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

RELATED CORRESPONDENCE

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June 8, 1984 '84 JUN 14 AIO:42

Lawrence Brenner, Esq., Chairman  
Administrative Judge  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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

Dr. Peter A. Morris  
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:

Counsel for the NRC staff hereby furnishes to the Board and the parties a copy of an addendum to the Federal Emergency Management Agency's Interim Findings on the Offsite Radiological Emergency Responses Plans for the Limerick Generating Station, that was sent to the Board on May 15, 1984.

Sincerely,

Benjamin H. Vogler  
Counsel for NRC Staff

Enclosure: As stated

cc w/enclosure: See page 2

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PDR ADOCK 05000352  
Q PDR

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cc w/enclosure:

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# Federal Emergency Management Agency

Washington, D.C. 20472

MAY 25 1984

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

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

SUBJECT: Federal Emergency Management Agency/Regional Assistance  
Committee Informal Evaluation of the Offsite Radiological  
Emergency Response Plans (RERP) for the Limerick Generating  
Station

Attached is a copy of the Federal Emergency Management Agency (FEMA)/Regional Assistance Committee Informal Evaluation of the offsite RERP for the Limerick Generating Station. The Informal Evaluation dated April 27, 1984, was prepared by Region III. A copy is being forwarded to the Pennsylvania Emergency Management Agency for their use in upgrading the offsite RERP. This evaluation is sent to you as an addendum to the Interim Finding on the offsite RERP for the Limerick Generating Station, which was sent on May 8, 1984.

The evaluation includes an element-by-element analysis of the adequacy of these plans, and may serve to clarify, if necessary, the Interim Finding. As before, FEMA finds that, at this point in the planning process, the local offsite emergency response plans developed for incidents at the Limerick Generating Station are inadequate. We will update this finding when revised plans have been submitted and reviewed by FEMA Region III and Headquarters.

If you have any questions on the Limerick Interim Finding, please contact Mr. Robert S. Wilkerson, Chief, Technological Hazards Division, at 287-0200.

Attachments  
As Stated



# Federal Emergency Management Agency

Region III 6th & Walnut Streets Philadelphia, Pennsylvania 19106

April 27, 1984

MEMORANDUM FOR: Robert S. Wilkerson, Chief <sup>NSP</sup>  
Technological Hazards Division

Attention: Gerry Smith

FROM: <sup>Rick Kinard</sup>  
for James R. Asher, Chairman  
Regional Assistance Committee

SUBJECT: Federal Emergency Management Agency/Regional  
Assistance Committee, Region III Informal  
Evaluation of the Offsite Radiological  
Emergency Response Plans Site-Specific to  
the Limerick Generating Station

Attached is a copy of the above-referenced report for your information, a copy of which has also been forwarded to the Pennsylvania Emergency Management Agency. If you have any questions or comments regarding its contents, please contact Rick Kinard at (FTS) 597-1781.

Attachment

FEDERAL EMERGENCY MANAGEMENT AGENCY  
AND REGIONAL ASSISTANCE COMMITTEE, REGION III

INFORMAL EVALUATION OF THE OFFSITE  
RADIOLOGICAL EMERGENCY RESPONSE PLANS  
SITE-SPECIFIC TO THE LIMERICK GENERATING STATION

Federal Emergency Management Agency  
Nuclear Regulatory Commission  
Environmental Protection Agency  
Department of Energy  
Department of Transportation  
Food and Drug Administration  
Public Health Service  
U.S. Department of Agriculture

April 27, 1984

Rating Key: A = Adequate  
I = Inadequate

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

A. Assignment of Responsibility (Organizational Control)

A.1.a. A The various County Radiological Emergency Response Plans (RERP) identify the major State, local, Federal and private sector organizations intended to be part of the overall response organizations under the "Responsibilities" section of the Basic Plan. This includes a detailed breakdown of the risk Counties' duties in general, as well as a listing of the specific County staff assignments. Other entities listed include the Commonwealth of Pennsylvania (specific State agencies), the Federal Government, municipalities and the American Red Cross. The County plans also contain two Appendices that detail the respective EOC's staff organization and the interrelationships of organizations.

As of September 1983, the U.S. Department of Agriculture established Food and Agriculture Councils (FACs) at the State and local level. Future revisions of the plan should change all references from the USDA State and County Emergency Boards to the USDA State and local FACs.

