the sirens and EBS systems were to be activated at 1955, however, no direction regarding evacuation was received at that time. A radio transmission from PEMA's Eastern Area Office was overheard at approximately 2005 which indicated that all risk counties were to be evacuated. Township officials did not contact the Columbia County EOC to confirm this information.

Access to the EOC was controlled by locking the access door.

III. Facilities

The EOC was adequately equipped with tables, chairs and lighting to support emergency operations. Only one commercial telephone was available, however, which could not receive incoming calls, and backup power was not available. A radio was available to monitor EBS messages.

The items posted in the EOC included an up-to-date status board, a map of evacuation routes and a list of the locations of emergency facilities, e.g., decontamination center, mass care center, TCP, etc. A map, which indicated wind direction/degrees was not available, however, the availability of related wind speed/direction data was only made available to the township on a requested basis.

IV. Communications

The township did not have adequate primary communications capability for the exercise. The newly-installed radio system, which was intended to provide the primary means of communications with the county EOC, did not operate properly, and was not used. The single commercial telephone available in the EOC, which was to provide backup, could not receive incoming calls. The RACES operator, therefore, played a critical role in providing communications support. Communications were primarily limited to contact with the Columbia County EOC and with staff alerting and activation procedures.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Public alerting and instruction activities at the Mifflin EOC were limited to the dispatch of one route alerting vehicle to complete its route. A single driver proceeded to complete the route in a personal vehicle at 1955 in coordination with the sounding of the siren. The return of this individual to the EOC was not observed.

VII. Protective Action

One traffic control point was briefly manned by the township police. Its location was at Market and Third Streets. The observer was told that during an emergency, three wrecker trucks would be available to maintain clear evacuation routes.

The EOC had a written list of three individuals that were handicapped and mobility-impaired. Immediately after the siren sounding, the manager noted that the ambulance (requested from Columbia County at 1739) would, at this time, be sent to pick up one of the mobility-impaired residents, and that volunteers would attend to the remaining two individuals.

VIII. Radiological Exposure Control

This activity was demonstrated largely by simulation. The EOC was provided with one O-20R and one O-200R pocket dosimeter. The TLD badge was simulated by a piece of paper and KI simulated by an empty vial.

No instructions were provided to the staff when the equipment was distributed, but appropriate forms and procedures were available and used by the Acting Radiological Officer. The Medical Officer was aware of KI dose and use procedures and explained the use of KI to the emergency staff workers.

A sign was posted indicating the location of the decontamination center at the Columbia-Montour Vo-Tech School. EOC staff were aware of their relocation site should evacuation of the EOC be necessary, but such an evacuation was not demonstrated.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Mifflin Township Deficiencies/Recommendations

1. Full EOC staffing did not occur, as the designated Radiological Officer recently resigned. The township demonstrated capability for 24-hour EOC staffing, although the staffing list contained in the plan does not indicate this capability. Mifflin Township should establish a formal replacement for the radiological position; the REP plan staffing list should be revised to reflect this capability, as well as 24-hour staffing capability.
2. Township EOC staff intercepted a PEMA Eastern Area Office radio transmission which indicated that an EPZ evacuation had been directed; this was accepted without verification. EOC personnel should be instructed to verify and confirm all unofficial instructions and/or recommendations for protective actions with Columbia County EOC.
3. The township EOC's only commercial telephone line could not receive incoming calls. The telephone line should be repaired to permit incoming call capability.
4. An unmet need at the township EOC, not provided for, was an emergency power generator. This item should be acquired, or otherwise made available to the township.
5. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.

North Centre Township EOC

I. Activation and Staffing

Activation of the EOC was initiated at 1527, when the EMC was notified via pager of the Alert status. The EMC verified the Alert notification with the county EOC, via telephone, at 1529. An up-to-date call list was used to notify and mobilize the EOC staff. Staffing was completed at 1736 (with the exception of the Fire Chief position, which was filled by the Deputy Coordinator), and the county was so notified. Seven officials were present at the EOC representing the following positions: Emergency Coordinator, Deputy Coordinator, police, Communications Chief, Radiological Chief, transportation, medical, and the Board of Supervisors. EOC staff persons demonstrated, in general, adequate knowledge with regard to the REP plan.

Round-the-clock staffing was not demonstrated during the exercise. The Emergency Coordinator stated he does not have sufficient staff or facilities to support 24-hour operations.

II. Emergency Operations Management

The Emergency Coordinator was in charge of the EOC as designated in the plan. He provided effective leadership and was knowledgeable of the EOC procedures. A copy of the township plan, along with an activity checklist, were available and were used by the EOC staff. Briefings were performed on an informal basis. Communication logs were maintained and message forms were effectively utilized. Status boards were promptly updated for the emergency action levels.

The Alert, Site Area Emergency and General Emergency were received at 1527, 1754, and 1938, respectively. Notification was received at 1952 regarding the 1955 activation of the EBS and siren systems; this activation, however, did not include the recommendation for any protective actions (Evacuation).

Upon activation, access to the EOC was effectively controlled by the Emergency Coordinator. The EOC staff has identification and badges; guards and sign-in sheets were not utilized. Based on the size of the township, where most inhabitants are reportedly known, the EOC access control was considered adequate. One elected official was present during the exercise. He arrived after the EOC became operational and left before the exercise was completed. He remained at the EOC from 1752 to 1815.

III. Facilities

The North Centre Township EOC is located in the Municipal Building, just outside the EPZ. Portions of the township lie within the ten-mile EPZ. Bunks, showers, kitchen facilities are not available for 24-hour operation. The facility has adequate space, lighting and furnishings. Emergency classification boards were available. Maps depicting the EPZ (without sectors), evacuation routes, traffic control points and relocation centers were posted.

IV. Communications

A two-way radio was recently provided for township EOC use. This exercise was the first time that this radio communications system was used. A permanent aerial was not available, so an aerial was improvised by wiring the radio to an aerial mounted on a truck outside. The radio equipment operated adequately. The RACES operator assigned to the township was not available at the EOC during the exercise. He arrived after the exercise had terminated. Backup communication to the county was provided via commercial telephone.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Notification was received from the county at 1952 that sirens were to be sounded at 1955. A route alerting team consisting of one vehicle was dispatched at 1956, immediately following the sounding of the sirens; it took approximately 40 minutes to complete the route. PA equipment for alerting was not available at the EOC; and township officials requested four portable radios and three bullhorns from the county EOC at 1655. Confirmation as to whether the county could provide this equipment was not observed. There are no public or private institutions requiring notification within the township.

VII. Protective Action

The North Centre Township EMC has a list of one mobility-impaired individual; no hearing-impaired individuals have been identified. The Pennsylvania State Police are responsible for traffic control along main evacuation routes; North Centre Township is responsible for one traffic control point on secondary routes. Simulated manning of this traffic control point was initiated at the General Emergency classification by the Police Chief.

No dairy farms, food processing plants or open water supplies are located within the township. A bus was requested at 1723 from the county to assist in the evacuation process if ordered by the county.

VIII. Radiological Exposure Control

The Columbia County EOC had pre-distributed one set of dosimeters (O-20R and O-20OR), dosimeter charger, and simulated KI and TLDs to the township EOC. Distribution of simulated dosimetry was made to the emergency operations staff during the Site Area Emergency classification, as specified in the plan. The Radiological Chief was knowledgeable in the use of the equipment, and provided instruction in its use. According to EOC staff, emergency workers with activities in the field would be required to go to the Columbia-Montour Vo-Tech decontamination center to be monitored before return to the EOC.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

North Centre Township Deficiencies/Recommendations

1. Full staffing did not occur, and capability for a full second shift was not demonstrated for all EOC positions identified in the plan. The municipality should establish full, two-shift staffing capability for all designated EOC positions and demonstrate this capability in future exercises. The staffing list contained in the plan should be revised as necessary.
2. The RACES operator assigned to the EOC did not arrive until after the exercise had been terminated. Future exercises should ensure the presence of a RACES operator during the course of the exercise to provide backup communications capability.
3. Unmet needs not provided for at the township include portable radios for traffic control personnel. These items should be acquired or otherwise made available.

South Centre Township EOC

I. Activation and Staffing

Activation of the EOC was initiated when the Emergency Management Coordinator (EMC) was notified of an Alert emergency classification at the Susquehanna Steam Electric Station at 1555.

A written, up-to-date call list was used to notify EOC staff. Staffing at the EOC was complete at 1650 and included all three of the Township Supervisors, police, fire, RACES and the Emergency Management Coordinator. Several of these individuals performed dual tasks and were knowledgeable regarding the RERP, however, it is recommended that specific individuals be assigned to each of the EOC functions, with a designated second shift of persons to provide a 24-hour staffing capability.

II. Emergency Operations Management

The EMC, as designated in the RERP, effectively managed EOC activation. During the course of the exercise, however, the EMC departed the EOC in order to coach a ball game, and delegated his responsibilities to one of the Township Supervisors. It is recommended that in future exercises all staff persons demonstrate an active role in EOC activities during the entire exercise.

Periodic briefings were held with EOC staff; message logs were efficiently maintained. The EOC was notified of Alert at 1555, Site Area Emergency at 1754 and General Emergency at 1940. At 1950, the EMC received notification via his pager that evacuation of the ten-mile EPZ had been ordered, and that the EBS and siren public notification systems were to be activated at 1955. This notification was a result of a Luzerne County transmission which was received at the South Centre EOC; verification to Columbia regarding the evacuation order was not completed until 2011, 21 minutes after the Luzerne transmission. The South Centre Township EMC should be instructed to immediately verify unclear and/or unofficial instructions for protective actions with the Columbia County EOC.

Elected officials were actively involved in EOC operations and decision making.

III. Facilities

The South Centre Township EOC was adequately equipped with furniture, lighting and space. Portable backup power is available through the fire department. A status board was clearly visible and was kept up-to-date regarding significant events. Maps were posted which indicated evacuation routes and access control points; information regarding relocation centers and population in the area was available at the EOC.

IV. Communications

Although the primary means of communication was intended to be the new county radio system, this network did not operate effectively; messages received over the system were severely truncated. The county EOC was telephoned at 1758 to inform them that messages received via this means were not being properly received and to ensure that a RACES operator had been dispatched by the county for township use. The RACES operator reported to the township EOC at 1857 and provided effective communications support with the county. Future exercises should demonstrate prompt activation of RACES personnel to provide a backup means of communication.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

A route alert team manned by fire personnel was dispatched at 1955 to run one of six alert routes. Portable "walkie-talkies" were used to communicate with the team, which reported completion of the route within 15 minutes. According to EOC staff, sufficient vehicles are available to run all six routes simultaneously.

VII. Protective Actions

The township is responsible for manning four traffic control points along secondary routes within the township. According to EOC staff, adequate manpower and vehicles are available to complete this task.

One mobility-impaired person has been identified by the township; according to EOC staff, this individual resides next to his father who would be responsible for securing his movement from the area. No indication was made that this information is in written format.

The EMC indicated that no farms or food processing plants are in the township.

VIII. Radiological Exposure Control

Two dosimeters (mid and high-range), a charger, and record keeping forms were available at the township EOC. Distribution of dosimetry to emergency workers was not demonstrated or simulated; it was understood by the EMC that the pre-distribution of the one dosimetry kit by the county was intended to simulate dosimetry distribution. According to EOC staff, approximately thirty dosimetry kits and KI would be needed by the township for emergency workers; however, the REP plan reports a need for 103 units. The need for this equipment should be reevaluated and a determination of need established. EOC staff appeared familiar with dosimetry use.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

South Centre Township EOC Deficiencies/Recommendations

1. Full staffing did not occur, and capability for a full second shift was not demonstrated for all EOC positions identified in the plan. The municipality should establish full, two-shift staffing capability for all designated EOC positions and demonstrate this capability in future exercises. The staffing list contained in the plan should be revised as necessary.
2. The township EMC presided over the EOC activation, but did not remain for the entire exercise. All EOC staff members should continue their involvement in response activities during the entire course of the exercise.
3. Although the township plan identifies a need for 103 units of dosimetry/KI, the EOC staff stated that only about 30 such kits would be needed. The required number of units of dosimetry and KI to meet the number of emergency workers within this township should be reevaluated in coordination with the county, and the plans revised to reflect any change in need as required. Also, distribution (real or simulated) should be demonstrated in future exercises.
4. The EMC learned of the evacuation via an intercepted Luzerne County radio message, but delayed contacting the Columbia County EOC for confirmation for 21 minutes. The South Centre Township EMC should be instructed to immediately verify unclear and/or unofficial instruction for protective actions with the Columbia County EOC.
5. Information regarding mobility-impaired residents was not in written form. The township should maintain a written list of mobility-impaired residents at the EOC.

RISK MUNICIPALITY ACTIVITIES Luzerne County

Black Creek Township EOC

I. Activation and Staffing

The township Emergency Management Coordinator (EMC) received a telephone call from the Luzerne County EOC at 1535. Previous attempts by the county to reach the EMC via a pager failed. The EMC is of the opinion that the county paging system does not work because sufficient measures have not been taken to overcome difficulties in radio transmission caused by the mountainous terrain in southern Luzerne County. The call was verified through voice recognition by the EMC.

The EMC arrived at the township EOC at 1552 and continued mobilization procedures which he had begun at home. The call lists used appeared to be up-to-date. No major difficulties were encountered in contacting EOC staff. Staffing was complete by approximately 1640. Double staffing was established for communications, transportation, fire/rescue, medical/ambulance, radiological and security functions. The deputy EMC was not able to attend the exercise.

The EOC staff displayed quite adequate familiarity with RERP implementation.

II. Emergency Operations Management

The Coordinator was effectively in charge. He held periodic briefings and involved the staff in decision making. Copies of the county and township plan were available and used. Checklists and SOPs were frequently consulted. Message handling was adequate (see Communications section). Access to the EOC was controlled.

The EOC received notice from the county of Site Area Emergency status at 1754 and General Emergency at 1940. Orders for Evacuation were received at 1950. Several Township Supervisors were present during periods of the exercise and were available for consultation throughout.

III. Facilities

The EOC was housed in the Weston Volunteer Fire Department station in Weston. Weston is in the southernmost part of Black Creek Township and is outside the 10-mile EPZ. There was sufficient furniture, space and lighting, but only one telephone. Back-up power is available from several sources and is used frequently during routine fire operations. A status board was clearly visible and kept up-to-date on significant events, including declarations of emergency classification levels.

Plume EPZ maps with evacuation routes were available in abundance, but not posted. Access control points were posted. Relocation centers, the host school and decontamination centers were all posted.

IV. Communications

The EOC was sufficiently equipped with radio communications equipment. The new county-wide radio system was the primary link to the county EOC. Some difficulties were encountered in both reception and transmission, however, these difficulties did not seriously impair the township's response. The EMC and Communications Officer agree that outdoor coaxial wire is needed and that the antenna should be installed on the EOC roof in order to improve the radio's functioning.

As noted above, the paging system used by the county for initial alerting of the EMC did not work.

The EOC has only one telephone. The slow pace of events in this exercise enabled the township to get by with one phone (although it was almost never not in use). A faster breaking incident could easily prove this one phone insufficient.

The new county radio and the regular police and fire radio network were located within several feet of each other. When combined with the volume of internal EOC conversation, the noise, at times, reached a high level with the potential for causing confusion.

The county was unable to provide the RACES operator requested by the township. The township, in turn, was unable to locate a local person who could have provided RACES communications. The lack of a RACES operator did not seriously impede RERP implementation.

V. Dose Assessment and Protective Action Recommendations

Not applicable at the municipal level.

VI. Public Alerting and Instruction

The EOC's roll in public alerting consisted of the dispatching of route alerting teams as a back-up to the siren system. The teams were dispatched at 1955 (simultaneous to siren sounding) in response to the county directive received at 1950. The message carried by the teams was an exercise message, i.e., that an exercise was in progress and that, in the event of a real emergency at Susquehanna, residents should turn on their radios or televisions to receive emergency broadcast system instructions.

The township EMC and several other EOC staff advised that there are two significant "dead" spots in the township where sirens cannot be heard because of the topography.

VII. Protective Action

A. Evacuation and Access Control

Activation of local traffic control points was promptly ordered upon declaration of General Emergency in anticipation of a possible evacuation. The resources of the township appears quite adequate to handle the limited number of traffic and access control points for which the township is responsible.

B. Special Evacuation Problems

The township has distributed a questionnaire to all residents requesting information on any special requirements for evacuation caused by disability or hearing impairment. The questionnaire has resulted in a short list of individuals which the EMC knows to be somewhat incomplete. The EMC is confident, however, that most, if not all, mobility-impaired persons are known by township emergency staff and would be provided for in the event of an evacuation.

VIII. Radiological Exposure Control

The EOC is presently equipped with one mid-range and one high-range dosimeter and a charging device. A recent county decision should shortly result in the permanent storage by the township of 40 dosimetry/KI kits for emergency personnel. For this exercise, KI, TLDs and additional dosimetry was simulated.

The township's two radiological officers were well-versed in the use of dosimetry, KI, records, maximum doses, decontamination procedures, etc., and provided excellent briefings to emergency workers during the exercise. The EOC is not in the ten-mile EPZ.

IX. Media Relations

There was no demonstration of arrangements for media relations, nor is there any mention of same in the township RERP, nor does there appear to be any particular need for same due to the township's rural character. The EMC would be capable of handling any media inquiries that might be made.

X. Recovery and Reentry

Not demonstrated.

Black Creek Township Deficiencies/Recommendations

1. The township EOC is equipped with only one telephone. It is recommended that an additional telephone line be established for the Black Creek Township EOC.
2. Radios at the EOC were located in close proximity, resulting in occasional noise interference. The township should consider arranging the EOC so that the various radio reception equipment is separated in order to avoid possible confusion.
3. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.
4. A RACES operator never arrived at the EOC. The assignment procedures should be revised by the county to assure that RACES operators will be provided.

Butler Township EOC

I. Activation and Staffing

Activation of the EOC was initiated when Luzerne County notified Butler Township at 1530 that the facility was at Alert status. The Police Chief verified the message by phone. The emergency staff were notified via tone alert radio. A written call list is available but not used because the tone alert radios negate the need for individual calls. Only the Township Supervisors were notified by telephone.

In an actual emergency, the county would telephone the Butler Township emergency number. The operator would then page emergency workers on the tone alert radios. An alternate system is that the emergency is reported to the county and paging is done over the county distribution pager or the county police radio.

Although notification was made promptly, a full complement of staff at the EOC was never achieved. Some of those who did participate arrived late.

The staff members present displayed adequate knowledge of their jobs. Since the first shift consisted of only the two Deputy Coordinators, they attempted to cover the duties of all missing members. They did a commendable job of covering all bases. Additional staff did not report until evening, after Site Emergency was in progress.

A shift change was demonstrated for the Deputy Coordinator and the Police Chief. Incoming staff were briefed as was the Radiological Officer, who arrived at 1825. The second shift Coordinator did a remarkable job in keeping things going. However, as the exercise progressed and actions picked up, it was impossible for him to do everything.

III. Emergency Management Operations

The Deputy Coordinator, as shown on the plan, was in charge of the first shift. Due to the small staff size, there was little need for periodic briefings, but when additional people arrived, they were briefed. A message log was kept and posted to a larger board. As the exercise progressed, all messages were received and recorded, but lack of staff prevented the log from being updated continually.

Access to the EOC was monitored by the Police Chief during the first shift. The second shift officer did not remain at the EOC for the entire exercise.

The township received radio notification from the county for Alert status at 1530, Site Emergency at 1755 and General Emergency at 1940. Radio interference was experienced during the General Emergency notification and the message was finally received by telephone. Radio notification to evacuate was received at 1950.

