



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

RELATED CORRESPONDENCE

May 28, 1985

DOCKETED  
USNRC

Helen F. Hoyt, Chairperson  
Administrative Judge  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dr. Jerry Harbour  
Administrative Judge  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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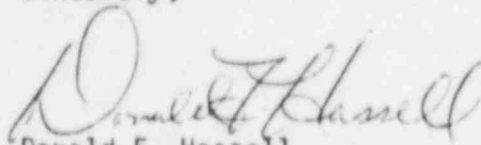
Dr. Richard F. Cole  
Administrative Judge  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

In the Matter of  
PHILADELPHIA ELECTRIC COMPANY  
(Limerick Generating Station, Units 1 and 2)  
Docket Nos. 50-352 and 50-353

Dear Administrative Judges:

On May 22, 1985, the NRC staff counsel forwarded to the Board and parties a copy of a May 21, 1985 memorandum from Mr. Krimm, Federal Emergency Management Agency (FEMA) to Mr. Jordan, U.S. Nuclear Regulatory Commission. As we noted in our letter of May 22, 1985, the FEMA memorandum of May 21, 1985 (copy attached) referred to two FEMA remedial evaluation reports that the NRC staff promised to provide to the Board and parties once the reports were received. Accordingly, the NRC staff is providing copies (copies attached) of the two FEMA Region III remedial evaluation reports (dated April 18, 1985 and April 25, 1985) for the information of the Licensing Board and parties.

Sincerely,

  
Donald F. Hassell  
Counsel for NRC Staff

Attachments: As stated

cc w/attachments: See page 2

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PDR ADOCK 05000352  
PDR

DS07

cc w/attachments:

David Wersan  
James Wiggins  
Frank R. Romano  
Ms. Phyllis Zitzer  
Troy B. Conner, Jr., Esq.  
Marvin I. Lewis  
Joseph H. White III  
Dir. Pa. Emer. Mgmt Agency  
Robert L. Anthony  
Martha W. Bush  
Gregory Minor  
Timothy R. S. Campbell, Director  
Atomic Safety and Licensing  
Appeal Board Panel

Zori G. Ferkin  
Kathryn S. Lewis  
Angus Love, Esq.  
Ms. Maureen Mulligan  
Mark J. Wetterhahn, Esq.  
Charles W. Elliott, Esq.  
Thomas Gerusky  
Sugarman and Denworth  
Spence W. Perry, Esq.  
Atomic Safety and Licensing Board  
Steven P. Hershey, Esq.  
Docketing and Service Section  
Edward G. Bauer, Jr.



# Federal Emergency Management Agency

Washington, D.C. 20472

MAY 21 1985

RELATED CORRESPONDENCE

MEMORANDUM FOR: Edward L. Jordan  
Director  
Division of Emergency Preparedness  
and Engineering Response  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission

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FROM: *Richard W. Krimm*  
Richard W. Krimm  
Assistant Associate Director  
Office of Natural and Technological  
Hazards Programs

SUBJECT: Finding on Offsite Planning and Preparedness at the  
Limerick Generating Station

Attached are two copies each of the Region III Exercise Evaluation Report on the April 10, 1985, Limerick Remedial Exercise, involving risk school districts and South Coventry Township; and the April 22, 1985, Remedial Exercise on alert and notification capabilities at Limerick. These remedial evaluation reports were prepared by the FEMA Region III staff and indicate that both exercises were successful in correcting the two remaining Category A deficiencies identified during both the July 25, 1984, full-participation exercise and the November 20, 1984, supplemental exercise.

The following is a brief summary of the earlier supplemental and remedial exercises conducted at Limerick which corrected the other Category A deficiencies:

- o November 20, 1984, supplemental exercise: A report on this exercise was transmitted to NRC on January 10, 1985.

Corrected the Category A deficiency resulting from the non-participation of Bucks County, Pennsylvania and 11 municipalities. Failure of South Coventry Township to participate in this remedial exercise resulted in a Category A deficiency which was subsequently corrected during the April 10, 1985, remedial exercise.

- o March 7, 1985, remedial exercise: A report on this exercise was transmitted to NRC on March 27, 1985.

Corrected the Category A deficiency related to emergency response procedures for Graterford, the Pennsylvania State Correctional Institution.

The planning deficiency concerning staffing resources for South Coventry Township has now been corrected through the submission of a new staffing plan which provides for adequate resources for prolonged emergency response, and through their demonstration of a capability to respond during the April 10, 1985, remedial exercise.

The two remaining planning deficiencies, unmet needs regarding buses and ambulances for Chester and Montgomery Counties and the process for establishing access control points, have now been addressed. The Pennsylvania Emergency Management Agency (PEMA) has received confirmation that written agreements have been reached with a bus company in Lancaster County and a bus company in York County in order to address the unmet needs of Chester County. In addition, Berks County has a sufficient number of reserve buses to meet the needs of Montgomery County.

The Division of Emergency Health Services, Pennsylvania Department of Health, has identified a minimum of 467 ambulances, approximately three times the 139 needed by both Montgomery and Chester Counties. Detailed response planning for the ambulances will be undertaken by the Pennsylvania Department of Health. Arrangements have been made by the three risk counties to man all thirty-nine access control points that were listed as a concern in the March 29, 1985, Interim Finding. Revisions will be made to the applicable county and municipal plans to reflect the updated information. Therefore, the two remaining planning deficiencies regarding unmet needs and access control points have now been corrected.

As a result of the July 25, 1984, full-participation exercise, the November 20, 1984, supplemental exercise, the March 7, April 10 and 22, 1985, remedial exercises, all Category A preparedness deficiencies requiring demonstration have been corrected. Also, as indicated above, all Category A planning deficiencies have now been corrected. Therefore, offsite radiological emergency planning and preparedness is now adequate to provide reasonable assurance that protective measures can be implemented to protect the public health and safety in the event of a radiological emergency at the Limerick Generating Station.

In your memorandum of May 10, 1985, you requested FEMA assistance in responding to the two conditions set forth in the Third Partial Initial Decision issued by the Atomic Safety and Licensing Board on May 7, 1985, which are:

- (1) Verification of plans to implement a level of traffic control in the King of Prussia area sufficient to assure that all the traffic evacuating along Route-363 to the Pennsylvania Turnpike can continue to move upon reaching the EPZ boundary, as implicitly assumed in NUREG-0654 Planning Standard J(10)(1).



FEMA RESPONSE:

In a May 10, 1985, telephone conversation PEMA informed FEMA Region III that Montgomery County had developed a plan of action to address the traffic control issue and has submitted it to PEMA for review. PEMA has forwarded this information to the Pennsylvania State Police for a detailed review. After the State has reviewed and commented on this plan, it will be forwarded to the FEMA Region III Office for review. When we have received their comments and recommendations, an update will be forwarded to you.

- (2) Verification of the satisfaction of the unmet municipal staffing needs as they relate to a capability of continuous 24-hour operation during a radiological emergency prior to operation above 5% of rated power.

FEMA RESPONSE:

FEMA has determined that adequate staffing now exists in all risk municipalities to respond to a radiological emergency over an extended period of time.

If you should have any questions, please contact Mr. Robert S. Wilkerson, Chief, Technological Hazards Division, at 646-2861.

Attachments  
as Stated

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FEDERAL EMERGENCY MANAGEMENT AGENCY

REGION III

EXERCISE EVALUATION REPORT

FACILITY: Limerick Generating Station

OPERATOR: Philadelphia Electric Company

LOCATION: Limerick Township, Montgomery County,  
Pennsylvania

REPORT DATE: April 18, 1985

EXERCISE DATE: April 10, 1985

PARTICIPATING  
JURISDICTIONS: Montgomery, Chester and Berks Counties  
Methacton, Perkiomen Valley, Pottsgrove,  
Pottstown, Souderton Area, Spring Ford Area,  
Downingtown Area, Great Valley, Owen J. Roberts,  
Phoenixville Area, Boyertown Area, Daniel Boone  
Area School Districts  
South Coventry Township, Chester County

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EXERCISE SUMMARY

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On Wednesday, April 10, 1985 a remedial exercise was held in conjunction with risk counties and school districts affected by the Limerick Generating Station. That evening South Coventry Township, Chester County, displayed their capabilities to respond in the event of an emergency at Limerick. Participating jurisdictions included:

Montgomery County EOC

- Methacton School District
- Perkiomen Valley School District
- Pottsgrove School District
- Pottstown School District
- Souderton Area School District
- Spring Ford Area School District

Chester County EOC

- Downingtown Area School District
- Great Valley School District
- Owen J. Roberts School District
- Phoenixville Area School District

Berks County EOC

- Boyertown Area School District
- Daniel Boone Area School District

South Coventry Township, Chester County

All jurisdictions performed in an adequate manner.