A.1.b. A The operational roles of the Counties, municipalities and school districts are handled in two ways. There is a listing of responsibilities in general terms and by functional areas, i.e. public information, transportation, medical support, evacuation, etc. The various jurisdictions also have delineated their concept of operations. In the case of the Counties these have been presented in a general operational format and also by functional area. School districts have shown their concept of operations based on the alternatives of school in session/school not in session. In all cases, the concept of operations are broken down by classification levels, thus providing for a coordinated response effort.

A.1.c. A Each County delineates the basic concept of operations and interrelationship of organizations on a County "EOC Staff Organization" chart, a "Primary and Support Responsibilities" chart and an "Interrelationships of Organizations" block diagram.

The block diagrams should be reexamined for accuracy. For example, in the Montgomery County RERP there appears to be a mixup in that the Industrial Liaison Officer has the primary role for school services and is not given any role in industrial liaison.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

A.1.d.

A

Each organization has identified a specific individual, by title, who would be in charge of their emergency response. At the County level, the responsibility for decisionmaking lies with the Commissioners, while a Director has been appointed for the implementation of the RERP. Municipal governmental bodies have the responsibility for the safety and protection of the public within their jurisdiction, as well as providing direction and control of the emergency organization. An Emergency Management Coordinator (EMC) is designated to coordinate response actions at the local EOC. School Superintendents are responsible for assuring the safety of all students and staff, along with notification and coordination of transportation resources for non-profit, private schools within the territory of their respective school district. Building principals are responsible for the coordination of protective actions within their schools and for the safety of students and staff.

A.1.e.

I

Each County calls for 24-hour response through paid staff supplemented by volunteers. There is no precise reference to a 24-hour per day manning of communication links, although it is assumed that this would be accomplished through the police/fire/emergency medical communications network. A more specific reference in the plans is needed to deal with this point.

Twenty-four hour emergency response at the municipal level is not assured due to the fact that many staff positions are vacant at the present time.

A.2.a.

A

A "Primary and Support Responsibilities" chart is available in all three County plans containing such functional areas as: Direction and Control, Communications, Alert/Notification, Public Information, Fire and Rescue, Police Services, Medical Support, Military Support, Transportation, Evacuation, Traffic Control, Mass Care, Radiological Exposure Control, School Services, Agriculture, Reentry, Resource Requirements, Training, Exercises and Drills, Agreements, Supporting Plans and Implementing Procedures, Municipal Plans, Maps and Industrial Liaison.

These functions are divided among the various officers/coordinators/officials. These items can be considered to be the more significant planning and/or preparedness issues that the local governments would be expected to address. Annexes to the Basic County plans have been included addressing each one of these categories, in most instances, by emergency classification level.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

Specific functional responsibilities of municipalities and school districts are contained in their respective plans.

A.2.b.

A

The legal basis for the preparation and implementation of the various RERPs (P.L. 1332, Pennsylvania Emergency Management Services Act of 1978) is contained in all plans, with a few possible exceptions.

A.3.

I

Federal response efforts will be coordinated through the Commonwealth of Pennsylvania. The State's role is delineated, in detail, in Annex E to the Commonwealth's Disaster Operations Plan, and is summarized in the risk Counties' RERP.

Agreements and Statements of Understanding with local and support organizations are in various stages of development, with some complete and some still in the process of being formulated. When finalized, they will cover such critical areas as the American Red Cross, EBS stations, amateur radio organizations, transportation, roadway clearance and fuel resources, relocation points for emergency services located within the plume exposure EPZ, mass care and reception centers, emergency worker decontamination stations, host schools, etc.

A.4.

I

The three risk Counties, when augmented by emergency personnel, are capable of responding to an emergency at the Limerick Generating Station for an extended period. The respective Directors/Coordinators have been designated as the individuals responsible for ensuring that the County EOCs are, at all times, capable of being operated on a protracted 24-hour basis. It is recommended that a more specific statement be included in Annex A of the County RERPs designating those officials responsible for assuring continuity of resources (technical, administrative, material).

As noted under element A.1.e., twenty-four hour response at the municipal level is not assured due to the fact that many staff positions are vacant at present.

C.

Emergency Response Support and Resources

C.1.c.

A

The Pennsylvania Emergency Management Agency (PEMA) is responsible for making the necessary arrangements to support the Federal government response personnel. The Counties will cooperate with the Federal Government, PEMA and the Pennsylvania Department of General Services in planning for, and making, necessary support arrangements. It is recommended that a complete statement such as Section II.D., Annex Q of the Chester County RERP should be added to the appropriate section of the Montgomery and Berks Counties' RERPs.



PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

C.2.a.           A       None of the three risk Counties will have a representative at the Limerick EOF as they are not involved in accident assessment. There is a question as to why this subject was dealt with under the "Communications" Annex.

C.4.            I       As noted under element A.3., support facilities, organizations or individuals have been thoroughly documented in the various RERPs. However, at the present time the process of obtaining the necessary letters of agreement is still underway.

It should be noted that the definition of "IRAP" in the Radiological Exposure Control Annexes of the County plans should be replaced by "FRMAP" - Federal Radiological Monitoring and Assessment Plan.

D.                           Emergency Classification System

D.3.            A       All local organizations are utilizing the standard emergency classification and emergency action level scheme which is in complete conformance with that established by the utility.

D.4.            A       Detailed response plans have been developed by all political jurisdictions (Counties, municipalities, school districts) based upon the emergency action levels and protective action alternatives. The overall responsibility for decision making within the Counties and municipalities lies with their respective governmental bodies, while the Superintendent of Schools will be responsible for their particular school district.

The authority to compel an evacuation rests only with the Governor and is based on recommendations received from PEMA and the Bureau of Radiation Protection (BRP). It is noted that the County Commissioners can recommend an evacuation, but they cannot compel it. However, there is a difference as to the possible source of the recommendation. Montgomery County cites the Limerick Generating Station or the Philadelphia Electric Company, Chester County cites PEMA and Berks County cites PEMA and BRP. The three risk Counties should agree on the same organizational source(s) for protective action recommendations.

E.                           Notification Methods and Procedures

E.1.            I       The method of notifying the risk Counties is incomplete, most likely due to the fact that the general public alert and notification system is currently undergoing a complete revision. Specific details are needed as to the method to be utilized and the organization(s) who will be performing the notification of the Counties at each classification level. Montgomery

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

County does have a "Method of Receipt of Action Information" on page 22 of the Basic Plan, but it is not tied into any specific organization nor emergency action level.

There is the provision for the logging of information on an official "Incident Notification Form." This form appears to be very comprehensive in nature and includes a space to record the telephone number of the caller which can be used for verification. However, there are no provisions for verification of messages by the support Counties or the risk municipalities.

In the event of an incident at Limerick, the County Communications Departments will notify the risk municipalities, starting at the Alert stage, with the telephone being the primary means of notification. Consideration should be given to developing an abbreviated "Incident Notification Form" for use by the municipalities.

E.2.           A       All County, municipal and school district plans have detailed procedures regarding the alerting, notifying and mobilizing of emergency response personnel. This includes County, municipal and school district personnel as well as other organizations involved in emergency response, such as the American Red Cross, health care and other special facilities, recreation areas, major industries/utilities, transportation systems, etc. For consistency, the Chester County plan should call for the notification of health care facilities in Annex C, as it does under the Chester County Operations section and under Annex G. Notification will occur, for the most part, at the Alert stage with partial mobilization occurring at that point. Call down lists are included in the applicable plans.

E.5.           I       The three Counties have determined the point (Montgomery and Berks - Alert, Chester - Site Emergency) at which they may commence issuing public information statements via the press or media, explaining actions being taken to protect residents and transients within the plume EPZ. There is concern with the statement in the Montgomery County RERP (Annex D, Section III.E.) that reads: "Coordination with PEMA is at the discretion of the Commissioners, the OEP Director/Coordinator or his designated alternate." Coordination of all public information releases is essential in order to prevent possibly contradictory information that would confuse the general public.

At the point it becomes necessary to alert the public (due to potential dangers and/or the need to take protective actions), PEMA will coordinate among the three risk Counties the specific

LANNING STANDARD/  
ELEMENT

RATING

COMMENTS

time to activate the public alert/notification system and the Counties will determine the appropriate EBS announcements to make. These (EBS) announcements will not be made before the public alert system is activated.

The various EBS stations are contacted beginning at the Alert stage, requested to review all the prepared announcements and place the alerting and warning system on standby status. There is some difference (and thus ambiguity) between the wording utilized in the Montgomery County plan on the one hand and the Berks and Chester County plans, on the other. The former states that, at the appropriate time, the County Director/Coordinator will notify the EBS station and verify that appropriate announcements have been made, while the other two Counties are committed only to verification that the correct announcements have been transmitted. If the EMCs in Chester and Berks are responsible for activating their EBS station this should be specified in the plan.