A call to activate emergency personnel and route alert teams to report to EOC for standby was issued at 1816. The Radiological Officer reported at 1825. Fire Police and TCP personnel reported at 1904. The Transportation Coordinator arrived at 1910, but stayed only for a 10 minute briefing. Route alert teams, which consisted of two fire units, did not arrive until 2015.

Copies of both the township plan and checklists were available and referenced. However, some discrepancies were noted between the two.

III. Facilities

Facilities were adequate and well arranged. Backup power, in the form of a generator, was requested as an unmet need from the county.

A message board was clearly visible. It was kept current until lack of personnel prevented. One map showing EPZ zones, traffic control points, route alert sections and pickup points was marked and posted. An additional wall chart indicated evacuation routes, relocation center, decontamination center and other data, in written form.

IV. Communications

Primary communication was via two telephone lines and the new county radio system. Luzerne County police radio, two local radio systems and ARES provided backup communications capability.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Route alert teams were dispatched from the township EOC twenty minutes after evacuation was ordered. A prescribed message was not used. Verbal message instruction was given to the teams by the Acting Coordinator.

VII. Protective Action

Traffic and access control was ordered promptly. Only two individuals, however, participated in the exercise.

The Deputy EOC Coordinator reported that adequate staff and vehicles were available to man traffic and access control functions simultaneously; however, this was not demonstrated.

In the event of bad weather, the Public Works Department is charged with clearing roads; a local wrecker service would be used for stalled cars, according to the EOC staff.

A list of four mobility-impaired individuals is on file. One person on the list is now deceased. No hearing-impaired people responded to the questionnaire issued by the township; therefore, it is assumed there are no residents in this category.

The Transportation Officer reportedly simulated arranging for ambulance service and bus pickup for evacuation from his home, and was thus not observed.

Notification of Job Corps, nursing homes, motels, etc. at the Alert stage was performed; however, continuing notification as the drill progressed was not observed. The Federal observer was advised that the Transportation Officer completed these notifications at the later phase. Since the Transportation Officer was at home, this was not observed.

VIII. Radiological Exposure Control

One item of each dosimeter, charger, records, badges, etc. was on hand in the EOC. Receipt of a full supply was simulated. The Radiological Officer advised that the number of kits on order would be sufficient. Lack of participants in the drill made this impossible to verify. The Radiological Officer was knowledgeable about the use of all equipment and simulated briefing and distribution to all participants at the EOC.

IX. Media Relations

Space was available for press briefing. No media people visited the EOC.

X. Recovery and Reentry

Not applicable

Butler Township Deficiencies/Recommendations

1. Full staffing did not occur, and capability for a full second shift was not demonstrated for all EOC positions identified in the plan. The municipality should establish full, two-shift staffing capability for all designated EOC positions and demonstrate this capability in future exercises. The staffing list contained in the plan should be revised as necessary.
2. Arrangements to provide bus and ambulance transportation were not performed at the Butler Township EOC, and this responsibility cannot be evaluated. In future exercises, the township EOC staff should demonstrate capability for providing the necessary evacuation transportation.
3. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.

Conyngham Borough EOC

I. Activation and Staffing

Activation of the Conyngham Borough EOC started with the Emergency Management Coordinator being notified of the Alert on his pager. This notification, he reported, occurred at 1526 and came from the Luzerne County EOC. This was verified. The police and fire department also received the information. The Emergency Management Coordinator arrived at the EOC at 1540 and, with other personnel, commenced setting up the EOC operation. Staffing was effectively completed by about 1700. However, the EOC was never fully staffed as there was no Radiological Officer and the Communications Officer never arrived. Organizations represented at the EOC included: city officials (the Mayor, three members of the Borough Council), the fire department, the police department, and the public works/streets department. The staff present generally were well-informed and well-trained. Round-the-clock staffing capability was not demonstrated. The EOC staff included individuals who showed excellent capabilities, performance and dedication to coping with the simulated radiological emergency.

II. Emergency Operations Management

The Emergency Management Coordinator for Conyngham Borough was effectively in charge of the emergency operations management as designated in the plan. He held periodic briefings to update staff on the situation, supplemented by separate briefings to separate operational groups, e.g., borough council members. A message log was kept of the significant messages, but copies were not reproduced and distributed. Access to the EOC was not actually controlled, but the existence of security and access control at the door was simulated. The EOC was notified that the plant was at Alert status at 1536, and that the plant was at Site Area Emergency status at 1756 and General Emergency at 1944. Actions taken to coordinate emergency activities included contacting police, fire department and ambulance service. Elected officials present at the Conyngham Borough EOC during the exercise included the Mayor and three members of the Borough Council.

III. Facilities

The Conyngham Borough EOC is located in the Borough Building. There was adequate furniture and space, and lighting. Only one telephone was available in the EOC. However, additional phones were available in the downstairs offices. A status board was not set up and kept up-to-date.

Plume EPZ maps were available, but not posted. Two large borough maps were posted which showed important locations, such as schools, and access control points. Evacuation route information, relocation center and related information was posted, but not specifically marked on a map. Backup power was not available at the EOC. EOC staff were aware of and discussed the less adequate aspects of the present EOC location and the possibility of construction of an extension of the fire house, which could provide a more suitable EOC facility in the future.

IV. Communications

Primary communications were with Luzerne County and were maintained using a portable FM communications radio. In addition, a number of hand-held radios were in use, operated variously at the county-wide fire frequency, the county-wide police frequency, and the four-zone police frequencies. In addition, the Emergency Management Coordinator's pager was in use. The pager only worked when on the charger, a distinct liability in providing for initial activation, although no problem arose during the exercise. Amateur radio operators for the RACES communications support arrived rather late, apparently due to some confusion in assignments. A telephone was available in the EOC, and additional police radio and telephone were available downstairs. Other local EOCs could be reached by fire department FM radio. No communications with schools were observed. This was not a responsibility of the local EOC. Ambulance service was reached by telephone. RACES was exercised for backup communication to Luzerne County. The main communication radio to Luzerne County appeared to work well. An unmet need in communication was for six portable radios to supply to fire/police volunteers driving in private vehicles to operate traffic control points.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

At 1951, Luzerne County informed the borough that the Governor had ordered an evacuation, to commence at 1955, following activation of the siren system and EBS. Two route alerting crews were dispatched at 1955 from the fire department. Both routes were completed within 45 minutes. Messages on AM and FM radio were monitored, following the sirens at 1955.

VII. Protective Action

Arrangements have been made with a private bus company to supply three buses to accommodate elderly residents in a set of high-rise buildings, as well as others needing transportation. There are two designated pickup points at opposite ends of the borough. Evacuation of a day care center in the borough seemed to have been planned somewhat unclearly; while EOC staff were aware and coping with it, the issue should probably be addressed more systematically. The EOC staff had a list of four mobility-impaired residents, with addresses. The EOC staff were aware of special needs and the fact that one of the individuals had passed on, although this information was not on the list. A request for an ambulance was simulated at 1955.

There were no hearing-impaired individuals identified in this community. The list will be updated and supplemented by a questionnaire prepared by the fire department, which is to be mailed out in the next few weeks to identify individuals requiring special assistance. Arrangements were made (simulated) for the transportation of the mobility-impaired individuals, including providing an ambulance for the one individual needing such transportation.

Activation of traffic control points was ordered promptly at 1955, following earlier preparation. However, only at 1953 did the police officer in command indicate an unmet need of six portable radios for six of his seven police/fire crew being sent to traffic control points in their private vehicles. There was some discussion of traffic volume, but this was not extensive. Access control was a county function; the borough only addressed traffic control. Police and streets department vehicles were available to cope with bad weather circumstances and stalled or wrecked vehicles; a tow truck was also available.

The EOC was evacuated following the simulated evacuation of the borough. New locations and phone numbers were provided to the county EOC (simulated).

VIII. Radiological Exposure Control

Actual radiological equipment available in the EOC consisted of one mid-range (0-20R) and one high-range (0-200R) direct reading dosimeter and a dosimeter charger; all other equipment was simulated. A wall placard containing appropriate radiological information (e.g., use of KI and maximum allowed radiation exposure) was posted. They simulated picking up their dosimetry and KI kits from the Sugarloaf EOC to which Luzerne County had simulated sending kits. Personnel were aware of and had written instructions available on the use of dosimeters, procedures for use of KI and maximum allowed exposure (25 Rem) for emergency workers. Several of the EOC staff had received training in radiological exposure control and procedures. EOC staff were aware of when and where to go for decontamination and the decontamination location was posted on a wall placard.

IX. Media Relations

No media representatives were expected or showed up during the exercise. Media relations were essentially not applicable to this local EOC.

X. Recovery and Reentry

Not applicable.

Conyngham Borough Deficiencies/Recommendations

1. Full staffing did not occur, and capability for a full second shift was not demonstrated for all EOC positions identified in the plan. The municipality should establish full, two-shift staffing capability for all designated EOC positions and demonstrate this capability in future exercises. The staffing list contained in the plan should be revised as necessary.
2. Conyngham Borough's unmet needs not provided for include an emergency generator and portable radios for traffic control personnel. These should be acquired or otherwise provided to the borough.
3. A status board was not used at the EOC. Posting of a status board with entries kept up-to-date should be done to keep all staff members advised of current status.
4. The RACES operator arrived late at the EOC. The assignment procedures should be reviewed by the county to assure that RACES operators will be provided in a timely manner.

Conyngham Township EOC

I. Activation and Staffing

At 1530 the municipal EMC received a phone call (the Alert notification) from the Luzerne County EOC activating the municipal EOC. The EMC immediately called the Luzerne County EOC to verify the message. Staffing was complete at 1759. Staffing consisted of the municipal EMC, fire, transportation, communications, radiological, medical and police personnel. First shift staffing were well-versed in their roles. Round-the-clock staffing capability was demonstrated by a combination of shift change and roster. Incoming staff on the shift change were briefed and also were well-versed.

The following staffing problems were noted:

1. Two first shift staff members could not be contacted because the call list was incorrect.
2. Staff members participating in some positions (radiological and communications) were not those identified on the staffing list. Some positions were staffed where the list showed no capability.

II. Emergency Operations Management

The municipal EMC was effectively in charge and held periodic update briefings with her staff. Access to the municipal EOC was controlled by a guard at the only entrance door. The EOC was notified of the events as follows:

Alert	1530
Site Area Emergency	1755
General Emergency	1941

The municipal EMC called the police, fire and ambulance organizations at 1535 to coordinate emergency activities as part of the EOC staffing. Two supervisors were present and involved in the decision making; they arrived at 1700 and 1800.

This was the first exercise for the EMC, who assumed the position recently (the staffing list in the plan has not been revised to reflect this staffing change). The new EMC was well-versed in her role.

III. Facilities

The EOC was located in the township garage at 48 Main Street, not in the township fire hall. This facility was adequate for use as the municipal EOC. The EMC indicated that the township hopes to eventually use a vacant school as its municipal building and EOC. The status board was clearly visible and kept up-to-date.

The following maps were posted: evacuation routes, route alerting sectors, relocation centers, ACPs. The following maps were available, but not posted: plume EPZ and radiological monitoring points. Population by evacuation area was not posted.

IV. Communications

Communications between the county EOC and municipal EOC was primarily via telephone with radio backup. Ambulances are contacted via telephone. The radio system connecting the county EOC and municipal EOC experienced some problems until 1735 in that the county could not always hear the municipal EOC. A problem with the phone connecting the municipal EOC and the fire hall was also experienced; the municipal EOC had to have the operator cut in to connect. Although the county EOC advised the municipal EOC at 1603 that a RACES operator was being dispatched, none arrived.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The municipal EOC played a role in public alerting. When the county EOC radioed the municipal EOC at 1950 advising that the sirens would activate at 1955, the fire representative called the fire company telling them to start the engines to commence route alerting (1956). Route alerting took about 20 minutes. At 2003 the one factory in the township was called. The factory indicated that the sirens were barely audible and that if the windows were shut and the factory in full operation, the sirens would not have been heard.

VII. Protective Action

Activation of TCPs was promptly ordered. The three TCPs were manned by three municipal police. The Luzerne County EOC radioed the municipal EOC to advise that the state police would man additional TCPs.

The medical representative was aware of the location of seven non-English speaking people, one hearing-impaired person, and thirteen non-ambulatory people. This information was in written form and confirmed at Site Emergency status. Arrangements were made for the appropriate actions (i.e., notification and/or transportation).

VIII. Radiological Exposure Control

Mid and high-range dosimeters were available along with a charger, record keeping cards, and TLDs (Note: Dosimeters and KI were simulated). Fifty dosimeters were needed and available. Adequate supplies of KI were also available. The Radiological Officer was aware of proper procedures for use as well as maximum dosage allowed without authorization. The staff was advised of when and where to go for decontamination procedures. In addition, self-reading dosimeter information was posted.

Since the EOC was in the plume, measures were taken to protect the personnel against exposure.

Staff were to go to the decontamination center in Plymouth Township Municipal Building and then to Lake Lehman High School in Lehman Township for the alternate seat of government. However, the school phone number was unknown.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Conyngham Township Deficiencies/Recommendations

1. Staff members participating during the exercise were not those identified on the staffing list contained in the plan, and some positions were staffed where the list showed no capability. The township's staffing list should be revised and maintained to indicate current status.
2. Staff notification lists were incorrect or incomplete for some staff members. The township's notification call list should be corrected and completed, and maintained in a current status.
3. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.
4. A RACES operator never arrived at the EOC. The assignment procedures should be revised by the county to assure that RACES operators will be provided.

Dorrance Township EOC

I. Activation and Staffing

Activation of the EOC began when the EMC was alerted at 1527, via the pager, that an Alert had been declared at SSES at 1510. After confirming the message with the Luzerne County EOC at 1531, the EMC began notifying and mobilizing the EOC, in conformance with the plan procedures.

The EMC arrived to activate the EOC at 1547. EOC security and access control were soon in place, and communications via the new radio/pager system were established with the county EOC by 1600. Although other positions were staffed much earlier, the EOC was not completely staffed, in conformance with the plan, until the county-activated ARES operator arrived at 1737.

Copies of the township's emergency plan were available and were referred to by the EMC, deputy EMC and EOC administrative staff. The total roster of personnel includes 50 active personnel for two 12-hour shifts per day. During this drill a peak of 30 people were counted within the EOC. The services included the EMC staff, police, transportation, fire/rescue, medical and radiological staffs. For this exercise a dual staffing pattern was used to provide training and experience, and to demonstrate 24-hour staffing.

II. Emergency Operations Management

In accordance with the plan the EMC was the individual effectively in charge. All significant messages were posted by the deputy EMC on the emergency status board. During the exercise there were constant group briefings which included all appropriate personnel. These were conducted by the EMC. Early in the exercise, a list of unmet needs was communicated to the Luzerne County EMA. Among the unmet needs was a request for an emergency generator. The unmet needs were a constant referral item in the early part of the exercise. The EMC also requested weather information at various times.

All messages were tape recorded and transcribed. The messages were efficiently distributed by a courier between rooms in the EOC and among the EMC administrative and operations personnel.

The significant events occurred as follows:

Alert	1527
Site Area Emergency	1754
General Emergency	1940
Evacuation	1955

The management and operations functions were excellent; adherence to the written plan was evident throughout.

III. Facilities

The staff, and the many functional activities they provided, made the EOC an effective communications, command, and control facility. The facility did not have emergency power, cots, blankets, or a kitchen. All required posted charts, maps, and other displays and appointments exist per the Dorrance written plan.

IV. Communications

The township's equipment and procedures were adequate for communications between it and the county EOC.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Alerting and instructing the hearing-impaired persons in the township was simulated.

VII. Protective Actions

Many of the protective action components of the township plan were simulated. It was demonstrated that augmentation of staff by Pennsylvania State Police was necessary for traffic control, especially for portions of Interstate 81 and U.S. 309, which had special traffic patterns due to roadwork. The dispatch of two Pennsylvania State Police was simulated. The EMC and staff are very knowledgeable and aware of special evacuation needs of township residents. They simulated dispatching ambulances, rescue vehicles, buses and other forms of transportation, as necessary.

VIII. Radiological Exposure Control

This was a simulated exercise. There are four persons on the EOC staff who have had formal radiological exposure courses; another sixteen are taking training courses from township resource persons. The EMC requested a total of fifty items from the county, including mid and high-range direct-read dosimeters, permanent record badges and KI kits. A dosimeter charger was also requested. The twenty-five rem limit exposure was known by all personnel.

IX. Media Relations

Media are not permitted during actual emergencies in the township EOC. However, since a great deal of media coverage preceded the SSES exercise, a local newspaper reporter was admitted and a briefing was simulated for her.

X. Recovery and Reentry

Not applicable.

Dorrance Township Deficiencies/Recommendations

1. The township's unmet needs which have not been provided for include an emergency generator for the EOC. This item should be acquired or otherwise provided to the township.

Hollenback Township EOC

I. Activation and Staffing

At 1510 the EMC was notified by the county via portable radio that an Alert had been declared at Susquehanna and that the EOC was to be activated. The EMC verified the call by utilizing the toll-free number to Luzerne County. The EOC was activated at 1535 and the EMC proceeded to activate the call-down list. The deputy EMC was not available, but a volunteer replacement proceeded to the EOC at 1615 and began recording messages and operating county radio. The other organizations represented were fire/rescue and medical/ambulance services. Round-the-clock staffing for these services was accomplished by double staffing. Not present were a Transportation Officer or Radiological Services Coordinator. Township Supervisors were present at the EOC after 1930. However, the EMC and his deputy designee were capable of conducting operations as outlined in the plan. The police (service) staffing position was not filled as per the township plan. Those staff members present at the EOC displayed adequate knowledge of their responsibilities.

II. Emergency Operations Management

The EMC, as designated by the plan, was effectively in charge of the township's emergency operations and was effective in directing his staff to address various situations and actions. The EOC was notified of the Alert status at 1510, the Site Area Emergency at 1758 and the General Emergency at 1943 by two-way radio and verified via the same radio.

The Governor's Disaster Proclamation was received by the radio at 1858 and verified by the county via the radio. At 1952 the township received a message from Luzerne County that at 1955 the sirens and the EBS would be activated. At 1957 the sirens sounded. However, no EBS message was heard on the radio monitored at the EOC. At 1959 evacuation procedures were simulated following the sirens. At this time route alerting vehicles were on standby and traffic control points were in readiness. The one hearing-impaired resident would have been notified by the route alert team. A radio message was received from the county at 1915 that no RACES operator would be available.

III. Facilities

Sufficient furniture, lighting and space were available. One commercial telephone was installed in the fire hall. Hollenback Township Municipal Building was not utilized as the EOC (as is indicated in the plan) because of the unavailability of telephone line hook-ups. Therefore, the fire hall (directly adjacent to the municipal building) was utilized as the EOC. Housekeeping support facilities were available and adequate. Backup power was available from a fire truck generator. The EOC was equipped with an emergency, battery-powered lighting system.

IV. Communications

The two-way radio picked up some disturbance on the channel, but was functional. All messages were received and verified over the two-way radio net, telephone verification was not necessary.

Although the municipality twice requested a RACES operator (at 1700 and 1730) from the county as an unmet need, no RACES operator was dispatched to the EOC. Verification from the county that "no RACES operator would be forthcoming to Hollenbach Township" was received by the municipality at 1915. Therefore, communications were continued via the two-way county radio.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The township relies on the siren warning system that sounded at 1957. Route alerting was simulated. One of the two fire trucks and the ambulance were equipped with a public address system. The one hearing-impaired person would have been contacted during the route alerting. The route alerting runs were simulated to have taken 45 minutes to complete. The radio station monitored did not broadcast an emergency message.