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EXERCISE BACKGROUND

On July 25, 1984 the initial, full-participation radiological emergency response exercise was held in conjunction with the Limerick Generating Station. Involved from an offsite standpoint were the Pennsylvania Emergency Management Agency, coordinating the response of other State agencies, the risk counties of Montgomery, Chester and Berks, the support county of Lehigh and 33 risk municipalities. On November 20, 1984 a supplemental exercise was held involving the support county of Bucks and eleven risk municipalities. On March 7, 1985 an exercise was held with the Pennsylvania Department of Corrections to test the ability of the Department and the State Correctional Institution, Graterford, to respond in the event of an emergency at Limerick. The purpose of the April 10, 1985 exercise was to test the capabilities of risk school districts to respond to an emergency at Limerick, along with South Coventry Township, Chester County, the remaining municipality that had not demonstrated its ability to respond to a radiological emergency.

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OBSERVER ASSIGNMENTS

Montgomery County EOC

Methacton School District  
Perkiomen Valley School District  
Pottsgrove School District  
Pottstown School District  
Souderton Area School District  
Spring Ford Area School District

Jim Asher (RAC Chairman)  
Paul Giordano (Regional Director)

Bob Linck (FEMA)  
Bill Curtis (FEMA)  
Jan Lamb (FEMA)  
Joe Gavin (FEMA)  
Joe McCarey (FEMA)  
Tom Majusiak (FEMA)

Chester County EOC

Downingtown Area School District  
Great Valley School District  
Phoenixville Area School District  
Owen J. Roberts School District

Rick Kinard (FEMA)  
Pattie Connell (FEMA)  
Dale Petranek (FEMA/Red Cross)

Berks County EOC

Boyertown Area School District  
Daniel Boone Area School District

Marty Frengs (FEMA)  
Steve Hopkins (FEMA)  
Robin Danforth (FEMA)

South Coventry Township,  
Chester County

Karen Larson (FEMA)  
Roman Helo (FEMA)  
Rick Kinard (FEMA)



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EVALUATION CRITERIA USED

The school district and municipal response during this exercise was evaluated in relationship to their respective Radiological Emergency Response Plans for Incidents at the Limerick Generating Station, most in draft form. These plans were developed to be consistent with P.L. 1332, the Pennsylvania Emergency Management Services Act of 1978, and in accordance with NUREG 0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

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OBJECTIVES/SCHOOL DISTRICT EXERCISE

1. To demonstrate the capability to alert and mobilize people and resources in a timely manner.
2. To demonstrate the adequacy of communications systems.
3. To demonstrate the operational knowledge and support from elected or appointed public officials regarding plan familiarity, operations process, and decision making.
4. To demonstrate the capability of the counties and school districts to implement emergency response plans to protect the health and safety of persons located within the Emergency Planning Zone.

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OBJECTIVES - SOUTH COVENTRY TOWNSHIP EXERCISE

1. To demonstrate the capability of municipal governments to implement emergency response plans to protect the health and safety of people located within the Emergency Planning Zone (EPZ).
2. To demonstrate the adequacy of communications systems.
3. To demonstrate the operational knowledge and support from elected and appointed public officials.
4. To demonstrate the capability to alert and mobilize people and resources in a timely manner.
5. To demonstrate adequacy of facilities to provide sufficient space and accessibility for response team staff and communications equipment.

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## SCENARIO

The onsite scenario called for Unit 1 at the Limerick Generating Station to be operating at 100% power. Two operators were contaminated at 0800. While working in the refueling area of the reactor building, one of the operators fell into the spent fuel pool. The second operator, who was helping the first, slipped, fell, and cut his neck. An unusual event was declared - radioactivity was not released.

At 0900, a fire was reported in the control room at the Limerick Generating Station. The fire was fueled by leaking fuel oil. The CO2 fire extinguishing system malfunctioned requiring off-site assistance due to the severity of the fire. An unusual event continued - radioactivity was not released.

At 0930, a discharge pipe on a condensate pump ruptured and water from the rupture sprayed on the other condensate pumps, tripping the pumps. The loss of the condensate pumps resulted in a reactor scram, an unplanned shutdown resulted - unusual event continued.

Security forces investigated the possibility of sabotage. Facility engineers, NRC, and BRP attempted to manually open relief valves to depressurize the reactor vessel. PEMA monitored the situation and kept all agencies abreast of any changes in systems which could jeopardize the public health and safety.

### SCENARIO CHRONOLOGY OF EVENTS (School Exercise)

<u>Projected Time</u>		<u>* Actual Time</u>
1000	Alert	1000
1100	Site Emergency	1100
1300	General Emergency	1300
1330	Evacuation	1330

### SCENARIO CHRONOLOGY OF EVENTS (South Coventry Township Exercise)

<u>Projected Time</u>		<u>Actual Time</u>
1700	Alert	1700
1805	Site Emergency	1805
1900	General Emergency	1850
1930	Evacuation	1930

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DEMONSTRATION OF RESOURCES

The following items were demonstrated as part of the school district or South Coventry Township radiological emergency response exercise.

- Administrative office response centers or an emergency operations center
- Staffing of facilities
- Communications systems and equipment
- Route alerting
- Buses and drivers
- Traffic control points
- Self-reading dosimeters (high-range), chargers and record keeping

DEFICIENCIES NOTED IN PAST EXERCISES

Category "A" deficiencies noted as a result of the July 25, 1984 full-participation exercise include the following:

1. Lack of Twenty-Four Hour Emergency Response

Updated plans have been submitted to the Regional Office indicating municipal capability to respond to an accident at Limerick for an extended period has now been resolved. The one exception is South Coventry Township. However, at the April 10, 1985 exercise the township Emergency Management Coordinator did make available a copy of their plan to the Federal Observer which included a staffing chart containing a full complement of names. All the individuals reflected on the chart were in attendance during the exercise. A request has been made to PEMA to provide the Region with a copy of South Coventry Township's revised RERP as soon as possible. Staffing concerns noted at PEMA, the Montgomery County EOC and the Chester County Reception Centers have also been addressed (NUREG Element A.4).

2. The Means of Dealing with Mobility-Impaired/Transit Dependent Individuals

From an exercise standpoint, the Region's concerns have been adequately addressed. Both the Pennsylvania Department of Corrections (including the State Correctional Institute, Graterford) and the various risk school districts have adequately displayed their capabilities to respond to an emergency at Limerick during exercises held on March 7, 1985 and April 10, 1985, respectively. From a planning standpoint, the needs for buses and ambulances have been identified. Significant unmet needs remain; attempts continue to obtain the necessary resources. Because of this last point, a Category "A" deficiency remains (NUREG Element J.10.d).

3. Lack of Certain Types of Self-Reading Dosimetry, TLDs and KI

As noted in the March 1985 Interim Findings, Potassium Iodide has been obtained in adequate numbers. Low-range, self-reading dosimeters have been ordered, with delivery beginning the week of March 31. TLDs are also in the process of being obtained. In the meantime, adequate dosimetry is available at other sites in Pennsylvania that could be transferred to the Limerick area in a prompt manner in the event of an emergency. A Category "A" deficiency is no longer warranted (NUREG Element J.10.e, K.3.a).

4. Failure to Activate the Public Alert and Notification System Within 15 Minutes, as Called for Under FEMA-43

Based upon a decision by John L. Patten, Director of the Pennsylvania Emergency Management Agency, the alert and notification process was not tested as part of the April 10, 1985 exercise. An exercise is scheduled for Monday, April 22 to address this issue (NUREG Element E.6).



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5. A Number of Communities Did Not Display Their Capabilities to Respond to an Accident at Limerick

Through exercises held on November 20, 1984 and April 10, 1985, this issue has been satisfactorily resolved (NUREG Element J.9).

Category "B" deficiencies have been, or are being, resolved as part of the planning process or will be addressed, where necessary, at the next full-participation exercise, scheduled for April 1986.

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## Montgomery County EOC

The County EOC received an Alert message from PEMA at 1000 and confirmed the message at 1007. The EOC was only partly activated because of the limited scope of the exercise. At 1100 the Site Emergency was declared and at 1300 a General Emergency. At 1330 the evacuation was ordered and the school districts were immediately notified.