Finally, and most critically, according to the Pennsylvania EBS Operational Plan, dated December 1982, the EBS stations referenced in the Montgomery and Chester County plans are not the primary stations. Both Counties lie within the Philadelphia extended area and thus their designated stations should be WIP or WMMR-FM. There is concern that backup power would not be available in the case of power failure and, in Chester County's case, the fact that the EBS station is not operational 24 hours a day. If an incident occurs at night and/or during inclement weather significant time could lapse before critical information could be broadcast to the public in Chester County.

E.6.

I

Because of a decision by the utility to switch from a Tellabs "294" community alerting system to a standard siren system (after the plans were submitted for informal review), the plans do not reflect the current situation.

In addition, route alerting teams will be used as a supplement to the public alert system and will travel pre-designated routes utilizing public address systems to instruct residents in areas where there is a known system failure to tune to their EBS stations. The teams will also directly contact any individuals along their designated route who have been identified as hearing-impaired and transient locations to ensure notification has been received.

The establishment of the various route alert sectors and the designation of specific fire departments to those sectors is incomplete at present. There appears to be a difference between the County and municipal plans. The County K&RPs refer

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

to "pre-designated route alert teams" while the municipal plans state that "specific assignments will be made at the time of mobilization..."

Where applicable, transient locations need to be added to municipal plans, as route alerting may be the primary means of notification for these areas.

- E.7.                   A       Draft messages have been included in the County RERPs to be utilized during an emergency, whenever necessary. Subject areas include: "Sheltering Alerting and Warning EBS Announcement," "Selective Evacuation Alerting and Warning EBS Announcement," "General Evacuation Alerting and Warning EBS Announcement," "School Evacuation Alerting and Warning EBS Announcement," along with a "Reentry and Recovery Alerting and Warning EBS Announcement" and an "Alert and Warning EBS Announcement." These messages appear to be comprehensive in nature and would, for the most part, be easily understood in an emergency situation. It is noted under the "General Evacuation..." announcement that reference is made to the Emergency Information Brochure. It is important that the evacuation map(s) included in that brochure be easily understood as some of the directions in the "General Evacuation..." announcement are somewhat vague (southwestern part of Pottstown, eastern Schuylkill Township, etc.). If detailed maps are not included in the brochure it could lead to confusion, resulting in overcrowding on some evacuation routes and underutilization of others. Certain information remains to be added to the "School Evacuation..." announcement in the Montgomery County RERP.

F.                                   Emergency Communications

- F.1.a.                   I       As noted under element E.1., details are needed as to the method to be utilized (including means of communication) and the organization(s) who will be notifying the three risk Counties. Also, a more precise statement regarding 24-hour per day manning of communications links is needed, as noted under element A.1.e.

Once staffing of the municipal emergency operations centers has been finalized, consideration should be given to adding another contact person to the lists contained in the County plans, thus providing an alternative source to whom to relay the notification information. There is a concern that the notification process to the municipalities could be slowed significantly if the local EMC is not accessible and no other contact is readily available.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

F.1.b.

I

Appendix B-1 of the Montgomery County RERP delineates, in a very thorough manner, the capabilities of their communication system, including the equipment that would be utilized to interface with other Counties (risk and support). Although the Chester and Berks County plans have somewhat similar charts that detail communications equipment, capabilities need to be dealt with as well. Neither of the latter two plans addresses inter-County communications.

The role of Montgomery County as the alternate facility notification source in the event of a breakdown in communications between PEMA and Limerick is somewhat vague. The County will serve as the source of information to Chester and Berks Counties. It is implied that they will keep PEMA informed, as well, but there is no explicit statement to that effect. In addition, there is no mention of the line of communications to BRP. This would be critical in the event of the need for a protective action recommendation. It is unclear whether BRP would continue to communicate through PEMA or would communicate directly with Montgomery County. Please clarify.

F.1.c.

I

The Montgomery County plan states that all communications with the Federal Government will be through PEMA. The Chester and Berks County plans do not specifically address this issue.

F.1.d.

I

The entire notification and communications system is in a state of flux, including the means of communication between the Limerick Generating Station and/or the EOF and the risk County EOCs. Thus, no details concerning the system are included in the plans at the present time.

F.1.e.

A

All three Counties' RERPs discuss their alert/notification actions under Annex C. The Montgomery County procedures are clearly the preferred means of dealing with this function in that at all emergency classification levels there is a precise reference to all individuals or organizations and whether they are to be placed on standby, or mobilized. The Berks and Chester County plans should be expanded to reflect the information contained in the Montgomery County plan. As an example, at the "Alert" stage the Mass Care Coordinator and the Southeastern Pennsylvania Chapter of the American Red Cross would be notified by the Montgomery County EOC. Yet there do not appear to be any similar arrangements in the other risk Counties to notify their Mass Care Coordinator/Red Cross.