VII. Protective Action

According to the plan, the state police will man TCPs along major evacuation routes. According to the EMC, only one (1) municipal police would be posted at the Hobby Corner. This action was simulated. The EMC did not involve the state police in this exercise, but was aware of their responsibility. The EMC promptly activated the TCP after the county siren sounded. It was observed that no bus or other transportation vehicle was available to the EOC for transit-dependent residents. The EMC requested a bus (as an unmet need) at 1730. According to the EMC, there are no residents requiring ambulatory services, and only one (1) hearing-impaired resident. The EMC advised that the route alert team in the sector of the hearing-impaired would have contacted the resident.

Hollenback is a farming community; the EMC was aware of the location of all farms, in the event that ingestion pathway measures were needed.

VIII. Radiological Exposure Control

In accordance with the scenario, the full complement of dosimetry/KI was not available, but was simulated. However, several mid and high-range dosimeters were available for demonstration and training purposes, and were distributed to some EOC personnel. Instructions on Radiological Information were posted. The medical officer was knowledgeable of the procedures for KI distribution.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Hollenback Township Deficiencies/Recommendations

1. The township EOC was not fully staffed in accordance with the township plan, as the Transportation and Radiological positions were not manned. Capability for full EOC staffing should be established, and demonstrated at future exercises.
2. Some positions were staffed by people other than those designated in the plan. The staffing list should be revised, if necessary, and all staff members, as designated in the plan, should participate in future exercises.
3. The EOC was equipped with only one telephone line. It is recommended that at least one additional line be installed to allow simultaneous incoming and outgoing call capability.
4. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.
5. A RACES operator never arrived at the EOC. The assignment procedures should be revised by the county to assure that RACES operators will be provided.

Hunlock Township EOC

I. Activation and Staffing

The activation and staffing of the EOC occurred according to the plan for the township. The Alert notification was received from the county EOC at 1529. This notification was verified at 1534. The procedures for staff mobilization were adequately demonstrated. The Deputy EMC employed an up-to-date call list (written) to notify the staff. Full staffing, for one shift, was completed at 1716, although most positions were manned earlier. The staff positions included the EMC, Communications Officer, Transportation Officer, Medical Officer, Radiological Officer, Fire Services Chief and Deputy, Fire/Police Chief and two Township Supervisors. One RACES operator arrived during the Alert stage. All positions were double staffed prior to the termination of the exercise which demonstrated two-shift capability for round-the-clock operations. The entire staff exhibited adequate training and knowledge of the various assignments each was responsible for.

II. Emergency Operations Management

The EMC or Deputy EMC, as designated in the RERP, was in charge of Hunlock Township's emergency response operation. Periodic staff briefings were held even in view of the small staff size and the relatively low level of action generated by the scenario. Staff members were involved in the decision making with respect to their responsibilities, and plans, including SOPs, were available and employed. Message logs were maintained and a status board was utilized with the emergency classification levels posted. Security at the EOC was good with access controlled by the Fire Police.

The township EOC received notification of the major events as follows:

Alert	1529
Site Area Emergency	1754
General Emergency	1941
Evacuation	1951

The capability to take appropriate emergency response actions was demonstrated.

III. Facilities

The township EOC is housed in the Hunlock Creek Fire Hall. This EOC provides sufficient space, lighting and equipment. The EOC contains a complete kitchen facility, the use of which was demonstrated during the exercise. Extended operation of the EOC is possible with bunks available for staff members. Rest rooms are available; limited showering accommodations exist. The EOC has one "emergency" telephone

and two additional lines. The "emergency" phone line rings at the EOC and ten private residences in the township. The EOC has backup power available from portable generators on the fire equipment. These portable generators were tested within the last seven days. Maps of the township, the ten-mile EPZ, evacuation routes and traffic control points were available and posted.

IV. Communications

The communications system presently employed by Hunlock Township performed adequately. The new county-wide radio system is now the primary pre-alert system for the township. The township went on line with this new radio system in March 1985. The EMC or the Deputy EMC has a pager, which is tied to the county radio system, with them at all times. The backup to the new radio system is the telephone. The primary post-alert stage method of communication is the county radio system with RACES as a backup system which is further backed up by the three telephone lines mentioned above. In addition to the aforementioned radio systems, the township EOC also has the fire department radio system which can be utilized if necessary. The township EOC has two antenna systems - one for the county radio system and one for the fire department radio. No antenna system is available for RACES. The Communications Officer had a manual of operations and used it. There were a few times when the noise level in the EOC was unacceptable; however, the EMC quickly dealt with the problem and it was corrected.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The emergency response staff of Hunlock Township demonstrated its ability to perform its role in alerting the public. As outlined in the township plan, the EMC had a complete list which identified institutions within the township. There are no hospitals, nursing homes, or prisons/jails in the township. However, the list did include four businesses and two schools which were to be contacted for the purpose of verification that the Alert notification had been received. The EMC simulated the calls after Alert notification was received at the EOC.

The township is responsible for route alerting and notification of the hearing-impaired. The county EOC notified the township EOC at 1951 that activation of the sirens and EBS would begin at 1955. The EMC activated the route alerting procedures and dispatched the township route alert teams to notify the hearing-impaired of the township. This was done following the activation of the sirens, as called for in the plan.

The preparation and distribution of emergency instructions for the general public are the responsibilities of the State and county.

VII. Protective Action

A protective action recommendation was received for the sheltering of livestock. The message was received at 1806. The EMC simulated contacting the persons affected. Simulation was by phone and was completed by 1826.

The county advised the township EOC (at 1951) that the Governor was ordering evacuation at 1955 and that siren and EBS would be activated. Traffic control points were manned. Route alert teams and ambulances were dispatched at 1956. The EMC advised that the township has sufficient resources to meet identified needs in all areas. All route alert teams completed their respective route by 2043. Decontamination procedures were simulated and began at 2050.

VIII. Radiological Exposure Control

No actual dosimetry or KI was available at the EOC, however, a simulation was scheduled. The county EOC advised the township EMC and Radiological Officer to follow a simulation of the existing plan whereby the township would send a staff person to Shickshinny to pick up the required dosimetry and KI. Officials demonstrated the procedures for distributing dosimetry and KI to EOC personnel during the exercise. Instructions were given on the use of material and provided significant evidence that the township emergency personnel are adequately familiar with the procedures for the use of dosimetry and KI. Township officials advised that the unmet needs identified in the plan are correct and that they expect to receive all materials shortly after May 1, 1985.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Hunlock Township Deficiencies/Recommendations

None identified.

Huntington Township EOC

I. Activation and Staffing

Activation and staffing of the EOC occurred according to plan and without problem. The Deputy EMC used an up-to-date written call list to notify the staff. Full staffing, for one shift, was completed in a timely manner. The staff positions included the EMC, Deputy EMC, Fire/Rescue Officer, Police Services Chief, Medical Services Officer, Transportation Officer, Radiological Services Officer, and Communications Services Officer. One RACES operator and radio specialist arrived during the Alert stage and immediately set up operations. All positions were eventually double staffed with the EMC arriving around 1600, demonstrating two-shift capability for round-the-clock operations. The staff, in general, displayed adequate knowledge and training.

II. Emergency Operations Management

The EMC, as designated in the plan, was in charge of the township's emergency response operation. Periodic briefings were held to update the staff on the situation. Staff members were involved in decision making regarding their own responsibilities, and plans and SOPs were available and referenced. Message logs were kept by the RACES operator and a status board was maintained with the emergency classification levels posted. EOC security was very good, with access controlled by the township police.

The EOC received notification of the major events as follows:

Alert	1541
Site Area Emergency	1749
General Emergency	1945
Evacuation	1950

The capability to take appropriate emergency response action was, for the most part, simulated in accordance with the scenario. No elected officials were present during the exercise.

III. Facilities

The Huntington Township EOC, which is located in the Township Municipal Services Building, was adequate for conduct of the exercise. The building provided sufficient space and lighting and one telephone was available for the exercise. There are no kitchen, showers, or bunking facilities and backup power capability is not available. Other communications equipment, including a roof-mounted antenna for RACES, was present. Maps of the county and township were available, but there were no maps posted depicting the 10-mile EPZ, evacuation routes, or traffic control points. The township population was small and elaborate mapping data was not needed. As the plan does contain maps of some of the aforementioned items this is not considered a deficiency.

IV. Communications

The communications operation for Huntington Township is marginally adequate. The major means of communications, according to the plan, is the telephone. However, the township currently has only one line; additional extensions would be beneficial for actual emergency operations. The primary means of communication with the county EOC is via the new radio/pager system. RACES communications will be established in the primary post-alert stage, backed up by two-way radio capability. The EMC stated that the Luzerne County EOC had responsibility for contacting local schools and a nursing home.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Township officials demonstrated their capability to perform their designated role in the public alerting process. In accordance with their plan, the EMC had a list identifying township institutions, including a nursing home, which are to be notified at the Alert stage. The county EMA has primary responsibility for contacting public and private institutions (i.e., prisons, schools, industries/businesses). The township would provide verification to the appropriate institutions. The municipal EOC is not responsible for providing verification telephone calls to its schools. The county EOC, school district, and Pennsylvania Department of Education will provide that notification.

Responsibility for activating the primary alert and notification systems - the sirens and EBS - resides with Luzerne County; Huntington Township is responsible for implementing route alerting in the event of siren failure, and to notify the hearing-impaired. The county informed the township EOC staff at 1950 that activation of the sirens and EBS would take place, beginning at 1955. Route alerting was performed by one of the three teams referenced in the plan. The one team demonstrated their route alerting procedures and simulated dispatching route alert teams to notify the eight identified hearing-impaired residents. This was done following activation of the sirens, as specified in the plans. The one route alerting truck went out at 2000 and returned at 2040.

VII. Protective Action

Township officials discussed the fact that lists containing the names and addresses of residents requiring ambulances or other forms of special assistance for evacuation are available. The EMC stated that sufficient resources to man traffic control points were not available and that their plan was to augment the state police to the best of their ability. The township's plan states that the township has the responsibility for manning two traffic control points. Appendix 10 does not reflect any unmet needs for personnel in this area.

VIII. Radiological Exposure Control

No dosimetry or KI, real or simulated, was available at the EOC. Dosimetry and KI for township personnel is currently being stored in the county EOC, according to the township EMC.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Huntington Township Deficiencies and Recommendations

1. Elected officials were not present at the EOC for the exercise. Elected officials should participate in future exercises, in order to be completely familiar with the capability of their township to respond to an emergency at Susquehanna.
2. The township has only one telephone line. Attempts should be made to secure additional lines in order to handle ingoing and outgoing calls simultaneously.
3. Unmets needs for the township EOC which were not provided for include an emergency power generator. This item should be acquired or otherwise made available to the township.
4. Attempts should be made to clarify the concern raised by the EMC of inadequate resources to deal with traffic control points. If the township cannot address this situation internally, other arrangements should be made to man those locations.
5. No dosimetry kits were issued to the township. Actual samples of dosimetry and KI should be provided in future exercises for township training and demonstration purposes.

Nanticoke City EOC

I. Activation and Staffing

Activation of the EOC was initiated at 1540 by a message received from Luzerne County and verified by a return phone call. Staff were mobilized using a call list for key personnel, supplemented by several Emergency Medical Technician student trainees from Luzerne County Community College. Sufficient personnel were present by 1605 to cover the functions of Emergency Management Director, radiological, communications, transportation, medical, and EOC security. Police and fire/rescue operations were located in adjacent rooms and buildings until the end of normal working hours. At that time they, too, staffed the EOC. Capability for protracted operations was shown by both posting a duty roster for two shifts and by double staffing of most positions (including student trainees). Both shifts demonstrated adequate training and knowledge of their responsibilities.

II. Emergency Operations Management

Overall emergency operations were managed by the Emergency Management Director or his deputy, as specified in the plan. Simultaneous briefings of the entire EOC staff were seldom held. Rather, information was shared by multiple individual contacts with appropriate parties. This mode of operation was mostly satisfactory; however, some key information was missed in the process. Specifically, the Fire Coordinator did not know for 50 minutes after the fact that evacuation had been ordered. At each stage of the emergency, staff were instructed to follow written checklists of response actions. This procedure was very effective in ensuring a full and correct response. The logging, reproduction, and distribution of messages to and from the communications room was efficient. Access to the EOC was secured at the Alert. Key notifications were received from Luzerne County at 1540 (Alert), 1755 (Site Area Emergency), 1940 (General Emergency), and 1950 (Evacuation Order). Calls were placed by the EOC to activate police and fire services to standby at 1800, and to implement evacuation at 1955. Elected officials (City Councilmen) were present briefly in the EOC.

III. Facilities

The EOC, located in the basement of the Municipal Building, had sufficient furniture, space, lighting, and telephones for effective operations. However, as the space is usually occupied by other municipal offices, the EOC lacks dedicated storage space (e.g., a room or a locked cabinet) for emergency response equipment and materials (e.g., radios, maps and charts). EPZ maps that had previously been in the room could not be found. Though the EPZ maps were not available, information was listed on wall charts, or available on other maps, to show locations of evacuation routes, relocation centers, traffic control points and route alerting sectors. The EOC has minimal personal amenities for extended operations. However, an alternate

relocation point for the EOC does have such amenities, as well as intrinsic structural protection against radiation. The EOC does have backup power, and showers for decontaminating personnel. A status board was posted and kept up-to-date on emergency classification level, but significant response actions (e.g., the order to evacuate) were not posted. Better use of status boards could mitigate the lack of plenary briefings (see Section II).

IV. Communications

Communication facilities available in the EOC included the county radio net, amateur radio, police/fire radios and several telephones. Both the county radio and amateur radio were used to communicate with the Luzerne County EOC. While both systems worked, they were both heavily loaded with message traffic, making it difficult to achieve timely transmission of messages from the local EOC to the county. Also, the county radio net received interference, apparently from Columbia County. Local medical facilities were communicated with by telephone. Fire and police emergency workers were communicated with via their usual radios. An unmet need, however, is for portable radios to communicate with volunteer field workers guiding buses to evacuee pickup points.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Route alerting was performed as a backup to the county's activation of sirens and EBS. The route alerting process was begun by a radio message from Luzerne County at 1950, declaring the sirens, EBS, and evacuation to take effect at 1955. Seven route alert teams, which had been on standby, were dispatched at 1955, completing their routes in 20 to 35 minutes. The teams were equipped with detailed written route instructions, including the addresses of hearing-impaired residents to be visited personally. The teams were instructed appropriately to give a succinct message to residents to tune in to EBS. Also, throughout the exercise, periodic backup calls were made to medical facilities, per the plan.

VII. Protective Action

Activation of traffic control points was ordered promptly upon declaration of the evacuation. Evacuation routes and their capacity were discussed. Resources (personnel, vehicles, and fuel) for carrying out the evacuation were reported to be adequate. A written list of the locations and special needs of mobility-impaired residents was

available. To provide for these people, and for residents without personal vehicles, the City requested 60 ambulances and 20 buses to be provided by the county. Provision of these needs was simulated. However, the unmet needs stated in the plan are 5 ambulances and 78 buses. The figures actually requested were estimates based on a recent tabletop exercise by the City.

VIII. Radiological Exposure Control

Availability of self-reading dosimeters, TLDs, record keeping forms and KI for each emergency worker was simulated. Initially, 150 units of dosimetry and KI were requested from the county. Correct procedures for picking up the supply at Newport Township were described, though simulated. Later, an additional 80 units of dosimetry and KI were requested as a precaution. The plan indicates a total need of 274 units. One pair of self-reading dosimeters with charger and record forms was actually available for demonstration. Proper instructions were given for its use, and for the use of KI. Instructions included a briefing on the maximum dose allowed and on decontamination procedures. However, the location specified for decontamination (the Nanticoke Municipal Building) differed from that in the plan (the Plymouth Township Municipal Building). Measures to protect EOC personnel against exposure were not actually taken at the Nanticoke Municipal Building, but provisions were made for evacuation to an alternate protected location.

IX. Media Relations

Brief access to the EOC was given to local press covering the exercise. A briefing was given by the Emergency Management Director in an adjoining, but separate, conference room.

X. Recovery and Reentry

Not applicable.

Nanticoke City Deficiencies/Recommendations

1. Lack of plenary briefings, combined with a laxity in quickly posting key events on the status board, resulted in at least one key staff member not receiving timely notification of the evacuation. The Director should take steps to assure that the status board is maintained, and should consider simultaneous briefings of the full staff to advise them of significant events.
2. Portable radio equipment is an unmet need which has not been provided for. This equipment should be acquired or otherwise made available.
3. There were discrepancies demonstrated regarding Nanticoke City's need for transportation. The plan states an unmet need of 5 ambulances and 78 buses. However, the EOC requested 60 ambulances and 20 buses. The Luzerne County Plan and the Nanticoke City Plan should be updated to reflect the correct number of ambulances and buses required.

4. There were discrepancies demonstrated regarding Nanticoke City's need for dosimetry. The EOC requested a total of 230 dosimetry kits from the county. However, the plan lists a requirement of 274 kits for Nanticoke City. Plans should be updated to reflect the correct number of dosimetry kits required.
5. The decontamination station for emergency workers is listed in the plan as Plymouth Township Municipal Building. However, emergency workers were instructed to go to the Nanticoke Municipal Building for decontamination. This discrepancy should be resolved, and proper instruction of emergency workers should be assured.
6. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.

Nescopeck Borough EOC

I. Activation and Staffing

The call initiating activation of the EOC was received by the EMC from the communications network at 1530 on his beeper. He confirmed this with the county EOC. Staffing of the EOC was completed at 1645; however, there seemed to be some initial uncertainty by the individual who initiated the calls whether he was using the correct organizational chart. According to the EMC, a new organizational chart had been completed and delivered by the utility the night before. It was not dated however. All functions identified on the organizational chart, were represented and the staff displayed adequate training and knowledge. Round-the-clock staffing was demonstrated by a roster that was posted by the EMC and also through double staffing. Actual shift change was not demonstrated.

II. Emergency Operations Management

The EMC was very effectively in charge and was so designated in the plan. He continually updated the staff on the current situation and did an outstanding job of managing the Nescopeck Borough EOC. Message handling was very efficiently and conscientiously performed by EOC staff members. Access to the EOC with a sign-in sheet was also very tightly controlled and conscientiously adhered to by EOC staff members. The EOC was notified by county radio of the following events:

Alert	1530
Site Area Emergency	1738
General Emergency	1925
Evacuation	1950

Actions were taken within the EOC through representative organizations to carry out appropriate response to the events. Elected officials were present and were involved in any decision making.

III. Facilities

The EOC was spacious and provided sufficient furniture, lighting, telephones and two-way radio communications. The facility also could support extended operations through a well-equipped kitchen, restrooms and shower. There was no backup power capability, although this too had been requested by the EMC to the county. A status board was clearly visible, posted and kept up-to-date on all significant events. The following maps were posted: evacuation routes, relocation center, access control points and radiological monitoring points. The plume EPZ map with sectors labeled was available in the plan, but not posted.

IV. Communications

Communications were adequately demonstrated through a county radio system, telephone, RACES, scanners and police and fire/rescue networks. One problem was significant: Luzerne County and

Columbia County radio seemed to operate on the same frequency. With Nescopeck Borough being closer to the Columbia County EOC than the Luzerne County radio, transmissions to or from Luzerne County EOC, were frequently cut off by the stronger transmissions of Columbia County. This problem was explained to Luzerne County by the Nescopeck Borough radio operator. However, at 1925 Luzerne County radio had told Columbia County radio to switch to the fire radio frequency. This effectively eliminated the problem in Nescopeck Borough. The radio problem, while it existed, was further aggravated by the fact that no RACES personnel were available in the area to operate the RACES network. A RACES person had to be dispatched from Wilkes-Barre and did not arrive on the scene until 1805. The fire/rescue representative indicated he needed six more portable radios to effectively operate during a power plant emergency operation to cover the traffic control points and the communications from the EOC.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The EOC played an effective role in public alerting by performing route alerting, which commenced at 1955 by a call from the county EOC. Public alerting message distribution was demonstrated by EBS and vehicles with PA systems, at 1955.