Each school district in Montgomery County was called via telephone and was kept informed as the situation developed. A Transportation Officer was busy contacting the private bus providers first for an inventory of resources and then later for a request for vehicles. A Staging Officer was established at the staging area and buses were dispatched to meet the needs of the school districts. Montgomery County inventoried much more than the needed vehicle requirements at 1205. They had some fifteen reserve drivers available.

The Montgomery County operation was smooth and precise.

## Methacton School District

### I. Activation and Staffing

At 1003 the school district Superintendent received a call from the County EOC initiating activation of the school RERP. Since the call came directly from the County EOC, no verification was made by the school district Superintendent other than his repeating the message. The school district Superintendent used a written call list to notify the six schools and one day care center in his jurisdiction.

### II. Emergency Operations Management

The school district Superintendent was effectively in charge and held periodic briefings with the principals, as appropriate. A copy of the school district plan was available for reference and message logs were kept. The messages were logged in on standard size paper since no message forms were available. The school district was notified of the emergency sequences as follows:

Alert	1003
Site Emergency	1120
General Emergency	1313
Evacuation	1327

### III. Facilities

Two phones were available in the school district Superintendent's office (one at his desk and one at his Secretary's). Evacuation maps to the host schools were available; all the drivers were very familiar with the route.

#### IV. Communications

The communications system used by the school district to the County EOC is via phone with RACES backup. All other communication systems (local schools - public, parochial, private/nonprofit host schools, transportation coordinators/providers/bus drivers) is via private dedicated lines with backup via phone and RACES. Twenty of the 54 buses have radios; the 34 without radios do not appear to have RACES backup. At 1310 the County EOC advised the school district Superintendent that the county's phone line to the day care center was not working; the school district Superintendent was able to contact the day care center.

#### V. Public Alerting and Instruction

Not applicable.

#### VI. Protective Action

The one bus driver was activated promptly upon notification by the school district Transportation Director, who was notified by the school district Superintendent. The depot is five minutes from the Eagleville Elementary School; the Eagleville Elementary School is five miles (approximately nine minutes) from the host school. The school district Superintendent indicated that 35 buses would be used to evacuate all students simultaneously in one lift. The school district is aware of particular needs of special education students and arrangements for them are established. The Lower Providence Township police would be utilized to deal with possible traffic jams. The head custodian of Eagleville Elementary School would secure the building after evacuation. Since the school district administration building is not within the EPZ, no alternate locations are needed.

#### Perkiomen Valley School District

##### I. Activation and Staffing

The Superintendent of Perkiomen Valley School District was away at the time of this exercise and the Acting Superintendent functioned as the Coordination Officer.

The school district's RERP was activated at 1006 after receiving a call from the County Office of Emergency Preparedness. The school district was in Alert state. The Acting Superintendent immediately started mobilization procedures.

A "call list" was utilized. The list was current and up-to-date. All schools (public and private) were promptly notified of conditions. The "call down" list of schools was:

- |                              |                                  |
|------------------------------|----------------------------------|
| 1. High School               | 5. Transportation Dept.          |
| 2. Middle School             | 6. St. Mary's School             |
| 3. Elementary School (South) | 7. St. Eleanor's School          |
| 4. Elementary School (North) | 8. Twin Acres Country Day School |
|                              | 9. Bright Spot Kindergarten      |

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The initial "call down" began at 1008 and was completed at 1017.

It appeared that all staff was adequately trained and displayed knowledge of their duties and responsibilities.

## II. Emergency Operations Management

It was apparent that the Superintendent (Acting Superintendent at this time) was effectively in charge.

There were no formal briefing sessions between the Acting Superintendent and the district principals, however, the Acting Superintendent kept the principals up-to-date each time he called them on a condition change.

There was a complete copy of the plan available in the Superintendent's office and was utilized and referenced during this exercise.

No formal message log appeared to be maintained, however, the Acting Superintendent did keep copious notes of all activities (calls received, calls made) on a legal pad.

The school district received the following notification from County:

- |                      |      |
|----------------------|------|
| 1. Alert             | 1008 |
| 2. Site Emergency    | 1106 |
| 3. General Emergency | 1304 |
| 4. Evacuation        | 1321 |

## III. Facilities

There appeared to be ample telephone service at and to the Superintendent's office, schools and Transportation Department.

The Acting Superintendent completed his "call down" list after each notification from County as follows:

1. Alert - Started 1008 - Completed 1017
2. Site Emergency - Started 1107 - Completed 1114
3. General Emergency - Started 1305 - Completed 1313
4. Evacuation - Started 1322 - Completed 1329

Evacuation route maps were available for movement out of the school district to the host schools.

## IV. Communications

This school district used only the telephone for all communication activity. There appears to be no backup system of communicating with county or any of the schools in the district. All schools in the district use the telephone as primary system with no apparent backup system available.

Information regarding host school communications was not observed.

Communications with Transportation Coordinator and providers, including drivers, is accomplished by telephone (primary) and radio (backup). All buses are radio-equipped.

#### V. Public Alerting and Instruction

This school district did not play a role in any public information activity during this exercise nor does the RERP call for any.

The school district did monitor the County EBS throughout the exercise. KYW (AM) was the EBS station monitored.

The copy of the district RERP did contain a draft of a "Letter to Parents." It contained instructions on evacuation of the school children.

#### VI. Protective Action

The notification and activation of the bus drivers was promptly ordered. All estimates on transportation availability were discussed with the county. One bus was activated for purposes of this exercise. The Acting Superintendent advised that the district's resources were adequate to evacuate all students simultaneously in one lift.

The school district is very aware of particular needs of the special education students. Arrangements were not made for the special education students during this exercise, however, if the need arose, all special education drivers would be notified by phone and/or radio.

Bus driver contact was demonstrated during this exercise.

No efforts to deal with traffic problems with parents or general public in the event of an evacuation were demonstrated or even discussed during this exercise.

No recommendation to "shelter" was received from county. All shelter areas are designated and identified. Sheltering procedures were not demonstrated.

The RERP has arrangements for securing the buildings evacuated, however, it was not demonstrated during this exercise.

The Acting Superintendent did not contact or activate the host schools during this exercise.



L-1-1-1

A simulation of the evacuation from the elementary school (North) was conducted. One school bus, driver and FEMA observer were dispatched to the host school (North Penn High School) at about 1330. The trip was 10.9 miles one way and took 20 minutes to complete.

### Pottsgrove School District

#### I. Activation and Staffing

The School Coordinator for Montgomery County notified the Pottsgrove School District of an Alert at the Limerick Generating Station at 1009. Since school was in session, staff were already present, however, calls were placed and staff members informed of the Alert status. Written call lists were used and were up-to-date.

The following schools were notified by the school district:

- Pottsgrove High School
- Pottsgrove Junior High School
- West Pottsgrove Elementary
- Ringing Rocks Elementary
- Lower Pottsgrove Elementary

Confirmation calls were also placed to the following schools:

- St. Gabriel's Elementary
- St. Pius X High School
- West Mont Christian Academy

The staff displayed adequate training and knowledge to perform response functions.

#### II. Emergency Operations Management

The Superintendent of the Pottsgrove School District appointed his Director of Administration as the head of the response staff. He was effectively in charge of the organization. Periodic briefings were not held with the principals, however, they were kept up-to-date regarding significant events over the telephone. A copy of the school district plans were available and used during the exercise. The school district adopted the plan on April 9, 1985.

Messages were logged by the Director of Administration, the secretary and the RACES operator. The school district was notified of Alert at 1009, Site Area Emergency at 1115 and General Emergency at 1306. At 1315 the County School Coordinator informed the schools that the sirens would sound at 1330 and evacuation should follow.

#### III. Facilities

Sufficient phones were available in the Superintendent's office. The Transportation Officer and school principals were responding from their own offices and were not observed. However, the director had no difficulty contacting each action location when required to.



Evacuation maps were not located in the school district office, however, they were discussed in detail and available for bus drivers at the schools.

#### IV. Communications

The primary means of communication between the school district office, the County School Coordinator, the Transportation Officer, the public schools and the private schools was commercial telephone. A RACES operator was dispatched by the county to the school district office. The school district had the proper antenna installed. RACES communications were tested during the exercise and reception was good.

#### V. Public Alerting and Instruction

The school district did not play a role in public information. The EBS station was monitored in the school district office. The Pottsgrove School District Plan contains a detailed letter of instructions to parents. This letter has not been sent to parents as the plan was not adopted until April 9. The letter and an "Authorization for Student Pickup" will be mailed shortly. The letter will be signed and returned to the school for their records.