All municipal plans have provisions for the notification and activation of emergency response personnel.

PLANNING STANDARD/ ELEMENT	RATING	COMMENTS
F.2.	A	<p>The three risk Counties maintain an emergency medical communications network that provides for direct communications with their respective ambulance associations. There are no hospitals or nursing homes within the Berks County portion of the EPZ. In the two other counties it is assumed that contact from the EOCs will be by telephone. Please clarify.</p> <p>Both Chester and Montgomery Counties include an appendix to Annex G (Medical Support) detailing the risk and host hospitals and nursing homes. The Montgomery County list includes addresses and telephone numbers; it is recommended that this information be added to the Chester County list, as well.</p>
F.3.	A	<p>All Counties call for a periodic testing of the communications system, including municipalities and other response organizations. It would be beneficial to add "testing" information, as found on page B-3 of the Chester County RERP, to the Montgomery and Berks County Plans.</p>
G.		<p><u>Public Education and Information</u></p>
G.1.a., G.1.b., G.1.c. & G.1.d.	I	<p>All risk Counties' plans discuss the fact that public information materials will be reviewed and distributed on an annual basis. The information will instruct the public at risk how they will be notified, what their actions will be and who to contact for further information in the event of an incident at Limerick. Protective measures and the needs of the handicapped should also be included. Also, see element E.7.</p> <p>Until such time as these materials have been prepared and reviewed by the Regional Office, this element will remain open. This review will occur prior to, or at the time of, formal review. A final decision on the program's adequacy will be made at that time.</p>
G.2.	I	<p>As noted under element G.1., the public information program is still at an early stage of development and thus a final decision on its adequacy will have to wait until such time as it has been reviewed in detail.</p>
G.3.a.	A	<p>The three risk Counties have established the points of contact and the physical locations for use by the news media during an emergency. The media centers will be opened whenever the EOC is activated (or in Montgomery County's case, at Site Emergency). The locations are: Berks County - auditorium of the County Agriculture Center; Chester County - Room 322 of the Hazlett Building; Montgomery County - fifth floor conference room, Courthouse. These centers will be staffed by their respective Public Information Officers (PIO).</p>

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

- G.4.a.           A       The Chairman of the Board of County Commissioners, or his designee, will serve as their County's spokesperson in the event of an incident associated with the Limerick Generating Station. The County spokesperson will coordinate with the PIO prior to the release of public information during an incident.
- There appears to be some confusion as to whether the spokesperson will be briefed by the PIO (as in the case of Berks and Chester Counties), or will brief the PIO (Montgomery County).
- G.4.b.           I       There is no specific reference in the "Public Instruction" annexes for the exchange of information between designated spokespersons, thus creating the possibility of confusing and/or contradictory information being given to the public.
- G.4.c.           A       Each County will establish a Rumor Control Center whenever the EOC is activated (or with Montgomery County, possibly at Site Emergency) and will be staffed, and operated, by the respective PIOs in Berks and Chester Counties and by the Operations Officer in Montgomery County. The rumor control numbers have been established and will be published as the primary numbers for responding to questions from the general public. The need for additional telephone lines and/or staff to man the centers will be coordinated by the Coordinator/Director.
- G.5.             I       The three Counties will participate in an annual news media orientation, sponsored by PEMA. The orientation will acquaint news media representatives with radiological emergency response plans and points of contact for release of public information during an emergency. Information concerning radiation should also be discussed.
- Once the program has been established it will be reviewed in more detail, and a final decision made on its adequacy.
- H.               Emergency Facilities and Equipment
- H.3.            A       The various governmental jurisdictions, both County and municipal, have established emergency operations centers for use in directing and controlling response functions. Some municipalities, which are located entirely within the plume EPZ, are still in the process of determining alternate locations for their EOC in the event of a general evacuation.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