VII. Protective Action

Activation of control points was promptly ordered and access to contaminated areas were blocked by the Pennsylvania State Police. The EOC staff was aware of the location of mobility-impaired individuals in the borough through the use of 3" x 5" cards. Appropriate transportation arrangements had been made. There were four hearing-impaired, five non-ambulatory, and two residents with cardiac conditions needing special transportation. A member of the medical staff was dispatched to personally notify the hearing-impaired residents of the emergency situation.

VIII. Radiological Exposure Control

Only one sample of dosimetry equipment had been distributed along with the charger and record keeping cards. The Radiological Chief assured the FEMA Observer that an adequate number of dosimeters and KI would be available for each emergency worker, although this was not actually demonstrated. Appropriate instructions and proper procedures were demonstrated by the EOC Radiological Chief who also explained decontamination procedures.

Evacuation of the EOC was ordered following the General Evacuation. However, at 2030 the Luzerne County EOC notified the borough that its relocation center was Hazelton Area Vo-Tech, not the Columbia-Montour Vo-Tech, as was identified in the plan. Luzerne County advised that this new location was designated in a recent county plan revision which the Nescopeck Borough EMC had no knowledge of.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Nescopeck Borough Deficiencies/Recommendations

1. Unmet needs at Nescopeck Borough which have not been provided for include an emergency power generator for the EOC and portable radios for TCP personnel. These items should be acquired or otherwise made available to the borough.
2. There was a discrepancy between the Nescopeck Borough plan and Luzerne County's instructions as to the borough's EOC relocation site. This discrepancy should be resolved, and the borough should be advised of any such changes in the future.
3. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.
4. The RACES operator arrived late at the EOC. The assignment procedures should be reviewed by the county to assure that RACES operators will be provided in a timely manner.

Nescopeck Township EOC

I. Activation and Staffing

A call was received from Luzerne County by the EOC Coordinator in his home at 1529. Staff mobilization procedures were initiated at that time by the Coordinator, wherein the Township Supervisors and security personnel were notified to report immediately to the EOC. The Coordinator proceeded to activate the EOC and arrived at the EOC at 1635. At that time, the remaining staff were notified to mobilize from the phone at the EOC. The Alert call was verified by the Coordinator at the EOC via the radio system.

A written call list was used to notify the EOC staff. This list appeared up-to-date. EOC staffing was completed by 1700, except for ARES, who arrived by 1740. According to the participants, there is a regular system in place to receive a call directing activation, and call up staff at any hour of the day. This system was described in the plan and also in the SOPs.

The organizations represented at the Nescopeck Township EOC were: Township Supervisors, Fire Department, Transportation Officer, Police Department, Communications Officer, Radiological Officer, Security Officer and ARES. Full EOC staffing was not demonstrated, as the Medical Officer position was not manned.

The staff displayed adequate training and knowledge of procedures and round-the-clock staffing capability was demonstrated by the presentation of a roster.

II. Emergency Operations Management

The EOC Coordinator demonstrated very effective control as well as a good knowledge of procedures. The EMC held periodic briefings as necessary, usually to brief his staff on current events or to review SOPs for accuracy. The staff was involved in decision making in several instances. For example, the EOC Coordinator polled the staff several times in order to assess unmet needs. There were several copies of the plan available for reference and each staff member had their own copy as well. The staff also had detailed checklists and SOPs and referred to them often throughout the exercise.

Communications personnel kept the message log. Messages were not reproduced since there was no copy machine; however, communications personnel directed each message to the Coordinator, who reviewed it and passed it along to the responsible party. Due to the close proximity of the staff, this system was efficient.

Access to the EOC was controlled and monitored by the Security Officer. The door was kept locked at all times and persons allowed admittance had to show I.D. In addition, EOC personnel had to sign in and out on a log sheet.

The EOC was notified of SSES Alert status at 1529, Site Emergency status at 1738 and General Emergency status at 1925. The Evacuation order was received at 1950.

Elected officials were represented and participated in that one Township Supervisor was also the fire department representative.

III. Facilities

The Nescopeck Township EOC provided sufficient furniture, space and lighting. However, there was only one telephone. In a real emergency, one phone may be insufficient to handle both incoming and outgoing calls. The noise level could have been more adequately controlled; at times it was difficult to hear the radio.

The EOC can reportedly support extended operations as cots are available. There are no showers. There is a backup generator and a small, but adequate kitchen. Emergency classification levels were posted in a clearly visible area. However, the township used a paper chart for posting and if a mistake was made it could not be removed. The status board was kept up-to-date with all messages received from the county EOC. These messages could have been more complete in some cases.

The township posted maps of evacuation routes and access control points. In addition, the locations of relocation centers and the alternate seat of government were printed on charts.

IV. Communications

The EOC's primary system was the township's radio which was tuned into the county EOC. The exercise displayed a problem, however, in that Columbia County and Luzerne County were both using the same frequency. This situation was disruptive, and could cause confusion during a real emergency.

The EOC's backup system was ARES. In addition, the EOC had two radios with which to monitor the EBS station. During the General Emergency stage, the communications staff did so and received EBS information. The EOC also demonstrated radio capability to ambulance staff.

One telephone was also available. More telephones would be beneficial for managing an actual emergency.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The EOC played a role in public alerting through route alert teams. The initiating event was the evacuation message received at 1950 from the county EOC. Route alert teams were dispatched at 1950 since the municipality prepared for this eventuality at the 1925 message of General Emergency. There was very little discussion needed to implement route alerting since everyone involved knew their procedures. Only one section (of a total of five route alerting sections) was demonstrated. The route alerting team returned to the EOC at 2010. The route alert team used a prescribed evacuation message, broadcast from a fire vehicle with a PA system. The remaining route alert teams would have used cars with bullhorns supplied by the county EOC. The route alert team was dispatched immediately following the sounding of the sirens. This municipality appears very capable in this area and was also very efficient.

VII. Protective Action

The township EOC activated their three traffic control points during the General Emergency stage using police personnel. The EOC estimated that a medium density of traffic would flow through these points since the surrounding municipalities are or would be traveling away from them. The EOC staff felt that more than adequate resources were available to remove stalled or wrecked vehicles in that there are two tow trucks and heavy duty farm equipment that could be used. It was deemed unnecessary to activate this equipment for this exercise.

According to the EOC staff, additional resources in terms of personnel would be needed in a true emergency. They felt that in order to fully man traffic control points and perform route alerting, it would take more volunteers than they currently have. This contradicts the information contained in Appendix 10 of the plan.

The EOC staff were aware of the location of mobility-impaired individuals in the township and this information was available in written form. They were also aware of individual special needs and made arrangements for an ambulance to transport them to the relocation center.

According to the EOC staff, the County Agricultural Agent would advise them as to protective actions for food and animals. The township would work with route alert teams to implement the county's instructions as necessary.

VIII. Radiological Exposure Control

The availability of dosimetry equipment was simulated, however, the Radiological Officer was extremely well-versed on its usage and also where and when to pick up dosimetry equipment and KI. The Radiological Officer had a charger with extra batteries as well as record keeping cards, and simulated reading dosimeters once every half hour. The

Radiological Officer was also well aware of KI procedures and the maximum dose allowed without authorization, as well as decontamination procedures. Many of the procedures were also printed on charts and placed on the walls for easy reference. This EOC displayed excellent knowledge of dosimetry procedures, KI usage, and dose allowances.

IX. Media Relations

The Coordinator reported that he would not answer any questions and would direct any media inquiries to the information center.

X. Recovery and Reentry

Not applicable.

Nescopeck Township Deficiencies/Recommendations

1. Full EOC staffing was not demonstrated, as the Medical Officer position was not manned. Capability to staff this position should be established, if necessary, and capability for full EOC staffing should be demonstrated in future exercises.
2. The township reports that adequate personnel may not be available to implement route alerting and man traffic control points. This contradicts the information contained in the plan. This discrepancy should be resolved, and coordinated with the county.
3. The township EOC is equipped with only one telephone. Attempts should be made to obtain an additional telephone line as it is still considered the primary means of communication.

New Columbus Borough EOC

I. Activation and Staffing

Staffing of the New Columbus Borough EOC was initiated at the time of the Unusual Event. The EOC was completely staffed, as required by the plan, except for a RACES operator, by 1615. Round-the-clock staffing was demonstrated by double staffing and presentation of a roster. The staff demonstrated adequate training and knowledge.

II. Emergency Operations Management

The EMC was clearly in charge of operations at the EOC. Response to all messages of the county were prompt and proper. The Alert was received at 1525, the Site Area Emergency at 1756, and the General Emergency at 1942. The Evacuation order was received at 1950. No special requests were made by the New Columbus Borough to the county as they did not require special assistance. The Mayor and members of the Town Council were present for portions of the exercise.

III. Facilities

The facility did not have backup power and did not have bunks or showers for extended operation, but it was comfortable and had adequate furniture, space and lighting. Necessary maps and status boards were posted.

IV. Communications

Communications with the county were accomplished via radio with telephone as backup. Communications were never a problem, even though the RACES operator was not present at this exercise.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

When instructed by Luzerne County, New Columbus performed route alerting, from 1956 to 2010.

VII. Protective Action

Borough officials had lists prepared identifying eleven residents who would be brought into the EOC for special assistance in evacuation. Also, the one hearing-impaired person would have been notified. The county did not request New Columbus to perform any TCP or ACP duties.

VIII. Radiological Exposure Control

The use of dosimetry was simulated. New Columbus anticipates storing 17 dosimetry/KI kits at their EOC rather than at the distribution point in the county plan. KI was distributed (simulated) at 1808. The RADEF Officer was familiar with his duties and responsibilities. It should be noted that the Luzerne County Plan shows New Columbus Borough requires only two dosimetry kits, although the borough staff identified the need for 17 kits. Plans should be revised accordingly.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

New Columbus Borough Deficiencies/Recommendations

1. Unmet needs not provided for at the borough EOC include an emergency power generator. This item should be acquired or otherwise made available to the borough.
2. There was a discrepancy between the borough and county plans regarding the number of dosimetry/KI kits needed at New Columbus Borough. This discrepancy should be resolved and both sets of plans revised accordingly.
3. A RACES operator never arrived at the EOC. The assignment procedures should be revised by the county to assure that RACES operators will be provided.

Newport Township EOC

I. Activation and Staffing

At 1540 notice was provided to the township of an Alert at Susquehanna by Luzerne County; this was verified by call-back. Notification/activation procedures were started shortly thereafter. The Fire/Rescue Officer made all calls from an updated handwritten list. Notification procedures continued until all personnel had been reached. Staffing was complete by 1700. Staff included: Fire/Rescue Officer, medical/ambulance personnel, transportation, communications, Radiological Officer, RACES, Emergency Management Coordinator and four Township Supervisors. Adequate knowledge was demonstrated by staff members. Twenty-four hour staffing capability was demonstrated by presentation of a roster with shift changes where necessary.

II. Emergency Operations Management

The Emergency Management Coordinator was in charge of exercise play and consulted with staff on various occasions. Personnel used checklists and the Township Emergency Operations Plan for completion of activities. Messages received at the EOC were taken by the communications person and given to the EMC before proper logging on the status board. Access to the EOC was controlled by having the entrance manned throughout the entire exercise. The EOC was notified of Site Emergency at 1738 and General Emergency at 1940, by Luzerne County. The township received the Governor's evacuation order at 1950. Prior to that point, the township anticipated evacuation might be a consideration and put necessary personnel on standby: police, fire, ambulance, public works and buses. Four Township Supervisors were present at the EOC.

III. Facilities

The EOC was adequate for operation, though somewhat small. Status boards, with various information, were clearly visible and updated as needed. Maps posted included evacuation routes and pickup points, relocation center locations, traffic control points, route alerting zones and routes.

IV. Communications

Primary communications for the EOC were telephones and radio equipment. All messages coming into the EOC were recorded on log sheets. A RACES operator provided backup communications.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

After the sirens were sounded the township followed up with route alerting by fire/rescue vehicles.

VII. Protective Action

Activation of traffic control points was promptly ordered. The township maintains a list of mobility-impaired people in the community, with addresses and telephone numbers and information regarding their special needs. Arrangements were made to obtain the necessary number of ambulances for these people. Evacuation of the EOC was simulated for the exercise.

VIII. Radiological Exposure Control

Dosimetry measurements were simulated throughout the exercise. A Radiological Officer was present but was very unsure of her responsibilities.

IX. Media Relations

Media relations were handled by Luzerne County.

X. Recovery and Reentry

Not applicable.

Newport Township Deficiencies/Recommendations

1. Although there was a Radiological Officer at the EOC, she was not sufficiently familiar with her responsibilities. Additional training should be provided.

Nuangola Borough EOC

I. Activation and Staffing

The Emergency Management Coordinator (EMC) received a message over the paging system at 1525. She telephoned the Luzerne County EOC to verify the message and then proceeded with EOC activation. The Coordinator instructed the Communications Officer to notify EOC staff members by using the written call-down list. Staffing of first shift was completed by 1735. However, 24-hour staffing capability was never demonstrated for all positions. The following organizations were present in the EOC: Emergency Management Coordinator, Police Services Officer and deputy, Fire/Rescue Officer and two deputies, Medical Officer, Transportation Officer, Communications Officer, Radiological Officer. All staff members displayed adequate training and knowledge.

II. Emergency Operations Management

The EMC ably demonstrated that she could effectively manage EOC operations. Periodic briefings were held, plans were available, messages were logged, access to the EOC was controlled and status boards were accurately maintained. Four elected officials were present. The EOC staff demonstrated capabilities necessary to utilize resources to deal with an actual emergency. The EMC demonstrated that she can handle and implement actions according to the Radiological Emergency Response Plan for Nuangola Borough.

III. Facilities

The facility was sufficient for response activities. Backup power was not available. Evacuation routes and relocation centers were posted, but access and traffic control points were not available or posted.

IV. Communications

The municipal EOC was equipped with commercial telephone, a RACES operator and the new county-wide radio net. The EBS station was monitored over a standard radio. Communications were excellent for this exercise.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The EMC instructed the route alert teams to start route alerting after receiving a message from Luzerne County at 1950. All appropriate actions to notify the population were simulated.

VII. Protective Actions

The EOC staff were aware of the identity and location of mobility-impaired and hearing-impaired individuals. Once evacuation of the public was complete the EOC staff evacuated to their alternate site and informed the county of their new location.

VIII. Radiological Exposure Control

The distribution of dosimetry kits was simulated for this exercise. The Radiological Officer was aware of his distribution location. The EOC was equipped with 5 mid-range and 5 high-range dosimeters and a charger. The Radiological Officer was knowledgeable in the use of dosimetry and KI. Written instructions were also available. The staff knew the maximum dose authorized and where their decontamination station was located.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Nuangola Borough Deficiencies/Recommendations

1. Capability for 24-hour staffing was not adequately demonstrated. Only two of the seven positions in the EOC had backup staff. The borough should establish the capability to man two full shifts and demonstrate this capability in future exercises. The staffing list contained in the plan should be revised accordingly.
2. An unmet need not provided for is the lack of an emergency power generator at the Nuangola Borough EOC. This item should be acquired or otherwise made available to the borough.

Salem Township EOC

I. Activation and Staffing

Activation of the Salem Township EOC was fairly prompt, but was slowed by the need to telephone staff members. Additionally, all staff were volunteers and several key members had jobs that prevented them from staffing the EOC quickly. Complete staffing was never accomplished (no Medical Chief), but staff on hand were capable of handling the duties of late or missing personnel. Round-the-clock staffing capabilities were demonstrated (with the exception of the Medical Chief) with a duty roster and by the presence of several second shift staff that participated in the exercise. Twenty-four hour notification/activation is achieved by radio receiver contact with Luzerne County or by commercial telephone. Adequate training and knowledge were demonstrated by all staff. Frequent reference to the township plan was made to insure that proper procedures and all necessary duties were carried out.

II. Emergency Operations Management

Both the EOC Director and Communications Chief (the latter the Salem Township Board of Supervisors President) effectively managed operations at the Salem Township EOC. Both took charge of various situations and were frequently consulted by other EOC staff. They also conferred with each other about actions to take. Frequent reference to the plan was done (as a checklist) to assure that established procedures were accomplished at each emergency phase. Briefings were not necessary due to the close working relationship of all staff. The EOC Director (or assistant) also consulted with staff before finalizing decisions. Message handling was efficient, with all incoming messages given to the EOC Director for his signature and then passed to the secretary for filing. Outgoing messages were also signed by the EOC Director before transmission.

III. Facilities

The Salem Township EOC facilities were of adequate size and contained sufficient furniture and lighting. Only one telephone was available in the EOC; additional phones would speed contact with volunteer staff and various agencies, industries, etc. Noise was a minor problem during periods of major activity due to the number of radios operating in one room. Some of the radios should be set up in a smaller room that was infrequently used.

The facility was not equipped for extended operation, but this is not considered a deficiency. No permanent generator was available, but fire trucks could be brought in to produce power.

A status board was available and used effectively. Adequate maps and a list of relocation centers were posted.

Security at the EOC was adequate. Normally a security guard would be on duty. The President of the Board of Supervisors functioned in this role.

IV. Communications

Communications were conducted between the Salem Township EOC and Luzerne County EOC primarily through the radio system. This system functioned very well. Telephone contact with the county EOC was also demonstrated. Radio Amateur Civil Emergency Service (RACES) communications were also established after about three hours. RACES adequately demonstrated capability to provide backup communications.

Due to the location of the EOC in a hollow, direct radio contact to the local fire and police could not be made. Messages had to be routed to Columbia County and then to township fire and police stations. A similar process would need to be followed to activate home monitors. The police chief at the EOC expressed his desire to have a base station so that direct contact could be made.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The Salem Township EOC had a secondary role to the Luzerne County EOC in public alerting. Route alerting was prompt and conducted (partly simulated) by police, fire and volunteers. Some vehicles were sent out to alert the public prior to sirens sounding, contrary to the procedures specified in the plan. The EOC was informed by the county that this was an incorrect procedure.

There initially was some question about the EOC's responsibility to inform farmers to shelter cows. The second call from the county EOC concerning sheltering, confirmed that it was apparently the township's responsibility. Information and telephone numbers of dairy farmers will be added to the township emergency plans.

VII. Protective Action

Activation of traffic control points was promptly ordered. Estimates of traffic volume were not discussed, but traffic was not expected to be a problem within the sparsely populated township. Adequate volunteer lists were available to staff traffic and access control functions, in conjunction with police personnel.

The EOC staff was aware of mobility-impaired and hearing-impaired individuals. Arrangements were formulated for their evacuation, if needed. The fire and police stations had copies of these lists and would have primary responsibility in contacting and evacuating them. However, some question remains as to exactly how hearing-impaired people would be contacted. It was assumed that there would be other citizens in the homes to inform them (actually, the plans specify that route alert teams are to perform this duty).

Implementation of ingestion pathway protective actions were formulated at a higher level. The Salem Township EOC only functions as a means to pass information to farmers.

VIII. Radiological Exposure Control

The Radiological Chief was adequately trained in the use of dosimeters, exposure limits, and so forth (although he did not check the dosimeter on hand every half hour). He demonstrated instruction of dosimeters, TLDs, forms, etc. to police and fire personnel requiring them. Adequate numbers of radiological exposure kits would be available for EOC staff and required field workers. Workers were informed of the maximum dose allowed.