#### VI. Protective Action

The Director of Administration contacted the Transportation Officer at the Alert stage and throughout the exercise. The Transportation Officer was directed to check the vehicle resources and provide a report back to the school district office. He reported an unmet need for 18 buses which the school district relayed to the county.

The school district is aware of the needs of special education students. There are no students requiring special transportation within the district.

The school district owns their own buses. The bus drivers are supplied through CMB Services. Contact of the bus drivers was handled by the Transportation Officer and was not observed.

The St. Gabriel's Elementary School participated in the exercise by conducting a fire drill to coincide with the activation of the alert and notification system. At 1330 the fire alarm sounded and the building was completely evacuated by 1332. A bus was dispatched to St. Gabriel's School, however, it left the school for the host school prior to the 1330 fire drill and was not observed. The host school is St. Ann's Elementary School and is located approximately 30 miles away in Emmaus, Pennsylvania. Activation of the host school is accomplished at the county level.

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Pottstown School District

I. Activation and Staffing

The call activating the Pottstown School District RERP was received at 1011 by the Superintendent from the Montgomery County School District Intermediate Unit. A confirming call was received shortly thereafter from the County Office of Emergency Services. School district staff were at work in their offices at the time of activation. In conformance with the RERP, all public school principals were contacted by phone and requested to provide attendance figures as well as amount of food and fuel on hand (to be used in the event of sheltering). Non-public schools were also contacted by phone as a backup to the County Office of Emergency Services. The host school, the East Penn Senior High School in Emmaus, Pennsylvania, was also alerted at this time.

The Superintendent was assisted by his secretary and by the school district Business Manager (who is prepared to implement the RERP in the Superintendent's absence) and by several other school district staff members. A RACES operator, dispatched by the County, had radio communications established shortly after 1100. A school district teacher who is a RACES operator arrived at the Superintendent's office during the exercise in order to test a permanently installed RACES antenna.

II. Emergency Operations Management

The Superintendent was effectively in charge. Principals were kept up-to-date through the various emergency classification levels via telephone. School district staff were also kept up-to-date. Copies of the district RERP were available and utilized. The Superintendent was able to keep his own message log without interference with necessary communications.

The Alert message was received at 1011, Site Emergency at 1119 and General Emergency at 1308. The Site and General Emergency messages were received by telephone and by RACES. The Governor's Declaration of Disaster Emergency was received at 1120 and was not confused with any emergency level classification. The evacuation order was received shortly after the declaration of General Emergency and was relayed to school principals in time for the requested 1330 evacuation.

III. Facilities

The Superintendent's office is equipped with sufficient telephone. Each principal has a private, unpublished number which can be used by the Superintendent. Buses and drivers are provided through the county which is responsible for evacuation route maps, etc.

IV. Communications

Communications were established and demonstrated with the County EOC via phone and RACES, to local public and non-public schools via phone, and to the host school via phone and RACES.

## V. Public Alerting and Instruction

The school district's role in public information consisted of several phone calls to the local Pottstown (non-EBS) radio station by the Superintendent informing station personnel of the progress of the exercise. The County EBS radio station, KYW, was monitored by the district. A letter has been sent to parents providing information on the evacuation of school children.

## VI. Protective Action

Notification and activation of bus companies is a county responsibility. The school district delivered an updated estimate of the number of needed buses during the Alert stage. However, the district was aware of, and made provisions for, the transport of several groups of students not in their regular buildings during the exercise. The district was aware of and advised the county of the particular needs of its special education students.

One bus was activated for the exercise. It was dispatched to the Ruppert School in Pottstown. The driver was contacted at home by the bus company. Approximately one hour elapsed from the time the driver was contacted by the company, arrived at the bus depot at King of Prussia, and drove to the school (at 1231).

An evacuation of the Ruppert School was demonstrated although no students actually boarded the bus. The bus left the school at 1330. The driver was familiar with the main route and alternate routes to the host school at Emmaus, Pennsylvania.

## Souderton Area School District

### I. Activation and Staffing

The Assistant Superintendent of Schools was Acting Superintendent and performed the functions of Superintendent according to the Souderton Area School District Radiological Emergency Response Plan for Incidents at the Limerick Generating Station. He was assisted by the Business Manager, Souderton Area School District.

The activation and staffing procedures demonstrated followed the prescribed plan. The initiation and recipients of information were knowledgeable and performed according to plan.

### II. Emergency Operations Management

The Acting Superintendent received periodic briefings from school principals. This information was disseminated to the appropriate individuals. The call down procedures utilized a current list, the most critical school, Salford Elementary, being called first. The call down procedure consumed approximately 18 minutes for each escalation of the simulated emergency. The evacuation notification was received by the school district before all calls for General Emergency were completed. The County EOC was notified of call completion for each escalation.

### III. Facilities

The District Superintendent's office contained a dedicated phone, in addition to business phone; each school has a similar set up. Transportation is provided under contract with a local bus company. This company is contacted by the school district and then makes contact with the drivers. Evacuation route maps are contained on school buses, instructions for use of maps are under revision.

### IV. Communications

Notifications were made over emergency dedicated phone; staff was familiar with procedures for requesting backup communications, e.g., RACES.

### V. Public Alerting and Instruction

The school district did not play a role in public information. They were aware of procedures for coordination with the county.

### VI. Protective Action

Evacuation of all students in one lift requires county assistance. Procedures for this assistance are familiar to staff. The school district has two physically-handicapped students, and nine trainable mentally-retarded; arrangements have been made for their transportation. The Salford Elementary School had a fire drill in lieu of evacuation. The school was evacuated in two minutes.

## Spring Ford Area School District

### I. Activation and Staffing

A call was received from the Montgomery County EOC at 1014 notifying the school district that they were in an Alert status. The school Superintendent was ill, therefore, the school district's Business Manager was in charge. Notification of staff, schools and organizations was performed in a timely manner. The staff was well-schooled in proper procedures and phone lists were demonstrated to be up-to-date.

### II. Emergency Operations Management

Sufficient copies of the RERP were available at the school district's office. The Business Manager, who was substituting for the ill Superintendent, was well aware of the plan and effectively in charge. Information received by the school district was routinely and promptly transmitted to staff and the school principals.

The school district Coordinator maintained a message log which was available to the staff.



Upon arrival at Sacred Heart the principal informed the Federal Observer that the bus for evacuation had arrived at 1200 and had left promptly on the route to the host school. While the Federal Observer was in route to Sacred Heart, the principal had received the General Emergency notification (approximately 1315) from the school district. The school district Coordinator informed the principal to consider the exercise terminated insofar that the evacuation bus had already been sent to the host school.

### III. Facilities

The facilities at the school district were sufficient to coordinate the exercise. A dedicated phone line was installed in the Superintendent's office and other phone lines were available as backups and for follow-up phone calls by staff to individual schools.

Sufficient maps of evacuation routes were available at the school district office if they were needed.

### IV. Communications

The dedicated phone line served as the primary communication network. Auxiliary phone lines were available at the school district for backup. No RACES operator was requested by the school district nor was any sent by the county.

### V. Public Alerting and Instruction

A "Letter to Parents" was included in the plan to notify parents of evacuation procedures and host schools. The Spring Ford Area School District RERP states that one of the purposes of activating the public alert system is that school may need to be closed. This is inconsistent with the rest of the school district RERPs, although the Montgomery County RERP does acknowledge the need to close schools as a reason for activating the alert and notification system.

### VI. Protective Action

The notification of the Transportation Coordinator was completed promptly as called for in the RERP. Estimates of expected buses was discussed with the county and one bus was activated for the exercise. The school district seemed aware of resources required for evacuation and of any special needs for special education students.

As noted in Section II, there was a mix-up on evacuation with the bus arriving/leaving early. Sheltering procedures at the school districts were observed, including closing doors, windows and ventilation systems. The host schools were contacted as designated in the RERP. Plans were also available to relocate the school district office and personnel.

Chester County EOC

The Chester County Department of Emergency Services operated out of their EOC in the basement of the Haelett Building in West Chester, Pennsylvania. The Deputy Emergency Management Coordinator oversaw operations. Two liaison officers maintained contact with the school districts, while a secretary was on hand to log messages from PEMA. Adequate telephones were available, with ARES serving as a backup communications system.