- H.4. I As noted under element E.2., each organization has provided for the timely activation of the facilities and centers described in the various plans. However, there is still a concern regarding the staffing of the municipal EOCs, in particular, as many staff positions remain vacant at the present time.
- H.7. A The risk Counties rely totally on the Bureau of Radiation Protection for such technical tasks as incident assessment and air monitoring for detection and definition of the radioactive plume.
- Monitoring (or survey) equipment is required for decontamination monitoring of emergency workers and the general public. The CDV-700, a geiger counter, will be utilized for this purpose. Chester County has determined the need for 180 survey meters, Berks - 90, while Montgomery has not made a determination as to the necessary numbers. The two support Counties (Bucks and Lehigh) need approximately 161 and 105, respectively.
- According to a telephone conversation with PEMA on March 30, 1984, adequate numbers of equipment are available to handle the monitoring requirements of emergency workers and the general public. Once Montgomery County has included the number of CDV-700s it expects to need in their plan, this element will be completely satisfied.
- H.10. I Although the County RERPs call for an inventory-inspection-operational check of the special issue and set-aside equipment and KI, it is only scheduled to take place annually rather than quarterly, or after each use. There is no assurance that sufficient reserves are available to replace that equipment which has been removed for calibration or repair. Also, there is no statement that calibration of equipment will be at intervals recommended by the supplier of the equipment.
- H.11. I As noted under element H.7., a listing of radiological monitoring equipment has been compiled for all Counties except Montgomery. Protective equipment would consist of double clothing (rain gear) and respiratory protection (self-contained breathing apparatus or improvised measures, if necessary); there is no need for a listing of this information.
- Although communications equipment is not identified in specific detail (in terms of numbers), the "Communication Systems Capabilities" appendices address the subject. See element F.1.b. concerning the need to expand the Berks and Chester County charts. Information regarding emergency supplies is scattered throughout the different plans, in various stages of completion.



PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

The Consolidated Resource Lists needs to be completed for each risk municipality and then included in the applicable County RERP, as well.

H.12. A The Counties and municipalities will rely upon BRP, through PEMA, for incident assessment, field monitoring, and representation at the Limerick EOF, for the receipt, analysis and coordination of field monitoring data.

I. Accident Assessment

I.7. A See the comment to element H.12.

I.8. A See the comment to element H.12.

J. Protective Response

J.2. A Although the Montgomery County RERP states that a review of the Limerick Generating Station's plans for evacuation and reception of on-site personnel will take place in order to ensure consistency, certain "highlights" of the Limerick plan should be included in the Montgomery County RERP. This would include, at a minimum, such information as evacuation routes and relocation areas, to be used by plant personnel.

J.9. I Protective measures have been identified for both the general public and emergency workers. Protective actions for the general public include sheltering, selective evacuation and general evacuation. Items that would be implemented in support of these actions would include traffic and access control, mass care, agriculture, transportation, medical support, etc. Protective measures for emergency workers will take the form of radiological exposure control. They will be provided with the necessary dosimeters, radioprotective drugs (KI), and, when needed, double clothing and respiratory protection, along with up-to-date and critical information such as radiation levels, plume direction and speed, increased risks due to radiation exposure, etc. Decontamination is available for both the general public and emergency workers. Institutional personnel will be discussed in detail under element J.10.d.

Although the framework has been established as to how the various County, municipal and private organizations will respond to an emergency at Limerick, and the criteria for initiating protective actions (including PAGS) has been delineated, it is still not apparent that there is an ability, at this point in the planning and preparedness process, to implement protective measures. This is based on information

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

and/or resources that are lacking at this point in time. These include vacant positions at the municipal level, unmet needs and resources, outstanding letters of agreement, and incomplete information on transit-dependent individuals, etc.

J.10.a.

I

An evacuation plan map is currently included in all County and municipal RERPs, containing a detailed representation of evacuation routes. Please clarify as to why a map identical, or similar to, this map was not included in school district plans. Maps showing reception centers, mass care centers and host schools have yet to be developed. Radiological sampling and monitoring points need not be mapped as this is not a responsibility of the local governments.

Evacuation support maps need to be completed for each risk municipality.

J.10.b.

A

Each County plan, in an appendix, provides information regarding population data by sector and by miles (2-5-10). This is considered to be adequate since there are no evacuation areas, per se; the entire plume EPZ will be evacuated, if necessary. However, Montgomery County does have a population sector map on page W-5-1. The other Counties should consider adding a similar map to their plans.

J.10.c.

I

See comments to elements E.5. and E.6.

J.10.d.

I

Information concerning this element is not complete at the present time as plans have not been received, by FEMA, for the State Correctional Institution, Graterford. In addition, the municipalities have not completed developing listings of homebound individuals, requiring ambulance transportation or other special assistance in the event of an incident at the Limerick Generating Station.

There are two hospitals and four nursing homes in Montgomery County and one hospital and three nursing homes in Chester County; there are currently no hospitals or nursing homes in the Berks County sector of the plume EPZ. Evacuation priorities have been established for ambulances located within, or serving, the plume EPZ, and those located outside, and not serving, the EPZ.