IX. Media Relations

No media representatives were present at the Salem Township EOC. Adequate space is available, if needed, for media briefing. The EOC staff was updated and knowledgeable about conditions so that media briefings could have been adequately conducted.

X. Recovery and Reentry

Not applicable

Salem Township Deficiencies/Recommendations

1. Full EOC staffing was not demonstrated at Salem Township, as the Medical Chief's position was not filled. Capability to staff this position should be established, and staffing of all EOC positions should be demonstrated in future exercises.
2. Township officials dispatched route alert vehicles prior to the siren activation, contrary to the procedures specified in the plans. Proper sequencing for route alerting should be reviewed with appropriate EOC staff members.
3. Officials were not adequately familiar with the procedure for alerting hearing-impaired residents. Proper procedures for contacting hearing-impaired residents via route alert teams should be reviewed with appropriate EOC staff members.
4. The EOC had only one telephone line. It is recommended that additional phone lines be installed, if possible.

Shickshinny Borough EOC

I. Activation and Staffing

Activation and staffing was completed in remarkably short order as follows:

Received notification to activate EOC	1527
Completed staff notification	1535
Staffing completed	1540

All staff sections were represented and city officials (Mayor and Council) were present. Eight fire department people were also on duty.

This effort was directed by the designated Emergency Coordinator/Police Chief and assisted by the Communications Chief. Both are relatively new, but demonstrated they are very capable of performing their duties. All of the support staff were knowledgeable and dedicated and briefed well.

The rapid staffing was due to the closeness of the respondees to the EOC (municipal building).

II. Emergency Operations Management

The Emergency Coordinator/Police Chief was a very effective Emergency Operations Manager. He is relatively new, but demonstrated effective leadership and consulted staff members frequently when necessary. The staff was quite adequate and knew their duties and assignments.

At peak turnout there were sixteen persons at the EOC and eight fire personnel at the fire house across the street.

Staff position signs were located at various tables and rooms and these stations were manned at all times. This EOC was very capably managed and operated.

III. Facilities

The EOC facility was spacious and well organized. It is located in a modern, two-story municipal building in the center of the borough. Directly across the street was the district fire house.

The EOC could support limited extended operations as there was a kitchen on the second floor. The EOC facility was quite adequate overall.

There is no backup power available at the EOC. The fire house does have auxiliary power.

IV. Communications

All staff members at the EOC were in close verbal communications. Field personnel had portable radios.

Communications were very good, utilizing county-wide radio, police radio, telephone, fire network communication system and RACES. The RACES operators displayed their customary usefulness.

Users of these systems showed professionalism in the clearness and conciseness of messages sent. All communication systems were centrally located (except RACES) and close to each other.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Public alerting consisted of one fire vehicle dispatched to cover Zone 1 after the sirens sounded at 1955. Route time was thirteen minutes for that vehicle. Delivery of prescribed messages was simulated.

Two sirens were heard sounding with quite adequate loudness outside. They were still audible inside, but could be unheard if some noise level was being maintained inside.

VII. Protective Action

Four traffic control points were briefly manned at the appropriate time.

Ten persons requiring special need in the event of evacuation were identified. Their special needs were in written form and available to the staff from the Medical Officer. The staff knew these special needs.

Messages regarding ingestion zone precautions were received from the county.

VIII. Radiological Exposure Control

One mid-range dosimeter and one high-range dosimeter were actually available. Seventy-four other dosimetry kits were simulated. The staff indicated a need of forty for projected emergency workers. All emergency staff and officials knew details concerning proper use and dosage limitations.

Some staff members had received radiological training from training courses provided by the utility. All staff knew decontamination location and details. Overall exposure control measures for emergency workers were adequate.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Shickshinny Borough Deficiencies/Recommendations

1. There was a discrepancy between the number of dosimetry/KI kits needed by the borough, as identified during the exercise (40), and reported in the plan (75). This discrepancy should be resolved, in coordination with the county, and the plans revised as necessary.
2. Unmet needs identified for the borough include an emergency power generator. This item should be acquired or otherwise made available at the EOC.

Slocum Township EOC

I. Activation and Staffing

At 1530 Slocum Township received the notification of Alert from the Luzerne County EOC. After verifying the message through the county civil defense network, the township began activating its EOC. The township partially activated at that point, waiting until Site Emergency to bring all staff members into the EOC. A written call list was utilized that was up-to-date. Full staffing was completed by approximately 1815. A call directing activation can take place at all hours by the county utilizing a pager to contact the Emergency Management Coordinator. If he cannot be contacted, the Deputy Coordinator will be notified. Failing to reach the deputy will result in the use of the fire phone. Home and business telephone numbers are available on the organization chart.

Positions represented at the EOC included the EMC and his deputy, fire police, security, communications, radiological, medical (ambulance), the situation team, route alert teams, the pick-up team and traffic control personnel. The staff displayed adequate training and knowledge and were both highly professional and enthusiastic in fulfilling their response roles. Twenty-four hour staffing was demonstrated through the presentation of a roster and double staffing in some positions. Second shift personnel were contacted and placed on standby.

II. Emergency Operations Management

The Emergency Management Coordinator was effectively in charge of operations, as called for in the Slocum Township Radiological Emergency Response Plan. Periodic briefings were held to update the staff on the situation and, where applicable, the staff was involved in decision making. Copies of the township plan were available as well as detailed checklists broken down by responsibility area and emergency action level. Message logs were kept; since all primary responses were located in the same area, there was no need for the messages to be reproduced.

Access to the EOC was controlled through the use of locked doors, a security person at the main entrance, and a sign-in sheet.

Slocum Township was notified of the Alert at 1530, the Site Emergency at 1754 and the General Emergency at 1945. At various times throughout the exercise, the township received protective action advisories for livestock farmers. The township simulated contacting the three farmers that would be impacted. At 1950, a message was received announcing that sirens would be sounded and EBS activated at 1955, followed by evacuation of the ten-mile, 360 degree area surrounding the plant. The fire department and ambulance service were co-located with the EOC and were thus kept up-to-date on all events throughout the exercise.

The Township Supervisors did not have any involvement in the exercise, other than receiving initial notification.

The county did a good job of keeping the township informed of the status of the emergency, even if events had remained the same since the previous update. It is suggested, however, that municipalities be kept better informed of weather conditions (especially wind direction and speed) and radiation readings, if any.

Upon completion of their responsibilities during the Site Emergency, the staff turned down the county CD radio and engaged in personal conversations. Approximately 15 or 20 minutes later, the EMC walked into the operations area and asked whether anything was coming over the radio. The volume was turned up and it was discovered that a roll-call was taking place. The township was instructed to telephone the county and they were told that a General Emergency had been declared.

III. Facilities

Sufficient furniture, space and lighting existed, however, there was only one telephone available. This would be inadequate during a real emergency, as it could not be made available, simultaneously, for both incoming and outgoing calls. At times, there was excessive noise since both the county CD radio and the township fire/rescue radio were located in the operations area. Extended operations would be aided through the use of a kitchen and bathrooms. Backup power is also available.

The emergency classification level was posted on an emergency message log, which was kept up-to-date on all significant events.

A township map was posted. Information was also available on evacuation routes, relocation centers, traffic control points, route alert sectors and population of the township. It is recommended that a map showing the entire plume EPZ be provided to the township, as well.

IV. Communications

The primary means of communication between the township and the county was by the CD radio network. Problems developed in that both Columbia and Luzerne counties utilized the same frequencies. Because of this, interference occurred, in that the township received messages from both counties almost simultaneously. The township informed Luzerne County of this situation. Other forms of communication included commercial telephone and a fire/rescue network. A RACES operator arrived at the township near the end of the exercise.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Slocum Township was involved in public alerting by activating its three route alert teams. These were dispatched at 2000 after receiving notification from the county that sirens would be sounded and EBS activated at 1955. The last route was completed by 2040. Route alert teams are instructed to inform people that there is an emergency at the Susquehanna Steam Electric Station and to turn on their radios or television to their EBS station. The staff reported that there are no hearing-impaired individuals currently residing in Slocum Township.

VII. Protective Action

Traffic control points were activated in a prompt manner, utilizing township fire-police. They were briefed by the EMC and Radiological Officer and dispatched to the five designated points during Site Emergency. The township was informed by Luzerne County that the Pennsylvania State Police expected no traffic problems over designated evacuation routes. Adequate resources currently exist to cover all traffic control functions simultaneously.

The township is aware of the location of the four mobility-impaired individuals. Although the staff is cognizant of these people's needs, it is suggested that this information be put in written form. Arrangements were made for their evacuation through the dispatch of an ambulance at the appropriate time. In addition, during the Alert, the township requested two buses to relocate those without transportation. It was simulated that these buses were sent to the township and at 2015 one bus was dispatched throughout the township to pick up people (residents are instructed how to signal for the bus). Upon evacuating the township EOC to its alternate location, the staff would then send the other bus through the municipality to pick up any stragglers.

The township was kept informed by the county of protective actions applicable to livestock farmers. The township simulated contacting the three farmers in their area that would be affected by this information.

VIII. Radiological Exposure Control

A sample mid-range (0-20R) and high-range (0-200R) self-reading dosimeter, along with a charger was distributed to Slocum Township in order to demonstrate their familiarity with the equipment. Potassium iodide and TLDs were not issued. It is clear that the Radiological Officer has a good understanding of the proper procedures for utilizing all exposure control equipment. Good instructions were posted on the walls concerning TLD/self-reading dosimeter/KI information, exposure limits and what to do after an individual has completed his assignment, including the location of the emergency worker decontamination station. The EMC reported that the township needs approximately 25 dosimetry/KI kits and that as of June 1 the kits will be stored at the EOC.

Prior to their departure to their particular assignments, all route alert, traffic control and ambulance personnel were thoroughly briefed on all aspects of radiological exposure control.

IX. Media Relations

The EMC informed the observer that in the event of an actual emergency at Susquehanna, all requests by the media for information would be referred to the county. The media would not be admitted into the township EOC.

X. Recovery and Reentry

Not applicable.

Slocum Township Deficiencies/Recommendations

1. Elected officials did not participate at the Slocum Township EOC. Township Supervisors should be actively involved in future exercises by observing operations at the EOC in order to better understand the township's capabilities to respond to a serious emergency.
2. The EOC staff missed the initial broadcast of the General Emergency message, because the radio volume had been reduced to lower the noise level. As this is the primary means for receiving information from the county, the radio should be monitored continuously. It is recommended that some other means be used to reduce noise level in the EOC, such as relocating the radios or installing partitions.
3. The EOC had only one telephone line. It is recommended that at least one more line be installed, if possible, to provide for both incoming and outgoing calls simultaneously.
4. Problems were experienced with the new county-wide radio/pager system. These problems should be resolved in order to establish a workable and efficient communications/notification system linking this EOC with the county.
5. The RACES operator arrived late at the EOC. The assignment procedures should be reviewed by the county to assure that RACES operators will be provided in a timely manner.

Sugarloaf Township EOC

I. Activation and Staffing

The Sugarloaf Emergency Management Coordinator received the Alert level notification at 1529 via a pager from the Luzerne County EOC. He verified the notification by calling back on the telephone. He arrived at the EOC at 1540 and began activation. Except for the police function, the EOC was fully staffed by 1625. Later, the Chief of Police was also able to participate.

There was excellent participation by all township agencies as described in the plan: two Township Supervisors, Emergency Management Coordinator, Communications Officer, Radiological Chief, Medical Officer, Transportation Officer, and Police. The personnel were all quite experienced and knowledgeable and performed their assigned tasks well and promptly. Twenty-four hour staffing capability was demonstrated by a combination of double staffing and presentation of a roster.

II. Emergency Operations Management

The Sugarloaf Township Emergency Management Coordinator, as designated in the township plan, managed the EOC quite well. He was knowledgeable, experienced, competent and effective throughout the exercise. He was supported and assisted by two Township Supervisors who participated actively in the exercise.

Briefings were very informal but largely unnecessary due to the close proximity of the staff to incoming communications and the easily visible status board.

Incoming messages were logged, distributed, noted, and posted on the status board if of general interest. No difficulties were observed with message handling.

The Alert level notification was received at 1529 while the Site Area Emergency and General Emergency notifications were received at 1754 and 1940, respectively.

III. Facilities

The Sugarloaf EOC is located in the township fire hall. Although somewhat small, space was efficiently used and no problems were noted with furniture, lighting or equipment. However, only two telephone lines are available for seven functional positions; additional phone lines would be beneficial during an actual emergency.

Maps and a status board were generally appropriate, posted and kept up-to-date. However, the evacuation route map posted was not the current one provided in the utility brochure supplied to residents in the EPZ; that brochure was available in the EOC, however.

Backup power is available through the generator on the fire and rescue truck housed in the fire hall. Its use was demonstrated for operation of the radios for approximately an hour. It is capable of being hooked up to power most equipment and lighting.

IV. Communications

Communications operated well throughout the exercise. The new emergency management radio network provided excellent communications to the Luzerne County EOC. Three other township-wide radio nets are available through fire, police and emergency frequencies. Only two telephone lines are available, which may be inadequate for staff use in an emergency. The amateur radio operator from ARES arrived at 1817, 25 minutes after the Site Area Emergency notification was received.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

Sugarloaf Township provides supplementary public alerting through the use of four route alerting teams. One team was actually sent out to Sector C at 1956, concurrent with siren soundings. They completed their route at 2040 or 44 minutes later. The teams had been placed on standby at the Alert stage and were prepared for dispatch at 1950 on an initiating call from the Luzerne County EOC about the EBS message.

VII. Protective Action

Four traffic control points assigned to the township were ordered manned (simulated) at 1759, five minutes after the EOC was notified of the Site Area Emergency. The township has no access control responsibilities.

Although the township has repeatedly attempted to identify hearing-impaired residents, none have identified themselves as such. Three non-ambulatory residents have been identified and their names, addresses and special needs were available in the EOC to the Medical Officer. Arrangements were made for their timely evacuation by ambulance once the General Emergency was declared.

VIII. Radiological Exposure Control

Sugarloaf Township requires 84 personal dosimetry kits for its emergency workers. Normally, the kits are distributed from Luzerne County, but this activity was simulated during the exercise. In June of this year the township will permanently stock its own kits at its EOC.

Simulated kits consisting of one mid-range (0-20R) and one high-range (0-200R), and thermoluminescent dosimeters were available. The kit also includes KI, instructions and record cards. Chargers and general instructions for issuance were also available. Kits were appropriately distributed to route alert teams at Site Area Emergency. The Radiological Chief was knowledgeable and experienced about exposure limits and decontamination procedures.

IX. Media Relations

Not applicable.

X. Recovery and Reentry

Not applicable.

Sugarloaf Township Deficiencies/Recommendations

1. The RACES operator arrived late at the EOC. The assignment procedures should be reviewed by the county to assure that RACES operators will be provided in a timely manner.

Union Township EOC

I. Activation and Staffing

The call initiating the activation of the Union Township EOC was reported to have been received at approximately 1530. Notification was received by pager and verified using a telephone. The notification was made to a Township Supervisor who provides 24-hour monitoring of the pager for this month. This township official then called the EOC staff listed on a written call list. The supervisor determined that the EOC would be activated for a drill at a time that was compatible with EOC staff non-work hours. Activation was ordered at 1710. The EOC was operational by 1745 and staffing for this exercise was complete at 1837. Full EOC staffing was not demonstrated, as the Medical and Fire positions, listed in the township plan, were not filled. All staff members who participated performed their assignments promptly and demonstrated a good understanding of their roles. Twenty-four hour staffing capabilities were not demonstrated. A second shift of volunteer staff were not available for many positions in this township.

II. Emergency Operations Management

The overall management of the Union Township EOC was very good. The Emergency Coordinator was effectively in charge, as specified in the plan. He effectively utilized the functional capabilities of his staff and incorporated their input into the decision making process.

Periodic briefings were made and the plan was frequently referenced. Message logs were maintained although the messages received were not distributed because of the small size of the staff. Access to the EOC was controlled. Emergency classification levels were posted in the EOC at the following times:

Site Area Emergency	1757
General Emergency	1943
Evacuation	1957

III. Facilities

The Union Township EOC is located in the McKendrie Grange Hall. The alternate EOC is located at Lake Lehman High School. Facilities are adequate as to space, lighting and furniture. However, this facility is lacking telephones, a generator, and an indoor restroom, for extended operations. A map was posted showing evacuation routes and a chart identified local access control points and relocation centers. A map was not available depicting the plume EPZ.

IV. Communications

The available communications network at this EOC was marginally adequate. The primary system was a battery-powered radio that linked the municipal EOC with the Luzerne County EOC. In the township plan, a land line telephone was intended to serve as the primary communications

system. However, no telephones were installed in this facility. Backup communications were provided by a RACES operator who was dispatched by the county and at the request of the municipal Emergency Coordinator.

Both radios functioned effectively, although the quality of the transmission on the RACES radio was reduced at times. Moreover, both systems could be limited by long term use on battery power.

V. Dose Assessment and Protective Action Recommendations

This is not a municipal responsibility.

VI. Public Alerting and Instruction

The Union Township EOC is able to play a limited role in public alerting. Limitations involve alert teams, vehicles and bull-horns, which must be requested from outside the municipality. The municipality does have in place maps with six alert routes. The timing of these routes had not been field tested and EOC staff expressed a concern that six alert teams could not complete the routes in 45 minutes.

During the exercise, the township Emergency Coordinator requested two alert teams from Shickshinny and six from the National Guard. Bull-horns were also requested and an EOC staff member simulated going to a prescribed location to acquire them. According to the timing of the scenario, the bullhorns for EOC staff use and National Guard teams were not available in time for the route alerting notification of an evacuation. The teams requested from Shickshinny did not arrive. Consequently, the EOC staff performed their own route alerting. Two teams were actually dispatched to cover Sectors 2 and 5 at 2005. Routes were completed at 2050 (Route 5) and at 2130 (Route 2). Teams stated that in an actual emergency they would yell, honk horns, and knock on doors to alert the public. Two additional teams were simulated. Staff were not available for the additional routes unless the EOC staff participated. This demonstration documented that, in certain instances, route alerting could not be conducted in a timely manner. This is particularly important since EOC staff believe that some residents can not hear the sirens inside their homes.

VII. Protective Action

This EOC did not participate in the control of traffic, as they did not have adequate staff available or equipment such as vests and flashlights.

The EOC staff did not have a written list of mobility or hearing-impaired people. They believed that informal information known by the EOC staff would be sufficient. Currently known persons with permanent hearing and physical limitations are not believed to live in Union Township.

VIII. Radiological Exposure Control

One radiological kit containing a medium and high-range self-reading dosimeter, TLD, charger and record keeping card was available. The EOC simulated receiving an additional 40 kits to cover the maximum number of people that would need to carry out all the functions assigned to this EOC.

The EOC staff was aware of the maximum allowable dose and procedures for use of the decontamination facilities at another location. KI was simulated and dispensed to the EOC staff at the request of the county EOC. The order to take KI was not received. The EOC staff was also aware of acceptable measures to protect personnel against exposure while the EOC was readied for relocation. The use of the outside restroom facility could pose a problem.

IX. Media Relations

The media would not be permitted inside the EOC. Members of the press would be referred to the county EOC.

X. Recovery and Reentry

Not applicable.