At 1005, Chester County received notification from PEMA that an Alert had been declared by Limerick at 1000. The county immediately began a notification of their four risk school districts (Phoenixville, Great Valley, Downingtown, Owen J. Roberts), taking less than 10 minutes to complete the process. Although private, non-profit schools were not participating in the exercise, the county did contact these schools to confirm the accuracy of the telephone numbers and to inform them that an exercise was occurring.

Radio personnel (RACES) were dispatched to the school district at 1020 in order to provide backup communications. About 1050 the county called the school districts to confirm that they had completed their responsibilities under Alert and that they had notified their transportation providers, where applicable.

At 1100 the utility declared a Site Emergency, with Chester County receiving notification by 1105. The school districts were so informed by 1110. At this point Owen J. Roberts reported an unmet need of 23 buses. The county made arrangements to obtain those resources, consulting letters of agreement that had been developed with transportation providers. It was simulated sending the buses to a transportation staging area.

The Governor issued a Declaration of a State of Disaster Emergency at 1120. The county was notified at 1125; notification to the school districts was completed several minutes later. In order to avoid confusion, PEMA made it clear that a State of Disaster Emergency did not effect the classification level, which remained at Site Emergency.

During Site Emergency, Owen J. Roberts requested three individuals to assist in traffic control in the event an evacuation became necessary. The Chester County Department of Emergency Services contacted the County Sheriffs Office and obtained the manpower. The school district was informed of this at 1155.

From the time General Emergency was declared at 1300, it took five minutes to notify the county and the school districts. At 1315 a message was received from PEMA stating that sirens would be sounded and EBS activated at 1330, with 10-mile, 360 degree evacuation occurring immediately thereafter.

It should be noted that, as part of the exercise, it had been arranged to send buses to the various risk school districts and then on to the designated host schools. At the last minute, Chester County was informed that the buses assigned to the Owen J. Roberts School District were not available for this task. The county quickly implemented alternative arrangements, making contact with other transportation providers to obtain the necessary resources and dispatching the buses to the school. The entire process took approximately 20 minutes to complete.



## Downingtown Area School District

### I. Activation and Staffing

The exercise was coordinated by the school district's Supervisor of Maintenance, with the assistance of the Administrative Assistant to the Superintendent. The Superintendent received the initial call at 1030 from the Chester County EOC. The Superintendent was concerned that the verification number given to him by the county was incorrect. The county later changed the number, then changed it back to the original number. The call was verified at 1025 by Chester County. By this time the school district had notified all school principals of the Alert.

### II. Emergency Operations Management

Both the Supervisor of Maintenance and the Administrative Assistant displayed a high level of efficiency and professionalism in coordinating the exercise. They were both very knowledgeable of the plan and procedures. The Supervisor had a chart readily available for status updates of the different alert stages, attendance reports received from the schools and general comments that gave a complete picture of what was happening. The school district was notified of a Site Emergency at 1111, a General Emergency at 1304 and a protective action order to evacuate was received at 1321 to take effect at 1330. All schools were notified promptly upon receipt of notification from the county.

### III. Facilities

One school's emergency phone was out of order and other phones were "irregular." The Administrative Assistant was able to make contact through the operator. The school was able to make outgoing calls so the school district was able to maintain adequate contact.

### IV. Communications

The school district's emergency phone was used for incoming calls only. The primary means of communication was by phone. A radio was set up as a backup and messages were received by phone and duplicated by radio during the day.

### V. Public Alerting and Instruction

The school district monitored the situation closely and relayed information to the school principals. The Supervisor was in constant contact with the schools during the day. They did not play a role in public information. Due to poor reception in the building, they were unable to monitor WCAU.

## VI. Protective Action

When the schools were contacted at the different stages of alert, the principals were directed to refer to the RERP and implement the appropriate procedures. In the case of Downingtown School District, this means sheltering those students who live in the Limerick EPZ at their schools to await pick-up by their parents or legal guardian.

School district officials pointed out that the RERP designates the schools for which they are responsible. They stated that Upattinas School should be deleted from the plan because it is a private school and the county would be responsible for notification, not the school district. They did not contact Upattinas School during the day.

### Great Valley School District

#### I. Activation and Staffing

The Superintendent received a telephone call from the county EOC at 1028. He immediately called all schools in the district. He and his staff displayed adequate knowledge of the plan and its implementation.

#### II. Emergency Operations Management

The Superintendent was effectively in charge, briefed his principals at regular intervals, and was familiar with the plan. The school district was notified of emergency classification as indicated:

Alert	1028
Site Emergency	1111
General Emergency	1305

The Superintendent notified all the schools in his district within five minutes.

#### III. Facilities

The facilities were adequate to meet the provisions of the plan.

#### IV. Communications

All communications were by telephone. Any reference to the Tellabs 294 system should be revised to reflect current conditions.

#### V. Public Alerting and Instruction

The school district personnel monitored radio station WCAU throughout the drill.

A letter to the parents has been written but not distributed as the plan has not been approved by the school district.

## VI. Protective Action

The only protective action necessary was to hold students residing in the EPZ at school for pick-up. All schools are outside of the EPZ.

A fire drill was held at the Charlestown Elementary School during the exercise.

The school district can adequately protect the students in their jurisdiction.

### Owen J. Roberts School District

#### I. Activation and Staffing

The Superintendent was notified of the Alert classification at 1012. The call was received via telephone from Chester County DES. The Superintendent verified the notification by return call to the County.

Staff mobilization procedures were not demonstrated, as the Superintendent was the only participant at the district administration office. However, the Superintendent displayed emergency notification procedures which include call lists for administrative staff and all other district personnel. The lists, which included home and work numbers, were arranged by function (teachers, maintenance personnel, etc.) and by location (all East Coventry Elementary School personnel, for example).

The Superintendent notified the following after receiving the alert call, and subsequent classification changes: the switchboard, the transportation coordinator (who operated at the bus company's facility throughout the exercise), the host district (Twin Valley) administration office, and the East Coventry Elementary principal. Other district principals were at the East Coventry Elementary School to observe. Notification calls to their schools were simulated. Notifying private schools within the district is a county responsibility.

#### II. Emergency Operations Management

The Superintendent was firmly in command of the district's response activities, and demonstrated more than adequate training and knowledge. Key participants, including the East Coventry principal, the transportation coordinator, and the Twin Valley Superintendent were informed promptly of significant changes in status. The Superintendent maintained a log of all incoming and outgoing messages, and other activities, via a small, portable tape recorder. This verbal log was periodically converted to hard copy throughout the exercise. This proved to be an efficient and effective method of keeping track of events. In an actual event, with the appropriate administrative staff participating, the Superintendent reported that a status board and message forms (which were available) would be used.

The Superintendent does not consider the draft radiological emergency response plan, submitted to FEMA for evaluation, to be the official school district plan. A general, all-emergency plan was available, which included more detailed procedures and notification lists than contained in the RERP.

### III. Facilities

The Superintendent operated from his office in the district's administration building. The office was adequate in all respects for the exercise activities. According to the Superintendent, an adjacent conference room would be used as an operations room during an actual emergency, upon activation of the administration staff.

Although not observed, evacuation route maps are stored in all of the buses under contract to the district.

### IV. Communications

The available communications were more than adequate to handle the limited message traffic generated during the exercise. With one exception, the primary means of communication between the Superintendent's office and other locations, including the county EOC, school principals, and host district, was commercial telephone. The telephone in the Superintendent's office is equipped with two-button speed dialing for key numbers, and has conferencing capability. Communications with the transportation coordinator, located at the bus contractor's facility, were via the district radio. This network also provides communications with the contract buses, district vehicles, maintenance personnel, and other staff who are provided with hand-held, portable units. Although not demonstrated during the exercise, this system could provide backup communications to the various school principals. Backup communications with the county EOC included a telephone hotline and ARES. The county dispatched an ARES operator to the school district during the Alert phase; he arrived at 1100 with a portable, hand-held radio. A roof-mounted antenna, with a down-lead accessible in the Superintendent's office, provided clear communications.

### V. Public Alerting and Instruction

No public information activities were performed by the school district during the exercise. The draft RERP contains a letter to parents, but it is incomplete.

### VI. Protective Action

The protective actions described below were, for the most part, simulated. No drivers or vehicles were actually mobilized by the district, although three buses were dispatched by the county, and there was no evacuation demonstration involving students.