The evacuation time for the risk hospitals and designated nursing homes in Montgomery County and Phoenixville Hospital, in Chester County, are expected to be greater than that of the general population. Consequently, the staff and medical complement of these health care facilities are considered emergency workers, and are therefore provided KI and dosimeters.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

Because the situation is considered serious enough that the general public should evacuate rather than shelter, sheltering provisions at the above-referenced institutions should be discussed in further detail.

Information concerning where individuals requiring evacuation by ambulance or other special vehicles are to be relocated to needs to be included, where applicable, in municipal plans.

A discussion of the estimated time it would take to evacuate the Pennhurst Center, including mobilization, should be included in the Pennhurst RERP. This could have a significant impact on the type of protective action that should be taken and is of special concern since the facility is only about 2.5 miles from the Limerick Generating Station.

Although Appendix A to the Pennhurst Center's plan states that transportation vehicles will be obtained from Department of Public Welfare institutions there is no specific reference as to the source of such needed resources as five wheelchair buses, one regular 48 passenger bus, and one ambulance. This could impact on the mobilization time discussed above.

J.10.e.

I

Potassium iodide (KI) tablets and dosimeters are distributed to the Counties along with liquid KI to all designated hospitals and nursing homes. Chester and Berks Counties will distribute the KI to risk municipalities at Alert. It is unclear whether Montgomery County will predistribute KI to their municipalities or whether they will issue it at the Alert stage, as well. Please clarify.

Chester County has determined the number of dosimetry/KI kits necessary for emergency workers, while the Montgomery and Berks County lists are incomplete at present. In Berks County, the method of distribution is unclear - will the County deliver the material to the risk municipalities or will they travel to the County distribution point for pickup?

An adequate supply of dosimetry and KI is not currently available. The Regional Office should be informed when a supply has been obtained and distributed.

J.10.f.

A

Potassium iodide will not be administered to the general public and should be taken by emergency workers only on the order of the Secretary of the Pennsylvania Department of Health.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

According to Appendix 16 (Radiological Exposure Control) to Annex E, Commonwealth of Pennsylvania Disaster Operations Plan, the decision criteria that BRP and the PA Secretary of Health will utilize in determining whether or not to use KI include radioiodine dose projections, exposure savings, drug risk factors and incident assessment information. The Protective Action Guides for Emergency Workers, including thyroid gland exposure, are also contained in the County plans.

J.10.g.

I

The principal means of relocation in the event of an evacuation associated with an incident at Limerick is the private automobile, augmented by other transportation. Information is incomplete regarding the number of buses and ambulances available for evacuation. This is essential information as it is estimated that 317 buses and 30 ambulances would be needed to transport individuals from the plume EPZ. The necessary number of ambulances to evacuate health care facilities, and the resources to meet these requirements have not been completely designated in the County plans. Berks County has the most complete list, matching up buses and ambulances to the unmet needs of municipalities and school districts. Sufficient transportation is expected to be provided to move all students inside the EPZ in one lift. However, there is no assurance, at present, that sufficient buses (along with the necessary bus drivers) exist to meet this objective as the County plans reflect the fact that certain school districts will need additional buses, while the Berks County Transportation Resources and Requirements Summary list is blank.

Agreements or statements of understanding remain to be executed with transportation providers for evacuation support.

J.10.h.

A

The assumption has been made that 50% of the people evacuating the plume exposure EPZ would need mass care services. This breaks down to a requirement of 55,145 spaces for Montgomery County residents, 28,245 spaces for Chester County residents and 8,545 spaces for Berks County residents. The Berks County figures on page L-1 are confusing in that they do not seem to relate to the figures listed in the other two risk Counties, nor is it consistent with its own figures on page 8. In any event, adequate mass care facilities are available in the three risk Counties along with the two support Counties of Bucks and Lehigh. All mass care centers are located outside a 20-mile radius of the Limerick Generating Station.

J.10.i.

I

Traffic capacities of evacuation routes under emergency conditions will be part of a study performed under the auspices of the Philadelphia Electric Company. When finalized, it is expected that the risk Counties will review and evaluate the findings and include them in their respective RERPs.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

J.10.j.

I

The Pennsylvania State Police, supported by the National Guard and municipal police, will control access into the plume exposure pathway EPZ during sheltering or evacuation. Access control points have been determined, including such information as the post number, location, municipality, instructions, number of personnel and responsible organization. The Montgomery County listing is incomplete at present since it has not been determined who will man most of the posts.