Union Township Deficiencies/Recommendations

1. Full staffing did not occur, and capability for a full second shift was not demonstrated for all EOC positions identified in the plan. The municipality should establish full, two-shift staffing capability for all designated EOC positions and demonstrate this capability in future exercises. The staffing list contained in the plan should be revised as necessary.
2. No telephone lines were available at the EOC. In order to establish acceptable communications capability, telephones should be installed.
3. Personnel and equipment were not available for establishing traffic control points. Procedures should be established, in coordination with the county, to obtain these resources in a timely manner.
4. Based on personal knowledge, the staff believed that there were no hearing or mobility-impaired township residents. More definitive steps should be taken to confirm that there are no mobility-impaired or hearing-impaired residents in the township.
5. The township EOC lacks indoor plumbing, and does not have an emergency power generator. Efforts should be made to provide these amenities which are basic to establishing continuous operations capability.

RISK SCHOOL DISTRICT ACTIVITIES

Berwick School District - District Superintendent's Office

I. Activation and Staffing

At 1012 the Superintendent received a phone call from the Columbia County EOC initiating the activation of the school district emergency plan. At this time the school district staff proceeded to notify, by phone, all individuals listed in the school district plan. The plan contains an appendix which lists, in outline form, the alerting responsibilities for each of the key school district staff. All the telephone numbers were correct.

II. Emergency Operations Management

The district was notified of the Site Area Emergency at 1104, at which time proper notification was disseminated by phone to all concerned parties. During the exercise the District Superintendent continuously monitored and coordinated the activities of his key staff, primarily the Transportation Officer and the Curriculum Director. All players, including the district personnel and the middle school staff and teachers, referenced their copies of the school district plan. The district was notified of General Emergency and Evacuation recommendation at 1328, by which time the observer had relocated to the Berwick Middle School to observe the evacuation demonstration.

III. Facilities

The school district was equipped with adequate space, lighting and furniture. Evacuation route maps were available for bus drivers.

IV. Communications

The primary and only means of communication was by commercial telephone. There was no backup communication available; although the plan specifies that RACES is to provide this capability, that organization did not participate in this demonstration. Notification calls by school district staff took approximately 15 minutes to complete with four key staff making commercial telephone calls. The staff expressed concern about this time span and concluded that a quicker, more direct line of communications would be beneficial. According to district personnel, school buses are not radio equipped.

V. Public Alerting and Instruction

According to the Superintendent, letters are sent home to parents annually which describe the evacuation of students and instruct parents where to pick up their children; any new students entering school are provided with this letter when they enroll. The school district monitored the EBS station, WBRX, during the exercise. The county plan contains prescribed school evacuation EBS messages, but EBS was not activated for the school district exercise.

VI. Protective Actions

Notification of bus companies' drivers was promptly initiated upon notification of the Alert status. The number of buses needed has been identified in the plan. According to the Superintendent, district resources are adequate to evacuate all students simultaneously in one lift. The school district staff was aware of the particular needs of special education students. The staff was knowledgeable regarding protective actions as contained in the plan, to include required actions to effect sheltering.

Berwick School District - Berwick Middle School

At the time of the General Emergency the observer was located at the Berwick Middle School, which demonstrated the evacuation. The evacuation announcement was broadcast over the school public address system. Students were instructed to report to their home rooms. Home room teachers took a roll call and escorted students to the designated bus pick up points.

Only two buses were actually mobilized, but simulation of students boarding the buses was demonstrated for the whole middle school student body. One bus departed empty to the designated host school; this was done primarily to determine the travel time for the route. The second bus was actually boarded by students and designated faculty. After roll call was taken, the full bus drove around the parking lot and returned.

The school building was completely emptied and key personnel proceeded to check the building for any remaining students and made arrangements to secure the building, as specified by the plan.

The principal and vice-principal were very much in control and were very knowledgeable in the established procedures. Consideration for special students was not demonstrated, but staff were aware of and knowledgeable of appropriate procedures as detailed in the district plan.

Berwick School District Deficiencies/Recommendations

1. Notification calls to other staff members took four Berwick School District officials 15 minutes to complete, which they felt was too long. It is recommended that school district officials investigate the possibility of obtaining a more rapid means of notification, such as a paging system.

Central Columbia School District

I. Activation and Staffing

Activation of the district's emergency plan was initiated at 1010 when a call from Columbia County EOC indicated that an Alert was in progress at the Susquehanna Steam Electric Station. The two participants, the school Superintendent and Transportation Officer, were already on duty. These individuals were familiar with the required activities and contact organizations.

Notification of the four risk schools and five transportation companies took place during the Alert and Site Area Emergency stages.

II. Emergency Operations Management

The Superintendent was clearly and effectively in charge. A copy of the school district plan was available for reference. The Superintendent was notified of Alert at 1010, of Site Area Emergency at 1103 and of General Emergency at 1306.

III. Facilities

The school district office provided adequate accommodations, furniture, space and lighting.

IV. Communications

Four telephone lines were available to the Superintendent. Two commercial lines were used extensively; the remaining telephone lines included a private line to the Superintendent's office and a line to the computer terminal. The telephones worked well, and the use of a speaker phone was effective. Incoming messages were taped (toward the latter portion of the exercise) to aid in transcription. Calls were placed to bus companies, affected schools, the Columbia County EOC and the Berwick School District.

According to the Superintendent, a RACES operator would be made available in an actual emergency to provide backup communications; this was not demonstrated during the exercise, however.

A written log of outgoing calls was not maintained. Although this did not result in any problem during the exercise, it is recommended that the Superintendent consider maintaining such a log to avoid a potential notification omission to a school or bus company.

V. Public Alerting and Instruction

A letter informing parents of the evacuation procedures, relocation sites, and pick up procedures was sent to the homes of all district students.

The EBS station was monitored (WHLM). Because the school district demonstration was out-of-sequence with the main exercise, EBS was not activated at this time.

VI. Protective Actions

Protective action procedures were simulated and discussed. Bus companies were notified to be on standby and required activities in response to an emergency were reviewed. School principals were informed.

Twenty-three buses from five companies were available. One bus was activated for the exercise to simulate a trip from the Mifflin Elementary School to the Columbia County Middle School, which would serve as a mass care center.

Needs of special students were discussed. Two special education students would be transported by bus or van.

Each teacher was prepared with a class roster, and school nurses had reportedly been briefed regarding special requirements of the children.

Central Columbia School District Deficiencies/Recommendations

1. A written log of outgoing calls was not maintained. Although this did not result in a problem during this exercise, it is recommended that the Superintendent consider maintaining such a log, to avoid omitting any required verification calls.

Hazelton Area School District

I. Activation and Staffing

Although the plans designate the Superintendent's Office as the point of entry for notification calls, the call activating the Hazelton Area School District Plan was received at the Hazelton School District Transportation Office at 1011 from the Luzerne County EOC. All exercise play was conducted from this location by the Assistant Transportation Coordinator, contrary to the plan, which designates that the Superintendent is in overall command. The Superintendent's Office was also notified, by a call from Intermediate Unit 18 at 1015.

Handwritten call lists were used to notify bus contractors as well as 13 individual school principals; the latter are not the responsibility of the Transportation Department to notify.

Notification calls to other district staff members, to whom the plan delegates emergency responsibilities, were not demonstrated, and they did not participate. These include the Business Administrator, the Health Supervisor, The Coordinator of Special Education, Education and Curriculum Directors, and Maintenance and Security personnel.

Mobilization of the Transportation Department staff was adequate; the staff, however, did not demonstrate sufficient training and familiarity with the plan. Additional training is recommended.

II. Emergency Operations Management

The district did not demonstrate emergency response procedures in accordance with the plan. The Superintendent, who is supposed to be in overall command, and most other district staff members did not participate. The exercise demonstration was relegated to the Transportation Department, with the Transportation Coordinator (TC) in charge. This was inappropriate. The TC, in addition to his own responsibilities, was straddled with performing other duties with which he had no reason to be familiar. Lacking the support of key district staff, and without a knowledge of the overall plan and familiarity with the Superintendent's responsibilities, the TC was not adequately prepared to demonstrate effective emergency operations management.

III. Facilities

Both the Superintendent's office and the Transportation Office are adequate for the purpose, with sufficient telephones being available.

Individual evacuation maps were not available for bus drivers.

IV. Communications

Commercial telephones provided the communications link to EOCs, schools and bus drivers. Adequate phones were available.

V. Public Alerting and Instruction

No public alerting role was carried out from the district, although the plan does include a draft letter to parents which includes appropriate instructions and information regarding the evacuation of students.

VI. Protective Action

Appropriate actions were demonstrated in arranging for buses to evacuate the risk schools. Bus drivers were promptly notified. The Transportation Office was fully aware of numbers needed and adequately provided for resources through contractors and their own buses.

Special education students were known and appropriate procedures for their evacuation were provided.

Other issues, such as arrangements to deal with possible traffic jams of parents at the schools, arrangements for securing evacuated schools, coordination with host schools, and arrangements for the relocation of the school district administration, were not demonstrated.

Hazelton Area School District Deficiencies/Recommendations

1. The Hazelton School District Superintendent and most other staff members, as identified in the plan, did not participate in the exercise. Future exercises should include participation by the Superintendent and other key staff members to whom the plan has delegated emergency responsibilities.
2. The official in charge of the district's emergency response actions did not have sufficient preparation and training, plan familiarity, and staff support to demonstrate effective emergency operations management. The district should designate and train a suitable substitute to manage emergency operations, should the Superintendent be unavailable.
3. Aside from transportation arrangements, most of the administrative-level notifications and coordination actions necessary to implement an evacuation were not addressed. These include arrangements to deal with possible traffic jams of parents at schools, arrangements for securing evacuated schools, coordination with host schools, and arrangements for the relocation of the district administration. Capability to perform these actions should be demonstrated at future exercises.

Nanticoke School District

I. Activation and Staffing

The school district was notified of an Unusual Event at 1010 by the Luzerne County EOC. The notification was verified through the Intermediate Unit at 1030. The Superintendent initiated mobilization procedures upon receipt of notification. The schools under the district's jurisdiction were notified, the bus contractor was contacted and the host school district was alerted. Mobilization was effected at 1100.

II. Emergency Operations Management

The Superintendent was effectively in charge of the district's emergency operations. Staff was briefed throughout the exercise. Internal communications were well managed. No pre-printed message logs were used, however the Superintendent recorded all pertinent information and informed the staff in a timely manner. Notification of Site Emergency was received at 1109 and the General Emergency notification was received at 1314. The exercise was terminated at 1350.

III. Facilities

Office facilities and space were adequate. Necessary information (plans, telephone lists, etc.) were available and used.

IV. Communications

Communication was effected by telephone. Enough equipment and lines were available to allow the Superintendent and staff to make all necessary contacts.

V. Public Alerting

The school did not play a part in alerting the general population. Letters had been sent to all parents outlining the procedures for evacuation and pick up in an emergency.

VI. Protective Action

The Superintendent notified the bus contractor after receipt of alert notification. The bus contractor has agreed to provide sufficient equipment to allow evacuation in one lift. The relocation point (host area) has been identified and the school district plan provides for the relocation of students to that site.

Nanticoke School District Deficiencies/Recommendations

None identified.

Northwest School District

I. Activation and Staffing

The Principal of the elementary school served as Acting Superintendent in place of the regular Superintendent. The RERP is currently being revised and updated as there have been a considerable number of changes in administration and other details.

The Acting Superintendent demonstrated excellent leadership and organizational talents and is to be commended. The staff displayed adequate training and knowledge to fulfill duties in this exercise. The entire staff has attended two training sessions at the school and one at SSES sponsored by the utility.

II. Emergency Operations Management

The Acting Superintendent was totally in charge and efficient. All functions of management were ably carried out.

The district is understaffed but this was of no significant hinderance to accomplishing the exercise objectives.

III. Facilities

The facilities, located in the district office at the Northwest High School, were adequate for these emergency management activities. Backup power was available via generators.

IV. Communications

Outside communications were solely by telephone. Communication to six nearby staff members were verbal. There were two phones in the Superintendent's office and five in the adjacent district business office. This number is quite adequate.

Two bus companies were not notified - each with one bus. This did not effect evacuation capability, as 27 buses were needed, and 29 were initially available.

V. Public Alerting and Instruction

The district plays a minor role in overall public information dissemination. The plan contains a copy of a letter which is sent to all parents advising them of the evacuation plans, host locations, and pick up procedures. Several EBS stations were monitored.

VI. Protective Action

Protective action procedures were adequate for the task. Bus companies were notified, as necessary; according to the district staff, there are more than adequate resources available to draw on in order to evacuate all students in one lift.

District personnel were aware of the needs of special education and handicapped students, and appropriate arrangements were made. Although sheltering was not demonstrated as part of the exercise, each risk school has a designated sheltering area.

Evacuated schools were ordered secured, and arrangements were made for the relocation of the district administration to the host school.

Northwest School District Deficiencies/Recommendations

None identified.

SUPPORT COUNTY ACTIVITIES

Red Cross Field Headquarters

The Red Cross Field Headquarters was established at the Wyoming Valley Chapter to support the eight-chapter Red Cross mass care demonstration for this exercise. This headquarters will receive reports of activity and requests for supplies and personnel during a real emergency.

Of the eight reception/mass care demonstrations (both risk counties and six support counties), only Wyoming County played in sequence with the main exercise events. This caused a serious problem for participants at the Field Headquarters because the normal procedures for notifications, general coordination, and handling requests for supplies could not be followed, as most mass care locations were not "in synch" with the Red Cross and other agency representatives at the State and risk county EOCs.

In future exercises, if counties play mass care activities out-of-sequence, provisions for proper notification and coordination with appropriate staff at State and county EOCs should be made to support the out-of-sequence play.

A related problem was that Red Cross did not have the opportunity to provide input during the scenario development process. It is recommended that the Red Cross State Liaison be included in scenario development meetings to ensure that the Field Headquarters role is properly utilized.

Red Cross Field Headquarters Deficiencies/Recommendations

1. Out-of-sequence mass care activities created problems in notification and coordination of activities. In future exercises, it is recommended that all out-of-sequence play be held to a minimum. If out-of-sequence play is necessary, then all support elements should be addressed in the scenario to ensure proper actions.
2. Red Cross did not provide input during the scenario development process. For future exercises, it is recommended that Red Cross State Liaison be included in scenario meetings to ensure that the Red Cross Field Headquarters' role is properly utilized.

Lackawanna County Support Activities

County EOC

I. Activation and Staffing

The activation of the EOC was not observed and because of the out-of-sequence play, proper actions per emergency classification were not performed. However, the county EOC fully supported the out-of-sequence play. Call lists were current and logs indicated the EOC was fully staffed by 1500. The staff present were knowledgeable and performed well. The reception center and mass care center were activated in a timely manner.

II. Communications

Communications were adequate. State radio, county radio, with telephone and RACES backup, supported the entire operation.

III. Radiological Exposure Control

All radiological exposure control items were taken to the monitoring site with the exception of the TLDs, which were intentionally left at the EOC. The supply was adequate. County officials were aware of the procedure concerning the distribution of KI.

Reception Center

The reception center was located in the Birney Plaza Shopping Center. It was activated in a timely manner and was adequately staffed with knowledgeable people. Strip maps to mass care centers were available. Provisions were made for traffic control.

Mass Care Center

I. Activation and Staffing

The mass care center, located at the Riverside Junior-Senior High School in Taylor, Pennsylvania, was activated in a timely manner with staff comprised of county representatives, Red Cross and ARES. The staff were knowledgeable and performed their assigned tasks well. A 24-hour capability was demonstrated by a combination of staffing lists and double staffing.

II. Registration and Monitoring

Red Cross registration forms were used to register victims. Upon arrival, evacuees were checked for radiological contamination and decontaminated in accordance with established procedures contained in the county plan. The Radiological monitors were familiar with correct procedures and they had proper equipment.

III. Congregate Care

The shelter is more than five miles beyond the EPZ and can accommodate 1300 people. If more evacuees arrive at the reception center than the mass care center can accommodate, they are diverted to other facilities. There was sufficient food available and more could be obtained through government and Red Cross channels. The shelter can handle physically-impaired evacuees. The shelter has communications by radio and telephone to the county EOC, Red Cross Field Headquarters, and emergency medical facilities.

Lackawanna County Support Activities Deficiencies/Recommendations

None identified.

Lycoming County Support Activities

County EOC

I. Activation and Staffing

Staff mobilization procedures, in accordance with the county plan, were demonstrated by simulation. A current, written call list was used. Full staffing was not demonstrated. Those present included a County Commissioner, the Emergency Management Agency Director, the County Administrator, Radiological Officer, police and fire representatives, and Red Cross representatives. The available staff generally demonstrated adequate training and knowledge.

The county's reception and mass care centers were not activated and staffed. Instead, the county provided a simulated demonstration of how the associated activities would be performed. This occurred at the EOC. The observer was provided a walk-through tour of the facilities which would be used for these activities.

II. Communications

According to the staff, key county officials can be contacted by pagers 24-hours per day. Commercial telephone, dedicated land line, radio and RACES provide communication with PEMA Area offices, county EOCs, ambulances, hospitals, and the reception and mass care centers. Walkie-talkies are also used. Due to the tabletop nature of this demonstration, no communications were observed.

III. Radiological Exposure Control

An adequate supply of self-reading dosimeters, dosimeter chargers, TLDs, record forms and KI were available. Appropriate instructions were provided when the dosimetry was distributed, and the Radiological Officer was aware of the proper procedures for the use of KI.

Reception Center

The designated reception center at Lycoming Valley Mall was not activated or staffed. Reception center procedures that would be implemented were described at the county EOC. Some aspects of this activity could not be evaluated, including timeliness of reception center activation, reception center staff mobilization procedures, and knowledge of all staff members concerning their responsibilities.

A tour of the reception center facility showed that it should be adequate for this function.

Mass Care Center

I. Activation and Staffing

The designated mass care center at Montoursville High School was not activated or staffed, so no direct observations were possible regarding staff activation procedures and mobilization time, staffing contributions of the various responsible organizations, adequacy of staff regarding number and training, and capability for 24-hour staffing.

II. Registration and Monitoring of Evacuees

No direct observations were possible regarding registration procedures, radiological monitoring procedures, or decontamination procedures.

III. Congregate Care of Evacuees

The mass care center is located 30 miles beyond the EPZ boundary, and can accommodate 1,200 evacuees. A walk through tour was provided. The facility should be adequate for its intended use as a mass care center, in terms of the sleeping accommodations, toilets, drinking water, secure storage, and parking available. The school cafeteria provides an immediate supply of food. The shelter was equipped to handle handicapped evacuees and had a nursing station. No observations were possible regarding the availability and adequacy of communications.

The personnel available for the simulated exercise demonstrated adequate training and knowledge, and provided generally adequate descriptions of procedures that would be used at the reception and mass care centers. However, the demonstration contained many simulations and artificialities, and many aspects were not addressed at all. As with any tabletop exercise, this demonstration did not provide a suitable opportunity for a definitive evaluation of capability.

Lycoming County Support Activities Deficiencies/Recommendations

1. The Lycoming County reception and mass care center demonstration was limited to a tabletop exercise. Future exercises should include a more extensive demonstration, including full activation and staffing of the EOC and reception and mass care centers, to provide the basis for a more thorough evaluation of this activity.

Northumberland County Support Activities

County EOC

I. Activation and Staffing

EOC activation was initiated upon receipt of the Alert notification. The call was received from PEMA's Central Area Headquarters in Selinsgrove, at 1510. (This was an out-of-sequence event; the times do not correspond to the main exercise.) Staff mobilization was initiated by the use of a call list. The phone numbers were up-to-date. By the time the observer left for the reception center at 1615, staffing was not yet complete.

The positions that were manned by 1615 included: USDA, RADEF and Decontamination, Transportation, Public Utilities, Police, Red Cross, and County Secretary.

Those positions that were not manned by 1615 were: Mass Care and Shelter, Mental Health and Mental Retardation, Medical, Fire, Public Relations, and County Commissioners.