After receiving the Alert notification, the Superintendent directed the transportation coordinator to inventory and ready the buses, and notify drivers, as stipulated in the plan. The number of available buses was reported to the county, and the Superintendent implemented a preliminary transfer of East Coventry Elementary School students to the Middle School. This is a precautionary move specified by the plan due to the school's close proximity to the Limerick facility.

After receiving notification of the escalation to Site Area Emergency the Superintendent directed that the available buses be assembled at the main high school/middle school campus, and reported the district's unmet need for 23 buses to the county. The county later reported that 23 buses had been designated for the district, and were being assembled at the county's transportation staging location. The Superintendent reported an unmet need for three traffic control personnel to the county, and advised the host district Superintendent to prepare for early dismissal. The Superintendent also directed the transportation coordinator to confirm that all drivers had maps.

After receiving the General Emergency notification, the Superintendent contacted the school principals and directed them to review the procedures for both sheltering and evacuation. The Superintendent was notified by the county of the evacuation decision at 1319 and, at that time, requested the county dispatch the 23 buses. The Superintendent notified the host district Superintendent, and requested an early dismissal. In implementing the school district evacuation, the Superintendent reported that, in an actual emergency, first priority would be given to the elementary schools in allocating the available buses. The high school/middle school would then be evacuated as buses arrived from the county. The Superintendent continued to monitor the evacuation process and reported the various vehicle arrival and departure times to the host Superintendent and the county. The evacuation was reported complete at about 1350.

#### Phoenixville Area School District

##### I. Activation and Staffing

At 1010 the Phoenixville School District Superintendent received a telephone call from the Chester County DES, that the Limerick Nuclear Generating Station was in Alert status as of 1000. The Superintendent called in his staff, i.e., two assistants and a secretary, who proceeded to notify the following facilities by telephone:

- Senior High School
- Junior High School
- East Pikeland School
- Barkley School
- 2nd Avenue School
- Schuylkill School
- Gross Bus Company
- Treddyfrin Earltown School (host facility)

No problems were observed in this phase of the operation at either the Superintendent's office or at the facilities notified by his staff.

## II. Emergency Operations Management

Throughout the entire exercise the Superintendent was totally in charge and his three staff members performed in an excellent, professional fashion without any problems. Briefings were held, message logs were kept, the plans and maps were available for reference, and a status board, while not available for this exercise, was on order for future use. Notification of status was received from the Chester County DES as follows:

Alert	1010
Site Emergency	1107
General Emergency	1304
Evacuate	1327

## III. Facilities

This exercise was conducted in the Superintendent's office which was of sufficient size for him and his three staff members, as well as three to four additional people, if necessary. Three separate telephone lines were available for their use. One line was dedicated to incoming calls from the County DES. The other two lines were used by his staff to notify their other facilities; no problems with this communication system were observed. The bus driver did not have a map but he stated that he did not need one.

## IV. Communications

The primary communications system with the County EOC was one dedicated telephone line. Two additional telephone lines were available for backup as well as ARES radio operator, who arrived at 1115 and was set up and operational at approximately 1130. The primary communications system with the local schools, the host school and the bus company was the telephone. No backup system for these facilities was observed. The buses were not radio-equipped and an ARES operator for the buses was not provided during this exercise. However, they did state that the plan called for a mobile ARES operator to follow the bus caravan in a real emergency.

## V. Public Alerting and Instruction

Except for a letter to the parents containing information and instructions concerning evacuation, the school district did not play a formal role in distributing public information. However, during this exercise, a newspaper reporter telephoned the Superintendent who relayed basic information concerning the actions taken by the local schools to protect the students as called for in their plans. WCAU was monitored by the staff throughout the exercise.



## VI. Protective Action

Within ten minutes of notification by the Superintendent, one bus arrived at the junior high school and one bus arrived at the senior high school. A dispatcher at the Gross Bus Company is responsible for contacting the bus drivers and he did dispatch these two buses. The Superintendent stated that Gross Bus Company is 17 buses short of the number of buses needed to evacuate all the students within the school district (which does not include the private and parochial schools). He stated that the county was aware of this and they promised, in discussions prior to this exercise, to obtain buses from other sources. The possibility of needing additional buses was not simulated in this exercise because as this scenario progressed, the local schools simulated attendance decline (assuming parents were coming to school and removing children). By the time the evacuation was initiated, enough buses were available from the Gross Bus Company to evacuate the remaining students. The one bus followed to the host school took about 15 minutes, without traffic congestion.

Transportation for the one mobility-impaired student is accounted for in the plan. According to the Superintendent, the county is responsible for manning two TCPs to handle potential traffic problems with parents picking up school children. Custodians are trained to secure the building and arrangements were made to locate the school district administration at the host school which was activated at approximately 1330.

Berks County EOC

Notification of Alert status was received in the Berks County EOC at 1000 via the dedicated phone line from PEMA. The Berks County Emergency Management Coordinator contacted the Daniel Boone and Boyertown School Districts by commercial phone. This notification was completed by 1005. Both school districts verified Alert status by calling the Berks County EOC. This was completed at 1012.

Site Emergency notification was received from PEMA at 1100 and notification by the county to the school districts was completed by 1106. General Emergency notification was received at 1303 and the school districts were notified by 1310.

At 1317 the notification of recommended evacuation to begin at 1330 was received in the Berks County EOC. The Berks County EMC had difficulty reaching the Daniel Boone Superintendent at the unlisted phone number because it was busy. He left a message for the Superintendent on the general phone line and also contacted the school directly to make sure that they received the message. The school had already received the message from the Superintendent. This notification was completed at 1325. The exercise was terminated at 1345.

All notifications received from PEMA came through on the dedicated phone line, commercial line and teletype. The primary means of communication between the County EOC and the school districts is commercial phone with unlisted numbers. The secondary means of communication is RACES. Secondary communication was not demonstrated in this exercise.

Boyertown Area School District

## I. Activation and Staffing

A telephone call from the Berks County Emergency Operations Center at 1007 informed the Superintendent for the Boyertown Area School District of an Alert at the Limerick Generating Station. The Superintendent immediately verified the content of the notification by call-back to the County EOC, and then proceeded to complete notification to the district schools using an up-to-date written call list, which included:

- Boyertown Area Senior High School
- Boyertown Area Junior High East
- Boyertown Area Junior High West
- New Hanover Elementary School
- Boyertown Elementary School
- Colebrookdale Elementary School
- Gilbertsville Elementary School
- Pine Forge Elementary School
- Washington Elementary School
- Earl Elementary School
- Pine Forge Academy
- Pine Forge SDA Elementary
- Montessori Academy
- Wayside Chapel

According to the Superintendent, the Lincoln Special Educational Facility and Head Start are under the direction of the Berks Intermediate Unit. To ensure notification to these facilities (and they indeed had not been notified), the Superintendent added them to his notification list. Attendance at each of the local schools was established and logged.

## II. Emergency Operations Management

The Superintendent for the Boyertown School District was knowledgeable with regard to the current RERP and conscientiously notified and updated available information to all of the schools upon notification by the county. Consideration should be given to providing an assistant to perform the notification calls, as the list took roughly 35 minutes to complete. A message log and status board were maintained; a copy of the plan was available for reference.

Notification of the Alert was received at 1007, of Site Emergency at 1106, and of General Emergency at 1305. Notification was received at 1318 to proceed with evacuation procedures at 1330.

## III. Facilities

Two phones were immediately available to the Superintendent which provided communication capability to the schools and the Transportation Department. Difficulty was experienced with the one newly-installed commercial line in that a loud whistle followed the first ring of the phone which inhibited effective conversation. The Superintendent indicated that the telephone company would be notified regarding the problem and requested to make the necessary repairs. A second, specialized system enabled contact with the schools via a three-digit calling system. This system has only seven trunks and reportedly, therefore, is easily overloaded. The Superintendent suggested that they may consider dedicating the last of the lines to emergency communications, if required. The school district maintained contact with the Transportation Department via the commercial telephone system; the facilities at that department were not observed.

An evacuation route map was provided by the school principal to the one bus driver who was activated to demonstrate the completion of an evacuation route.

## IV. Communications

The primary communication system between the Superintendent's office, the County EOC, local schools, the host schools, and the Transportation Department was a commercial telephone line which, as noted previously, should be serviced to eliminate a high-pitched whistling sound exhibited during use. A backup three-digit line is also available for everyday use, tying the Superintendent's office into all of the local schools. The backup means of communication was identified as being an amateur radio system, but was not demonstrated. According to the Superintendent, all district buses are radio-equipped; buses acquired via the Quigley Bus Contractor are not radio-equipped, but would be provided amateur radio operators through the county.

## V. Public Alerting and Instruction

The school district personnel did not demonstrate any public information activities, although they would reportedly use normal media resources to forward appropriate school information to the general public. Also, it was indicated that all such news releases would be coordinated through the county. The Superintendent, however, was unaware which radio station to turn to in order to monitor EBS announcements.

## VI. Protective Action

The Superintendent kept the county well-informed of any significant changes in student attendance having an impact on school bus requirements. Although the Superintendent contacted the Transportation Department at each classification level, the school district was not involved in the activation of buses during this exercise. The Superintendent reported that adequate resources are available for a one-lift evacuation. One bus was scheduled for activation through the County Emergency Operations Center the day prior to the exercise. This bus and driver were at the Boyertown Area Junior High West upon the Federal Observer's arrival at 1325.

A fire drill was demonstrated by the Boyertown Area Junior High West, beginning at 1330; evacuation of the entire school was a smooth, well-run operation and was complete within three minutes. The bus left the school at 1340 and arrived at the Kutztown University host location at 1422, approximately 33.5 miles distance. The route was completed without incident. No host school activities were demonstrated. The school principal appeared to be well-versed in evacuation procedures, but was unaware of RERP actions should sheltering be instituted.

## Recommendations

1. It is recommended that an assistant be provided to aid the Superintendent in the completion of the notification call-down list.
2. The principal of the Junior High West should complete additional review of the RERP to expand familiarity with sheltering activities.
3. The school district should monitor their designated EBS station.



I. Activation and Staffing

At 1008, the school district received a call from the Berks County Emergency Management Agency informing them of an Alert at the Limerick Generating Station. Staff mobilization procedures were demonstrated utilizing a written call list that was up-to-date. Schools contacted included the Amity Elementary School, the Daniel Boone Area Senior High School, the Monocacy Elementary Center and the Roosevelt Elementary Center. The senior high school and the Roosevelt Elementary Center are host schools for the other two schools. The staff displayed adequate training and knowledge to be able to respond in the event of an actual emergency at Limerick.

II. Emergency Operations Management

The Superintendent was effectively in charge, holding periodic briefings for school principals and key staff. A copy of the radiological emergency preparedness plan was available and utilized, when necessary. The school district was notified of Site Emergency at 1103 and General Emergency at 1305. Evacuation of the plume EPZ was directed to take place at 1330.

III. Facilities

Sufficient telephones were available to communicate with the county, the transportation provider and school principals. Evacuation route maps for drivers were not needed as the host schools are within the Daniel Boone Area School District.

IV. Communications

Telephone provided the means of communication between the various jurisdictions. RACES radio was not demonstrated for this exercise.

V. Public Alerting and Instruction

The school district did not have any direct involvement with public alerting and instruction other than drafting a "Letter to Parents." The district did not monitor the designated EBS station.

VI. Protective Action

Notification and activation of buses and drivers were activated in a prompt manner through a call from the Superintendent to their designated transportation provider. Adequate resources are available to evacuate risk schools in one lift. The school district is aware of the particular needs of special education students and made arrangements for their transportation. Travel time from the Amity Elementary School to the senior high school was approximately 15 minutes. Procedures were implemented to secure the evacuated school building.

## Recommendation

1. The school district should monitor their designated EBS station.

## South Coventry Township

### I. Activation and Staffing

As of 1730, South Coventry Township had partially activated its EOC as a result of an Alert declaration received from Chester County at approximately 1700. At 1805 the township received the Site Emergency declaration and, at that point, the Emergency Management Coordinator (EMC) fully activated the EOC, bringing in both shifts as well as extra staff available for miscellaneous duties. A written call list was utilized to notify the municipal staff; it contained both home and work telephone numbers. Besides the Emergency Management Coordinator and his Deputy, other staff on hand included the Fire Services/Radiological Officer and the Transportation/Medical Ambulance Officer. An ARES operator was utilized along with other personnel to man alternative communication systems, log messages, and update the status board. The staff displayed an excellent ability to implement their plan in the event of an emergency at Limerick.

### II. Emergency Operations Management

The EMC was effectively in charge, as called for in the township's radiological emergency response plan. The staff was kept fully informed of all significant events; plans and implementing procedures were on-hand and consulted on a regular basis. Message logs were kept and messages were reproduced and distributed to the appropriate individuals. Access to the EOC was controlled by the fire-police through a sign-in sheet and badging. General Emergency notification was received by South Coventry at 1850, while at 1915 the township was informed that the sirens would be sounded at 1930, with EBS activation to follow. Evacuation of the entire plume EPZ would commence at that time. All three township supervisors came to the EOC and were briefed by the EMC on the status of the emergency and the township's response.

### III. Facilities

The township EOC provides an excellent location from which to coordinate their response. Adequate furniture, space, lighting and telephones were evident and noise was controlled by establishing all communication networks in a separate room from the operations area. A kitchen, restrooms and backup power are available to help ensure extended operations. A status/incident board was clearly visible to all parties and was kept up-to-date throughout the exercise. Good maps were available, showing such information as the plume EPZ, route alert sectors, siren sites, evacuation routes and traffic control points.



## IV. Communications

Good communications were set up and utilized throughout the exercise. Besides the telephone, there was ARES radio, fire/police radio and a UHF unit which could communicate directly with the County EOC.

## V. Dose Assessment and Protective Action Recommendation

Not applicable to South Coventry Township.

## VI. Public Alerting and Instruction

Township route alert teams were dispatched to the homes of hearing-impaired residents as part of the overall alert and notification process, which was initiated at 1930. In addition, as part of the exercise, a simulated siren failure took place and a team was dispatched to perform route alerting in one sector of South Coventry Township. The township monitored WCAU-AM, Chester County's designated EBS station, throughout the exercise.

## VII. Protective Action

### A. Evacuation and Access Control

Fire-police were activated and called into the EOC to receive their dosimetry and instructions and then dispatched to the six traffic control points in South Coventry Township.

### B. Special Evacuation Problems

Utilizing a list that contained the names of mobility-impaired/transit-dependent individuals, the EOC staff contacted everyone, updating and revising the list where necessary. The township is aware of the needs of the various people involved and contacted the county, requesting a mini-passenger van and several ambulances. The county simulated dispatching these resources to the EOC at General Emergency. In addition, both Chester County and the township contacted the Coventry Nursing Home to inform them of the exercise.

## VIII. Radiological Exposure Control

At this point in time the township has only been supplied with high-range, self-reading dosimeters (CDV-742s), chargers and record keeping cards. The equipment was distributed to appropriate staff, along with adequate directions. Dosimeters were read during the exercise. The Radiological Officer was aware of the maximum dose allowed without authorization and decontamination procedures, i.e., the location of the emergency workers decontamination station. Because the EOC is located within the plume EPZ, upon completion of their responsibilities, the staff was instructed to report to their alternate EOC at the Chester County library.

IX. Media Relations

The EMC is aware that all press/media inquiries should be forwarded to the Chester County Department of Emergency Services. A response will be handled by the county.

X. Recovery and Reentry

This was not an exercise objective.

XI. Scenario

The scenario provided South Coventry Township sufficient opportunity to implement the various responsibilities called for in their radiological emergency response plan in an adequate manner.

# DRAFT

FEDERAL EMERGENCY MANAGEMENT AGENCY

REGION III

## EXERCISE EVALUATION REPORT

FACILITY: Limerick Generating Station

OPERATOR: Philadelphia Electric Company

LOCATION: Limerick Township, Montgomery County,  
Pennsylvania

REPORT DATE: April 25, 1985

EXERCISE DATE: April 22, 1985

PARTICIPATING  
JURISDICTIONS: Pennsylvania Emergency Management Agency,  
Montgomery, Chester and Berks Counties,  
the 43 Risk Municipalities

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# DRAFT

## EXERCISE SUMMARY

On Monday, April 22, 1985, a remedial exercise was held in conjunction with the Pennsylvania Emergency Management Agency, the Montgomery County Office of Emergency Preparedness, the Chester County Department of Emergency Services, the Berks County Emergency Management Agency and the 43 risk municipalities. The purpose of the exercise was to conduct a test of the integrated capabilities of the various jurisdictions to activate the Alert and Notification System for the area within approximately ten miles of the Limerick Generating Station within fifteen minutes of the decision by the Governor to institute protective actions.

All jurisdictions performed in an adequate manner.