The reception and mass care centers, which were co-located, were activated in a timely manner.

II. Communications

The primary means of communication with the PEMA Area EOC and other county EOCs was telephone, with radio providing backup. Communications with the reception/mass care center were via telephone and RACES. No problems were noted. Communications with EBS stations, hospitals and ambulances were not demonstrated.

III. Radiological Exposure Control

The radiological exposure control equipment was transferred to the reception/mass care center from the county EOC. The available equipment included: direct-read dosimeters, dosimeter charger, and record keeping cards. TLDs or other permanent record dosimeters were not available. There was a supply of 36 dosimeters. Printed instructions were available. KI was simulated. County officials were aware of proper procedures concerning the use of KI.

Reception Center

The activation of the reception center was accomplished in a timely manner. A call was received at 1530 by telephone and 1550 by radio. All units were on site. The center was adequately staffed by approximately 50 people. The staff was well experienced and knowledgeable of their responsibilities.

Packets containing maps, directions, floor plans, etc. were available for distribution to arriving evacuees. An adequate traffic control system was demonstrated at the reception center. Traffic control was demonstrated by local police, fire police and state police.

The reception center and mass care center were co-located. Communications with the county EOC were via telephone and RACES.

Mass Care Center

I. Activation and Staffing

The reception/mass care center was located at the Milton High School. The following is a list of department heads in the exercise: Mayor of Milton, Milton EMA Director, Deputy Director, Assistant Director, School Superintendent, Police Chief, Fire Chief, Ambulance Captain, American Red Cross, PIO, Transportation, Communications and Fire Police.

Notification of the staff was by radio. It took them 20 minutes to mobilize. The number of staff was adequate. The nursing staff have had training in disasters. One nurse is on duty at all times. Also a mental health social worker is on duty full time.

A 24-hour staffing capability was demonstrated through a combination of double staffing and a call list of Red Cross personnel.

II. Registration and Monitoring of Evacuees

Adequate procedures were demonstrated for registration of evacuees by the Red Cross. Registration forms were used which included all appropriate information necessary to identify evacuees and note any medical and health problems.

Capability for monitoring evacuees for radiological contamination was demonstrated. There were two monitoring teams available for the exercise. They were each equipped with CDV-700 Survey Meter Kits. Monitoring was thorough, though the bottoms of the subjects' feet were not tested.

If an evacuee is found to be contaminated, he would be decontaminated at the same location. Showers and clean clothing were available. The equipment and procedures for decontamination were adequately described and demonstrated.

III. Congregate Care of Evacuees

The relocation center is located 30 miles beyond the EPZ. Twenty-five hundred evacuees can be accommodated at the shelter, although the REP plan specifies that only 1910 people would be expected. If shelter capacity was exceeded, evacuees would be sent to other facilities (other schools and churches), as designated in the plan.

This facility provided more than adequate sleeping accommodations, toilets, drinking water, secure storage and parking. The capability to obtain food was adequate. They would use all food supplies at school until other food comes in. (The school feeds 3,000 students each day.) At that time the order for food would be made - to be delivered within 24 hours.

The junior high school has suitable facilities for handicapped evacuees. There were communications available with the local EOCs, the State area EOC and emergency medical facilities. The communications systems used were RACES, telephone, and other radio systems.

Ambulances were available at the mass care center in the event that quick access to hospital care was required for evacuees.

Northumberland County Support Activities Deficiencies/Recommendations

1. The Northumberland County EOC did not have TLDs for distribution to radiological monitors, as required by the plan. The county should be provided with an adequate supply of TLDs.

Schuylkill County Support Activities

County EOC

I. Activation and Staffing

Activation of the Schuylkill County EOC was initiated by receipt of the Alert notification, received from PEMA's Eastern Area EOC.

Notification and mobilization of the designated agency representatives was accomplished using an up-to-date call list. The EOC was staffed by representatives from Schuylkill County Emergency Management Agency, Pottsville Police, and the Schuylkill County Sheriff's Department, in addition to two radio operators and three clerical staff. Reportedly, the full EOC staff complement was expected between 1630 - 1700.

The staff were fully knowledgeable about their county plan and operational procedure. The reception center at Lakewood Park in Barnsville was activated in a timely manner, as was the mass care center at Tamaqua Senior High School.

II. Communications

The local EOCs were contacted by telephone as were other agencies such as Red Cross and Tamaqua EMA. The PEMA Eastern Area EOC could be contacted either by PEMA radio, or telephone as a backup. Communications with the EBS station were via telephone, but were not demonstrated. Supporting hospitals could be contacted by telephone or by a radio backup system, but no contact was demonstrated. The county ambulance could be contacted by the EOC radio system, but this was not demonstrated. RACES provided a radio link between the EOC and both the mass care center and the reception center.

III. Radiological Exposure Control

In accordance with plan specifications, the EOC had a supply of high-range dosimeters, TLDs, chargers for the dosimeters, record cards and potassium iodide (KI), and several people in the EOC were aware of procedures on using the equipment.

Reception Center

The reception center was located at Lakewood Park in Barnsville, Pennsylvania. Approximately eleven evacuees reported to the reception center which was activated promptly and adequately staffed. The staff were knowledgeable of their duties and gave each evacuee a map and a letter of instructions. These identified the mass care center and described the events that would occur upon their arrival. According to the letter, in an actual emergency the evacuees would be escorted in 50-car convoys. The reception center did have radio contact with both the Schuylkill County EOC and with the relocation center by the RACES system. The evacuees left the reception center in convoy and were escorted to Tamaqua to the high school.

Mass Care Center

I. Activation and Staffing

The relocation center was established in the Tamaqua Senior High School and was staffed by representatives of the Tamaqua Civil Defense, Red Cross, RACES, and students who had been trained as Radiological Monitors. The staff present at the school had all been alerted by the Tamaqua Civil Defense. An adequate amount of staff from each agency were present. Capability for 24-hour staffing was demonstrated by presentation of a list of other volunteers from both Red Cross and Civil Defense who could be called upon if needed. The staff demonstrated adequate training to perform all aspects of their assignments.

II. Registration and Monitoring of Evacuees

The convoy of evacuees arrived at the relocation center at 1650 and were checked for radiological contamination by four teams of radiological monitors. Each team was composed of two high school students who had completed a radiological monitoring course taught by a local Radiological Officer who was also present at the relocation center. Only one member of each team wore a CDV-742 dosimeter; the other team member did not have a dosimeter. No team members had TLDs. The monitors were also unfamiliar with how often to record their dosimeter readings and the maximum dose allowable. Additional dosimetry and training should be provided. The monitoring was performed with a CDV-700 Survey Meter.

All of the team members adequately displayed their ability to properly monitor evacuees for contamination. Evacuees who were found to be contaminated were led to a shower area on the second floor for on-site decontamination and would be issued hospital gowns when their clothing was disposed of in a secure container. They were then re-monitored after the decontamination (showering) was completed. Once screening verified that they were "clean" they were registered by the Red Cross and admitted to the main area of the relocation center with the other evacuees. The Red Cross completed a Red Cross Shelter Registration Form for each evacuee upon entering the relocation center. The Radiological Monitors also completed a form for each evacuee monitored, recording the readings.

III. Congregate Care of Evacuees

The relocation center was located more than six miles beyond the EPZ boundary, and provided a total occupancy of at least 1,000 evacuees. If it became full, five other schools in Tamaqua were available to care for the evacuees. All facilities (toilets, parking, sleeping area, cafeteria, showers, food and water) were adequate to handle the

evacuees. Cots and blankets could also be transported to the school within 24 hours. The shelter does have handicapped access by ramps and elevators, and had a supply of frozen foods in the school cafeteria for immediate use, with other food being purchased as needed. The Red Cross shelter manager stated that she had adequate food for 1,000 people for fourteen days, if needed.

The center had four two-way radios linking it to the Tamaqua EOC, fire, ambulance and the hospital, also RACES operators were present. The two Red Cross nurses were present and the school nurse's office would be used as the nurses station; the hospital was three miles away and could be reached within five minutes by ambulance. A fire department vehicle was stationed at the shelter along with a police vehicle. The flow of evacuees was properly handled in the relocation center by all staff present. Everyone was aware of their duties and carried them out in a very professional manner.

Schuylkill County Support Activities Deficiencies/Recommendations

1. Radiological monitors at the mass care center had not been provided with a full complement of dosimetry, as designated in the plan, and were not familiar with the maximum allowable dose or how often to read and record their dosimeter levels. Additional dosimetry and training should be provided.

Union County Support Activities

County EOC

I. Activation and Staffing

The County Emergency Management Director initiated activation of the EOC by simulating a Site Emergency (this was necessary because the event was demonstrated out-of-sequence with the main exercise). Notification and mobilization of staff were demonstrated. An up-to-date call list was used. Those present included a County Commissioner, the Emergency Management Director, the County Administrator, the PIO, the Radiological Officer, police and fire representatives, and Red Cross representatives. However, the EOC was not fully staffed. Absent were the coordinators for mass care, health, public works, resources and social services. Those present demonstrated adequate knowledge and familiarity with procedures.

The county's reception and mass care centers, which were to have been established at Bucknell University, were not activated or staffed. Instead, the county provided a simulated demonstration of how the associated activities would be performed. This occurred at the EOC. The observer was provided a walk-through tour of the facilities at Bucknell which would be used for these activities.

II. Communications

Key personnel have pagers, which were used for their notification. Communications with the reception and mass care centers was not demonstrated, as these locations were not staffed. Communications with other appropriate locations, including the EBS station, were demonstrated. No problems were noted.

III. Radiological Exposure Control

An adequate supply of self-reading dosimeters, dosimeter chargers, TLDs, and record forms were available. Appropriate instructions were provided when the dosimetry was distributed and the Radiological Officer was aware of the proper procedures for the use of KI.

Reception Center

The designated reception center at Bucknell University was not activated or staffed. Reception center procedures were described, including provisions for traffic control. Maps/directions to the mass care center were demonstrated. However, timeliness of reception center activation, reception center staff mobilization procedures, and knowledge of all staff members concerning their responsibilities could not be evaluated.

A tour of the reception center facility showed that it should be adequate for this function.

Mass Care Center

I. Activation and Staffing

The designated mass care center at Bucknell University was not activated or staffed. The American Red Cross Disaster Services Director and two assistants were present at the EOC. They were reportedly alerted by pager, but neither this nor their mobilization time were observed. The staff mobilization procedures were explained. Capability for 24-hour staffing was demonstrated by presentation of a staffing list showing three 8-hour shifts.

II. Registration and Monitoring of Evacuees

Procedures for registering evacuees were explained by the ARC Disaster Services Director and assistants at the EOC. Registration forms and shelter kits were demonstrated. Four radiological monitoring teams were present at the EOC to demonstrate and explain the procedures that would be used to check evacuees at the mass care center. The teams had the appropriate monitoring equipment and satisfactorily demonstrated its use. Procedures to prevent the spread of contamination could not be evaluated as there was no demonstration of the actual set up that would be used at the facility.

III. Congregate Care of Evacuees

The shelter is located 30 miles beyond the EPZ boundary, and can accommodate 1,700 evacuees. The county plan contains procedures if shelter capacity is exceeded. A walk-through tour was provided. The facility should be adequate for its intended use as a mass care center. However, such items as availability and adequacy of communications, provisions for handicapped evacuees, and availability of a nursing station were not observed. The mass care center staff members present at the EOC demonstrated adequate knowledge and training, and they provided generally adequate descriptions of procedures that would be used at the reception and mass care centers. However, the demonstration contained many simulations and artificialities, and some aspects were not addressed at all. As with any tabletop exercise, this type of demonstration does not provide a suitable opportunity for a definitive evaluation of capability.

Union County Support Activities Deficiencies/Recommendations

1. The Union County Reception and Mass Care Center demonstration amounted to a tabletop exercise at the county EOC. Future exercises should include a more extensive demonstration, including full activation and staffing, of the EOC, reception and mass care centers, to provide the basis for a more thorough evaluation of this capability.

Wyoming County Support Activities

County EOC

I. Activation and Staffing

The EOC was activated following a call from the PEMA Eastern Area EOC at 1529. The EOC was fully operational by 1540, and full staffing was demonstrated. The county government officials, which included elected officials, were present in the EOC. The staff generally displayed adequate training and knowledge. The reception/mass care center was ordered activated in a timely manner.

II. Communications

Adequate communications, primarily by radio and backup telephone, existed with all appropriate locations.

III. Radiological Exposure Control

An adequate supply of direct-read dosimeters, TLDs, KI and record forms was available. County officials were familiar with the proper procedures for the use of dosimetry and KI. Sufficient equipment was available to meet the radiological monitoring/decontamination requirements of the county.

Reception/Mass Care Center

I. Activation and Staffing

A combination reception/mass care center was established at the Tunkhannock High School. It was staffed by personnel representing county government, ARES, Red Cross, volunteer fire department and volunteer ambulance. The facility was staffed on orders of the EMC and Red Cross Chapter in a timely manner. There were sufficient staff present to perform their respective missions. Twenty-four hour staffing was demonstrated by double staffing and call down lists.

II. Registration and Monitoring

Upon arrival at the site, evacuees were monitored and, if necessary, decontaminated in accordance with procedures in the county plan. The monitors were adequately trained and had a working knowledge of their equipment. After clearing the monitoring/decontamination activity, evacuees were registered by the Red Cross.

III. Congregate Care of Evacuees

The center is more than five miles outside the EPZ and could accommodate 2,000 evacuees. If additional space was needed, additional sites would be opened. Procedures are in place to insure 24-hour food supply from USDA supplemented by Red Cross. Communications were in place to the EOC and to emergency medical facilities.

Wyoming County Support Activities Deficiencies/Recommendations

None identified.

MEDICAL SUPPORT ACTIVITIES

Berwick Hospital

The Berwick Hospital is located about 4.5 miles from the SSES plant. It is the primary medical treatment facility for the plant in the event that injuries or illnesses are too serious for treatment at the SSES Clinic.

I. Communications

The hospital has telephone contact with the plant and the Columbia County Medical Central Control. It also has radio contact with the medical control and the county EUC. The radio allows the hospital to be patched through to the ambulance squads, support hospitals and congregate care facilities.

The hospital received a telephone call at 1335 that two plant employees had been burned and were contaminated.

II. Hospital Facilities & Procedures

The utility has a number of health physicists on staff and the plans specify that one or more are to accompany a contaminated, injured employee to the hospital. (These physicists are also available to the hospital, if needed, for other patients.) The hospital staff includes a radiologist who is located adjacent to the treatment area for contaminated patients.

Monitoring and decontamination of the patient were adequately demonstrated, as were procedures for the control of the spread of contamination.

Upon delivery of the patient to the hospital, one of the health physicists measured the level of contamination while the patient was in the ambulance. Another physicist was in the treatment room to monitor for contamination while treatment progressed. Both brought their own survey instruments. The hospital's radiological accident supply cart includes several gamma and beta survey instruments, as well. The cart also has 30 dosimetry devices which are for the treatment staff.

The hospital's procedures for treatment and decontamination were developed by a consultant under contract to the utility. The procedures are quite thorough and are focused on allowing the treatment of injuries to proceed while controlling the spread of contamination. The other hospital functions are also not severely affected by the contaminated patient flow; it is well-contained processing. The staff has exercised the procedures and the rooms were set up quickly after the Alert notification. The equipment is adequate to treat numerous patients.

III. Ambulance Facilities & Procedures

Two patients were transported to Berwick Hospital by ambulance. One patient was determined to be too severely burned to be treated at Berwick and a Geisinger air ambulance was called in to air evacuate the victim to Geisinger Medical Center.

The ambulance carried the utility health physicist who had survey instruments. The crew was reportedly issued dosimeters when they entered the plant grounds but, because this was an exercise, the dosimetry was collected when they left. Therefore, the crew did not have dosimeters when they arrived at the hospital. This observer was informed that, in the event of an actual emergency, the ambulance crew would have retained their dosimeters so they could be monitored. Ambulance decontamination would have been performed by utility staff.

Berwick Hospital Deficiencies/Recommendations

None identified.

Geisinger Medical Center

I. Communications

Geisinger Medical Center, located in Danville, Pennsylvania, demonstrated treatment of an injured, contaminated patient. During this exercise the hospital received notification, at 1400, of a radiological accident with injuries at SSES. This information was verified with the plant. The hospital is able to communicate with other hospitals in the area, ambulances in transit, and aircraft. The communications equipment included: high band-low band and UHF transmitter/receivers, land lines, and RACES backup.

II. Hospital Facilities & Procedures

A health physicist is on the Geisinger staff. The hospital has a special decon kit which is well-stocked with protective garments and the following detection equipment: CDV-700, Ludlum models 3 and 177, GM meter model 520, and Eberline model RO-2A. Personnel monitoring devices, including film badges and self-reading pocket dosimeters (0-200 mR range) are also available. The hospital demonstrated use of this equipment in a satisfactory manner. The hospital had an adequate system for decontaminating the victim and adequately demonstrated their ability to perform this function. The hospital staff, nurses, doctors, and other auxiliary personnel demonstrated a respect for the problem presented by contaminated individuals, and an understanding of the methods necessary to prevent the spread of contamination to other parts of the hospital. This procedure was well demonstrated during this exercise. Geisinger Medical Center has the capability in-house to perform the radiological analysis necessary to support any emergency. An outside laboratory is not necessary.

III. Ambulance Facilities & Procedures

The patient was transported to the medical center via Geisinger air ambulance. The helicopter crew was properly equipped and demonstrated a good knowledge of the proper handling of a contaminated individual. The hospital staff demonstrated an adequate capability for ensuring that the helicopter crew and equipment used was not contaminated, to prevent the possible spread of contamination throughout the hospital. The helicopter crew was provided with personal dosimetry, and were sufficiently familiar with its proper use. The crew was in constant communication with the hospital base unit while enroute.

The accident scenario was sufficient to test the hospital's capability for treating contaminated patients. Contamination levels were such that the attending staff were provided with an adequate opportunity to demonstrate their capability regarding the use of survey equipment and decontamination techniques.

Geisinger Medical Center Deficiencies/Recommendations

None identified.

Nanticoke Hospital

Nanticoke Hospital is located just inside the EPZ boundary, but is more than ten miles from SSES. As a risk institution, the hospital plans focus on implementing protective actions for patients. However, the hospital is also capable of providing radiological support. The following observations are based upon an interview, as the hospital did not perform a demonstration in conjunction with the exercise.

I. Communications

Nanticoke Hospital has both telephone and radio contact with the Luzerne County EOC. At the time of observation, the hospital staff had set up a command center and the telephone was exclusively used for sending and receiving information. The hospital depended on the EOC to communicate with host hospitals, congregate care facilities and radiological laboratories.

II. Hospital Facilities & Procedures

The Nanticoke Hospital can provide support for radiological incidents. The radiologist has primary responsibility for directing decontamination. Assistance is also available from the health physicists at the Susquehanna Plant.

The hospital maintains monitoring equipment in the Radiology Department. It would be brought to the Emergency Room in an Alert situation. If the hospital were to be evacuated, the materials would be taken to the Physical Therapy Department which would serve as the control point. Since the hospital did not have exercise participants present, no observations were made. The decontamination equipment and instructions contained in the hospital plan appear adequate. There was no demonstration of this capability.

The hospital plans cover the tasks for treating a contaminated community person who needs medical treatment, but its major focus is on implementing protective actions for patients, should that be necessary. As the facility is located more than ten miles from SSES, patients could be safely sheltered even if evacuation is recommended for the general EPZ population.

The hospital plan includes detailed procedures for deciding whether to shelter or evacuate, as well as procedures for communicating with the county EOC, deciding which patients can be discharged, determining the level of care required for those patients evacuated to other facilities, and other similar risk hospital considerations. The hospital plans are in agreement with the county plan, Annex G, Medical Support. During the exercise, the hospital census was 60 medical/surgical patients, 44 of whom required evacuation to another medical facility. There were also 16 psychiatric patients who would also be transported in an evacuation. The hospital depends on the EOC to fulfill the tasks in the EOC Annex G, mainly location of referenced facilities and arrangements for transportation.

III. Ambulance Facilities & Procedures

The Nanticoke Hospital did not exercise with an ambulance, therefore, no observations were made.

Nanticoke Hospital Deficiencies/Recommendations

None identified.

SUMMARY OF INADEQUACIES

Explanation of Categories

The inadequacies listed under the Deficiencies/Recommendations heading for each evaluated location or activity have been summarized and classified according to the following three categories:

Deficiencies are demonstrated and observed inadequacies that cause a finding that offsite emergency preparedness was not adequate to provide reasonable assurance that appropriate protective measures can be taken to protect the health and safety of the public living in the vicinity of Susquehanna Steam Electric Station in the event of a radiological emergency. Because of the potential impact of deficiencies on emergency preparedness, they are required to be promptly corrected through appropriate remedial actions including remedial exercises, drills or other actions.

Areas Requiring Improvement are demonstrated and observed inadequacies of performance, 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.

Areas Recommended for Improvement are problem areas observed during an exercise that are not considered to adversely impact public health and safety. While not required, correction of these would enhance an organization's level of emergency preparedness.

SUMMARY OF DEFICIENCIES

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
1. Fishing Creek Township did not participate in the exercise. Township officials must demonstrate their capability to protect the health and safety of the public.	A.1.a., N.1.b.			
2. Upon receiving the Governor's protective action decision from PEMA, Columbia County officials informed the risk municipalities of the time for siren and EBS activation, but failed to advise them to evacuate. The county should take the necessary measures to ensure that protective action information is accurately and rapidly transmitted to municipal EOCs.	E.1.			

SUMMARY OF AREAS REQUIRING IMPROVEMENT

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
<u>State Level Activities</u>				
1. There was a delay of almost 30 minutes between the utility's Site Area Emergency declaration, and notification of PEMA by BRP. The two State agencies, in coordination with the utility, should investigate this matter to determine the origin of the delay, and implement corrective actions, if appropriate.	E.1.			
2. Transmission via teletype of hard copy of telephone communications and news release text to the county and PEMA area EOCs and Joint Media Center was delayed up to an hour, thus compromising its effectiveness. PEMA should establish a means for providing more immediate availability of these hard copy messages at the receiving locations.	F.1.b.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
3. Although BRP officials made a decision to recommend that emergency workers be authorized to take KI, they failed to inform PEMA. BRP officials should be instructed to notify PEMA of all protective action recommendations regarding emergency workers and the general public, so that they may be properly implemented.	J.10.f.			
4. At the EOF, field monitoring data presented to offsite officials was not in a useable format, and hindered confirmation of projected dose calculations; furthermore, status boards used to convey this information were not kept up-to-date. It is recommended that the utility convert the field data into a format which will facilitate comparisons with iodine dose projections, and present this information in a timely manner.	I.10.			
5. Although the Joint Media Center is located only 5.5 miles from the facility, contingency plans for evacuation due to plume exposure, if available, were not demonstrated. This issue should be addressed in future exercises.	G.3.a.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
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6. The utility's rumor control operator at the Joint Media Center was not able to provide specific information as requested. It is recommended that the State request the utility to provide additional training for rumor control staff members.

G.3.c., O.4.j.

7. The Pennsylvania Department of Transportation did not participate in the establishment of ACP/TCPs during this exercise. In future exercises, DOT should demonstrate their responsibility to support PSP by providing barricades, cones, signs, etc.

J.10.j.

Risk County Activities

8. Communications and notifications via the new radio/pager system were disrupted at most Columbia County municipalities; less serious interference occurred at some Luzerne County municipalities. The municipalities affected were: Beaver Township, Berwick Borough, Briar Creek Borough, Briar Creek Township, Mifflin Township, Black Creek Township, Butler Township, Conyngham Township, Hollenback Township, Nanticoke City, Nescopeck Borough and Slocum Township. These problems should be resolved to ensure that this system achieves its

F.1.a., F.1.b.,
F.1.e.

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
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potential for providing an efficient and reliable notifications and communications link between the county EOCs and their respective municipalities.

9. RACES operators never arrived at one Columbia County municipality and four Luzerne County municipalities, and arrived late at four other Luzerne County municipalities. The municipalities were North Centre Township, Black Creek Township, Conyngham Borough, Conyngham Township, Hollenback Township, Nescopeck Borough, New Columbus Borough, Slocum Township and Sugarloaf Township. Both counties, in coordination with their respective RACES organizations, should review the assignment procedures to ensure that a RACES operator is provided to all locations.

F.1.b.

10. There were discrepancies at five municipalities between the quantity of required dosimetry/KI kits, as identified during the exercise, and as reported in the plans. In Columbia County, such discrepancies were noted at Berwick Borough and South Centre Township. In Luzerne County the problem was noted at Nanticoke City, New Columbus Borough and Shickshinny Borough. Both counties should resolve these discrepancies with

K.3.a., P.3.,
P.4.

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
<p>their respective municipalities, and the plans should be revised accordingly. The quantity of dosimetry/KI units in prepackaged municipal kits should be adjusted as necessary.</p>				
<p>11. Neither the Columbia County nor the Luzerne County PIO demonstrated the coordination of news releases with their State counterparts at the State or Joint Media Center, as required by the plans. Both county PIOs should ensure that all public information releases are coordinated with the State, and with each other, prior to official release.</p>	G.4.a., G.4.b.			
<p>12. Although the Columbia County staffing list contained in the county plan does not indicate that full staffing is available for 24-hour per day operations, this capability was demonstrated during this exercise. The Columbia County Plan should be updated to reflect round-the-clock staffing capability and to accurately depict current staff assignments.</p>	A.2.a., P.4.			
<p>13. The Columbia County staff discontinued exercise play after being advised by PEMA that State-level play had been terminated. In future exercises, the county should continue exercise play until all county and municipal activities and objectives have been completed and fully demonstrated.</p>	N.3.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
14. The Columbia County Agricultural Agent was not sufficiently familiar with radiological exposure control procedures for farmers. Additional training with regard to personal protective actions for farmers should be provided to the Agricultural Agent.	K.3.a., 0.1.			
15. Columbia County did not demonstrate the availability of low-range (0-20R) self-reading dosimeters (CDV-730 or equivalent) which the plans specify are to be provided to every emergency worker. The county should obtain the appropriate number of such dosimeters for distribution to county and municipal emergency workers.	K.3.a.			
16. The Columbia County emergency worker decontamination demonstration did not occur as scheduled, precluding an evaluation of Columbia County's capability to perform this function. This capability should be demonstrated in future exercises.	N.3.a., N.3.d.			
17. At the Luzerne County Reception Center neither the ARC Reception Center Manager nor the race track manager were familiar with the specifics of the agreement as to what facilities were available, and a copy of the agreement was not available	C.4., P.4.			

Deficiency/Recommendation

Reference
NUREG-0654
Part II

Correction

Proj'd
Date

Actual
Date

in the plan for reference. Copies of the agreement should be included in the county plan, and should be provided to the Reception Center Manager.

Risk Municipality Activities

18. Fourteen of the twenty-six participating municipalities failed to demonstrate full first-shift staffing, and/or the capability for full, second-shift staffing, of all EOC positions identified in their respective plans. In Columbia County, the municipalities were Beaver Township, Berwick Borough, Briar Creek Borough, Briar Creek Township, Mifflin Township, North Centre Township, and South Centre Township. In Luzerne County, the municipalities were Butler Township, Conyngham Borough, Hollenback Township, Nescopeck Township, Nuangola Borough, Salem Township, and Union Township. These municipalities should:
(a) recruit and train additional staff members, as necessary, to establish two-shift capability for all specified staff positions, or (b) eliminate some staff positions which do not warrant exclusive manning, and reassign the functional responsibilities to other staff positions, or (c) implement a combination of (a) and (b). All plans and staffing lists should

A.2.a., A.4.,

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
be revised accordingly, and capability for manning two full shifts should be demonstrated in future exercises.				
19. At four municipal EOCs, staff members participating during the exercise were not those identified on the staffing lists contains in the respective plans, and/or some positions were staffed where the list(s) showed no capability. These municipalities were Berwick Borough, Mifflin Township, Conyngham Township, and Hollenback Township. The staffing lists for these municipalities should be re-vised to identify the personnel who are currently assigned to the designated EOC staff positions. Future staff changes should be accompanied by corresponding updates of the staffing lists.	A.2.a., P.4.			
20. At Conyngham Township staff notification lists were incorrect or incomplete for some staff members. The township's notification call list should be corrected and completed, and maintained in a current status.	E.2., P.10.			
21. EOC officials at six of the seven participating Columbia County municipalities intercepted radio messages (primarily RACES or Luzerne County transmissions) indicating that an evacuation had been directed. However, they either delayed	E.1.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
<p>verification or neglected altogether to verify the validity of the intercepted message with the Columbia County EOC. These municipalities were Beaver Township, Berwick Borough, Briar Creek Borough, Briar Creek Township, Mifflin Township, and South Centre Township. Municipal officials should be instructed to immediately verify any unclear or unofficially-received messages, particularly relating to protective actions, with the county EOC.</p>				
<p>22. The Slocum Township staff missed the initial broadcast of the General Emergency message, because the radio volume had been reduced to lower the noise level. As this is the primary means for receiving information from the county, the radio should be monitored continuously. It is recommended that some other means be used to reduce noise level in the EOC, such as relocating the radios or installing partitions.</p>	E.1., F.1.b.			
<p>23. Township officials dispatched route alerting vehicles prior to the siren activation, contrary to the procedures specified in the plans. Proper sequencing for route alerting should be reviewed with appropriate EOC staff members.</p>	E.6., 0.4.a., 0.4.j.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
24. Emergency generators were identified as unmet needs, not adequately provided for, at the following eleven municipal EOCs: Beaver Township, Briar Creek Borough, Mifflin Township, Conyngham Borough, Dorrance Township, Huntington Township, Nescopeck Borough, New Columbus Borough, Nuangola Borough, Shickshinny Borough, and Union Township. Generators should be acquired or otherwise made available to these municipal EOCs to establish capability for continuous operations in the event of a power failure.	H.3., A.4.			
25. Three municipal EOCs - Beaver Township, Mifflin Township and Union Township, were serviced by less than one fully-operational private telephone line. In order to establish minimum acceptable communications capability, at least one fully workable, private telephone lines should be installed at all municipal EOCs.	F.1.b., F.1.e.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
26. Despite some communications equipment problems, the Briar Creek Township EOC staff did not make effective use of the RACES operator, who was available for backup communications. RACES involvement should be more extensively tested and utilized during future exercises.	F.1.b., F.3.			
27. Salem Township staff were not adequately familiar with the procedures for alerting hearing-impaired residents. Proper procedures for contacting hearing-impaired residents via route alert teams should be reviewed with appropriate EOC staff members.	E.6., 0.4.a., 0.4.j.			
28. Two municipalities, Nescopeck Township and Huntington Township, reported a need for personnel to perform route alerting and/or traffic control, although their respective plans do not identify such an unmet need. Both municipalities should resolve these discrepancies, in coordination with Luzerne County, and make appropriate arrangements to perform these functions. The plans should be amended, if appropriate.	A.2.a., A.4. P.3., P.4.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
29. Six municipalities had unmet needs relative to establishing TCPs that were not adequately provided for. North Centre Township, Conyngham Borough, Nanticoke City, Nescopeck Borough, and Union Township reported equipment needs (primarily portable radios). This equipment should be acquired or otherwise made available to the municipalities in a timely manner. Union Township also reported the need for traffic control personnel. Procedures should be established to provide these resources in a timely manner.	H.10., H.11.			
30. South Centre Township did not have information regarding mobility-impaired residents in written form. The township should maintain a written list of mobility-impaired residents at the EOC.	J.10.d., P.4.			
31. Based on personal knowledge, the Union Township EOC staff believed that there were no hearing or mobility-impaired township residents. More definitive steps should be taken to confirm that there are no mobility-impaired or hearing impaired residents in the township.	J.10.c., J.10.d. P.4.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
32. Arrangements to provide bus and ambulance transportation were not performed at the Butler Township EOC, and this responsibility cannot be evaluated. In future exercises, the township EOC staff should demonstrate capability for providing the necessary evacuation transportation.	J.10.d., J.10.g.			
33. There were discrepancies demonstrated regarding Nanticoke City's need for transportation. The plan states an unmet need of 5 ambulances and 78 buses. However, the EOC requested 60 ambulances and 20 buses. The Luzerne County Plan and the Nanticoke City Plan should be updated to reflect the correct number of ambulances and buses required.	J.10.d., J.10.g., P.3.			
34. The Radiological Officer at the Newport Township EOC was not sufficiently familiar with the responsibilities and procedures for radiological exposure control. Additional training should be provided.	O.1.			
35. The decontamination station for emergency workers is listed in the Nanticoke City Plan as Plymouth Township Municipal Building. However, emergency workers were instructed to go to the Nanticoke Municipal Building	K.5.a., K.5.b. P.3.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
for decontamination. This discrepancy should be resolved, and proper instruction of emergency workers should be assured.				
36. There was a discrepancy between the Nescopeck Borough Plan and Luzerne County's instructions as to the borough's EOC relocation site. This discrepancy should be resolved, and the borough should be advised of any such changes in the future.	J.10.a., P.3.			
<u>Risk School District Activities</u>				
37. The Hazelton Area School District Superintendent and most other staff members, as identified in the plan, did not participate in the exercise. Future exercises should include participation by the Superintendent and other key staff members to whom the plan has delegated emergency responsibilities.	A.2.a., N.1.b.			
38. The official in charge of the Hazelton Area School District's emergency response actions did not have sufficient preparation and training, plan familiarity, and staff support to demonstrate effective emergency operations management. The district should designate and train a suitable substitute to manage emergency operations, should the Superintendent be unavailable.	A.4., 0.1.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
<p>39. At the Hazelton Area School District, aside from transportation arrangements, most of the administrative-level notifications and coordination actions necessary to implement an evacuation were not addressed. These include arrangements to deal with possible traffic jams of parents at schools, arrangements for securing evacuated schools, coordination with host schools, and arrangements for the relocation of the district administration. Capability to perform these actions should be demonstrated at future exercises.</p>	J.9.			
<u>Support County Activities</u>				
<p>40. Both the Lycoming County and the Union County Reception and Mass Care Center demonstrations amounted to tabletop exercises at the respective county EOCs. Future exercises should include more extensive demonstrations, including full activation and staffing of the EOCs and reception and mass care centers, to provide the basis for a more thorough evaluation of this capability.</p>	J.10.h., N.1.b.			

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
41. Radiological monitors at the Schuylkill County Mass Care Center had not been provided with a full complement of dosimetry, as designated in the plan, and were not familiar with the maximum allowable dose or how often to read and record their dosimeter levels. Additional dosimetry and training should be provided.	K.3.a., 0.1., 0.5.			
42. The Northumberland County EOC did not have TLDs for distribution to radiological monitors, as required by the plan. The county should be provided with an adequate supply of TLDs.	K.3.a.			

Medical Support Activities

None identified.

SUMMARY OF AREAS RECOMMENDED FOR IMPROVEMENT

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
<u>State Level Activities</u>				
1. State officials allowed only five minutes between the time of the Governor's evacuation decision, and the time it was to commence. Due to the complexity of events, culminating in the alert and notification of the public, which must occur during this period, it is recommended that State officials utilize more of the allowable 15 minutes for this activity.				
2. PEMA did not continue monitoring risk county primary response actions beyond the Site Area Emergency stage. As this activity may have corrected a serious deficiency in Columbia County, it is recommended that the county liaisons continue monitoring county activities to assure the completion of all local protective action events.				
3. PEMA terminated State-level participation in the exercise at the time when the counties and municipalities were (or should have been) at the peak of their evacuation activities. It is recommended that PEMA maintain at least minimal staffing until all local exercise activities have been completed.				

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4. BRP representatives at the EOF did not have copies of their plans and procedures. It is recommended that the EOF staff members have the BRP plans and procedures available for reference.

Risk County Activities

5. Problems with the internal message procedures were experienced at Columbia County. Officials should review the internal message control system and consider actions to streamline this system where possible. EOC representatives should be instructed to accurately complete all exercise message forms.
6. Many municipalities requested information concerning weather and radiological data. This information could be included in the hourly updates the county provided to the municipalities.
7. At the Luzerne County Reception Center (Pocono Downs Race Track) there was a lack of shelter and support facilities for the staff: there was no shelter in case of inclement weather; electric

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
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power was not available for lights and radios; there were no toilet facilities or sources of water. County officials should investigate the possibility of providing or arranging for these support facilities.

8. At the Luzerne County Mass Care Center, contaminated evacuees could contaminate the area between the entrance and the monitoring location, leading to the spread of contamination within the building. It is recommended that the monitoring location be established at the entrance.
9. At the Luzerne County Emergency Worker Decontamination Station, the entrance to the shower facility does not allow separating contaminated from decontaminated workers. The doors for the exiting of decontaminated persons should be installed in the shower facilities.

Risk Municipality Activities

10. At the Nanticoke City EOC, lack of plenary briefings, combined with a laxity in quickly posting key events on the status board, resulted in at least one

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
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key staff member no receiving timely notification of the evacuation. The Director should take steps to assure that the status board is maintained, and should consider simultaneous briefings of the full staff to advise them of significant events.

11. A status board was not used at the Conyngham Borough EOC. Posting of a status board with entries kept up-to-date should be done to keep all staff members advised of current status.
12. Elected officials did not participate at the municipal EOCs - Briar Creek Township, Huntington Township and Slocum Township. As they have ultimate responsibility within their communities for protecting the public, it is recommended that elected officials be actively involved in future exercises to become familiar with the municipal plans and responsibilities.
13. Eight municipal EOCs were equipped with only one telephone line. These municipalities were Briar Creek Borough, Briar Creek Township, Black Creek Township, Hollenback Township, Huntington Township, Nescopeck

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
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Township, Salem Township, and Slocum Township. It is recommended that additional telephone lines be installed, to provide capability for simultaneous incoming and outgoing calls.

14. Two municipal EOCs, those of Briar Creek Borough and Union Township, lack the basic amenity of indoor plumbing. To establish capability for continuous operations, efforts should be made to upgrade these facilities.

Risk School District Activities

15. Notification calls to other staff members took four Berwick School District officials 15 minutes to complete, which they felt was too long. It is recommended that school district officials investigate the possibility of obtaining a more rapid means of notification, such as a paging system.
16. At Central Columbia School District, a written log of outgoing calls was not maintained. Although this did not result in a problem during this exercise, it is recommended that the Superintendent consider maintaining such a log, to avoid omitting any required verification calls.

Deficiency/Recommendation	Reference NUREG-0654 Part II	Correction	Proj'd Date	Actual Date
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Support County Activities

17. At Red Cross Field Headquarters, out-of-sequence mass care activities created problems in notification and coordination of activities. In future exercises, it is recommended that all out-of-sequence play be held to a minimum. If out-of-sequence play is necessary, then all support elements should be addressed in the scenario to ensure proper actions.
18. Red Cross did not provide input during the scenario development process. For future exercises, it is recommended that Red Cross State Liaison be included in scenario meetings to ensure that the Red Cross Field Headquarters' role is properly utilized.

Medical Support Activities

None identified.