# DRAFT

## EXERCISE BACKGROUND

On July 25, 1984 the initial, full-participation radiological emergency response exercise was held in conjunction with the Limerick Generating Station. Involved from an offsite standpoint were the Pennsylvania Emergency Management Agency, coordinating the response of other State agencies, the risk counties of Montgomery, Chester and Berks, the support county of Lehigh and 33 risk municipalities. On November 20, 1984 a supplemental exercise was held involving the support county of Bucks and eleven risk municipalities. On March 7, 1985 an exercise was held with the Pennsylvania Department of Corrections to test the ability of the Department and the State Correctional Institution, Graterford, to respond in the event of an emergency at Limerick. On April 10, 1985 an exercise was held to test the capabilities of the risk school districts and South Coventry Township, Chester County, to respond to a radiological accident at Limerick. The purpose of the April 22, 1985 exercise was to test the Alert and Notification System for the plume exposure emergency planning zone of the Limerick Generating Station.



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## OBSERVER ASSIGNMENTS

Pennsylvania Emergency Management Agency

Jan Lamb (FEMA)

Montgomery County EOC

Jim Asher (FEMA)

Chester County EOC

Steve Hopkins (FEMA)

Berks County EOC

Rick Kinard (FEMA)

# DRAFT

## EVALUATION CRITERIA USED

The Pennsylvania Emergency Management Agency and county governments' response during this exercise was evaluated in relationship to the Commonwealth of Pennsylvania Disaster Operations Plan, Annex E - Fixed Nuclear Facilities, dated November 1981 and the draft Radiological Emergency Response Plans for Incidents at the Limerick Generating Station for Montgomery, Chester and Berks Counties. These plans were prepared under the authority of the Pennsylvania Emergency Management Services Act of 1978, P.L. 1332, and were developed in accordance with NUREG 0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," dated November 1980. This exercise was also evaluated against FEMA-43, "Standard Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," dated September 1983.

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## EXERCISE OBJECTIVES

1. To demonstrate, in a timely manner, the notification of the three risk counties and risk municipalities, of the need for protective action, the sounding of sirens and the activation of the Emergency Broadcast System.
2. To demonstrate the capability to activate the siren system and EBS within fifteen minutes of the decision, by the Governor, to institute protective actions.

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## SCENARIO

During the past four days, prior to April 22, 1985, the Limerick Generating Station has experienced systems failure resulting in declarations of Unusual Event, Alert, and Site Emergency.

Early on the morning of April 22, 1985 the Governor signed a proclamation that a State of Emergency existed in the counties of Berks, Chester and Montgomery due to the continued degradation of systems at the Limerick Generating Station.

At 1830 on April 22, 1985, the Limerick Generating Station declared a General Emergency. All risk municipalities and other separate entities were notified and EBS broadcast each significant change. Local EOCs were staffed to implement protective measures in accordance with their radiological emergency response plans.

At 1900 the Bureau of Radiation Protection (BRP) advised PEMA that:

- a. Pressure within the reactor was increasing.
- b. Reactor water pressure was decreasing.
- c. All attempts to depressurize the reactor vessel and increase the water level were unsuccessful.
- d. There was a possibility of fuel damage.
- e. Although there had been no release of radioactive gases, consideration should be given to the possibility of sheltering or selective evacuation if the situation continued to get worse.

## SCENARIO CHRONOLOGY OF EVENTS

<u>Projected Time</u>		<u>Actual Time</u>
1915	Decision of the Governor of the need for the evacuation of the plume exposure EPZ.	1915
1930	Evacuation	1930

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## DEMONSTRATION OF RESOURCES

The following items were demonstrated as part of the April 22, 1985 Alert and Notification remedial exercise.

- Emergency operations centers.
- Limited staffing of facilities
- Communications systems and equipment

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## DEFICIENCIES NOTED IN PAST EXERCISES

Category "A" deficiencies noted as a result of the July 25, 1984 full-participation exercise include the following:

1. Lack of Twenty-Four Hour Emergency Response

A copy of South Coventry Township's updated organizational chart has been forwarded by the Pennsylvania Emergency Management Agency. All plans now reflect round-the-clock staffing. Category "A" deficiency resolved. (NUREG Element A.4.)

2. The Means of Dealing with Mobility-Impaired/Transit Dependent Individuals

Significant unmet needs are still in evidence. Category "A" deficiency remains in effect. This is expected to be addressed through the planning process. (NUREG Element J.10.d.)

3. Lack of Certain Types of Self-Reading Dosimetry, TLDs and KI

Category "A" deficiency no longer warranted. (NUREG Elements J.10.e., K.3.a.)

4. Failure to Activate the Public Alert and Notification System Within 15 Minutes

The April 22, 1985 remedial exercise has successfully resolved the Category "A" deficiency. (NUREG Element E.6.)

5. A Number of Communities Did Not Display Their Capabilities to Respond to an Accident at Limerick

Category "A" deficiency resolved. (NUREG Element J.9.)



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## Pennsylvania Emergency Management Agency

At 1900 BRP advised PEMA that conditions at the plant were deteriorating and that consideration should be given to initiating protective actions should the situation continue to degrade. PEMA contacted the Governor at 1905 and briefed him on the plant conditions and BRP's recommendations. At 1917 PEMA released the following message to Berks, Chester and Montgomery Counties:

The Governor of the Commonwealth of Pennsylvania directs evacuation of the ten-mile emergency planning zone around the Limerick Generating Station beginning at 1930 this date. Simulate sounding of all sirens within the EPZ at 1930, immediately followed by an emergency broadcast message on the EBS system. Route alerting will be dispatched as required.

Please notify PEMA when last municipality confirms receipt of this message.

Montgomery County notified PEMA at 1925 that confirmation by municipalities was complete; Berks County notified PEMA that confirmation was received from all municipalities at 1931. Chester County notified PEMA that confirmation was received from all municipalities except Upper Uwchlan by 1922. Upper Uwchlan confirmed receipt of the message at 1935.

### Montgomery County

The EMC of Montgomery County received the call from PEMA at 1917 and immediately began the process of notifying all risk municipalities. This activity was completed by 1925, well within the allotted 15 minute time period. The EOC was not fully staffed; RACES was utilized as the means of communication between the county and its risk municipalities. The operation proceeded smoothly.

### Chester County

At 1917 the Operations Officer was notified by PEMA, via the dedicated telephone line (blue phone), that the Governor had declared an evacuation of the EPZ, and that the counties were to activate the sirens at 1930 (the county received a hard-copy verification, via teletype, at 1922). The Operations Officer immediately notified the municipalities, following his message with a roll call to verify receipt. This transmission was completed at 1920. Two township EOCs, Uwchlan and Upper Uwchlan, failed to response to the roll call. Contact with Uwchlan Township was re-established at 1923. The Township Coordinator reported that, due to a problem with the base station, they were switching to a remote unit. The coordinator confirmed, however, that he had received the evacuation message. At 1925, the Operations Office directed the Emergency Communications Center to simulate sounding the sirens at 1930, followed by simulated EBS activation.

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In the meantime, the EOC staff continued to attempt contacting Upper Uwchlan by both radio and telephone (the Township Coordinator had apparently not activated his EOC phone). It was not until 1935 that contact with the township, via radio, was established. This was five minutes after the 15 minute notification period had ended; however, the Township Coordinator reported that he had received the evacuation notification transmission at 1920, stating that he had picked it up from "another station." The County Coordinator could not provide an equipment-related explanation for this, and, in fact, radio communication with the township after 1935 was perfectly audible.

Despite the late verification of Upper Uwchlan Township's receipt of the notification message, the Chester County portion of this test is considered a success.

## Berks County

At 1917 the Berks County Emergency Management Coordinator received a call from PEMA, via the dedicated telephone line, notifying him that the Governor had directed the sounding of sirens and the activation of EBS at 1930, followed by the evacuation of the plume exposure emergency planning zone. Upon recording the information on a message form, the Coordinator directed RACES to broadcast the message to the seven risk municipalities. The municipalities verified receipt of the information by 1930 and the Coordinator contacted PEMA at 1931 to confirm that all jurisdictions were made aware of all details concerning alert and notification system activation and the evacuation. At 1930 the Coordinator demonstrated the process for sounding the sirens and simulated making a call to their designated EBS station.

The County Coordinator reaffirmed the fact that the EBS station operates at reduced power at night, but in the event of an emergency, could easily return to full power in a timely manner.

Berks County demonstrated its ability to contact all risk municipalities, sound their sirens and activate their EBS station in a timely manner.