Consideration should be given to including access control points on the "Evacuation Plan Map" in Annex W of the County plans and Appendix J of the municipal RERPs, as it would provide a better overall assessment of the effectiveness of the proposed access control plan.

J.10.k.

I

Removal of traffic obstructions/roadway clearance/fuel resources is the responsibility of the Public Works Officer/Group of the three risk Counties. Municipal emergency management agencies are tasked with providing these services within their jurisdictions.

Documentation of resources to support municipal and County needs for dealing with potential impediments to evacuation is, in many cases, incomplete at present. Once all the necessary assistance has been identified, agreements, letters of intent, or statements of understanding will have to be concluded, as called for in the various County and municipal RERPs.

The listing of traffic control points appears to be complete, but the specific agency responsible for manning them has not been determined in many cases.

J.10.l.

I

A time estimates study for evacuation of the plume exposure pathway EPZ will be performed under the auspices of the Philadelphia Electric Company. When finalized, it is expected that the risk Counties will review and evaluate the findings and include them in their respective RERPs. A copy of the study should also be forwarded to FEMA Region III.

Estimated fleet mobilization times for the risk school districts also need to be included in Annex N to various County RERPs.

J.12.

I

Upon arrival at a mass care center, evacuees will be monitored for radiation exposure upon their request or when BRP has directed that the situation warrants it. All persons will be registered and family units kept together if at all possible. Upon completion of the registration form, a copy will be forwarded to the Mass Care Coordinator at the County EOCs. A

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

Mass Care Center Registration Form has been included in the Montgomery and Berks County plans but has not yet been placed in the Chester County RERP. It is interesting to note that the Montgomery County plan contains a listing of animal shelters, animal hospitals, veterinary clinics and boarding kennels outside the plume EPZ. It is recommended that this information be included in the other risk County plans since pets cannot be sheltered at mass care centers.

Information is still incomplete regarding monitoring/decontamination team assignments in the Chester and Montgomery County RERPs and the numbers of necessary equipment in the Montgomery County plan.

Consideration should be given to completing a "Decontamination Monitoring Report Form" for each individual monitored, not just for those who have readings of 0.05 mR/h, or more, above background. Background reading records are important in that they may serve as a legal record certifying that an individual was free of contamination.

K.

Radiological Exposure Control

K.3.a.

I

Each emergency worker assigned tasks within the plume exposure pathway EPZ will be provided two self-reading dosimeters, one CDV-730 or one DCA-622 (0-20 R) and one CDV-742 (0-200 R), along with one thermoluminescent dosimeter (TLD). An adequate supply of dosimetry is not currently available. FEMA Region III should be informed when a supply has been obtained and distributed. See element J.10.e. concerning delivery of the dosimetry/KI kits and an incomplete listing of equipment.

Certain municipal plans need to include the location of the applicable decontamination station for emergency workers under the "Radiological Exposure Control" section.

K.3.b.

A

Each emergency worker is instructed to read their self-reading dosimeters at least once every thirty minutes. They are also responsible for completing a Dosimetry-KI Report Form and returning it to their particular organization at the termination of their services. Each organization will then inventory the self-reading dosimeters and prepare a summary report of use. All applicable forms and equipment will be delivered to the Counties, who in turn will forward the TLDs and forms to PEMA. They will then be passed on to BRP, who will deliver the TLDs to the service contractor, while BRP will retain the dosimetry records for analysis, reporting and storage.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

- K.4. I Elected officials in authority may authorize, in advance, volunteer emergency workers to exceed the protective action guidelines (25 Rem whole body exposure) to a maximum of 75 Rem for a life-saving mission. This is intended to avoid delays in performing a necessary life-saving mission. However this element calls for a decision chain for authorizing emergency workers to incur exposures in excess of the EPA General Public PAGs, i.e. 1-5 Rem whole body. Emergency workers have been given the authority to automatically exceed the Emergency Worker PAGs by unnamed, untitled "elected officials," except in the case of Montgomery County which has designated the Director as the responsible official. The elected officials should consider the increased risks due to radiation exposure as well as other specific guidelines delineated in the risk Counties' RERPs prior to allowing emergency workers to exceed the General Public PAGs.
- In order to have positive control of worker exposure, the worker and his management chain should have a predetermined low exposure level at which a worker would: a) be relieved, or if the job is important enough, b) be specifically authorized to perform his duty until a new exposure level is reached. Thus, receipt of any exposure above a pre-set level is deliberate and planned.
- K.5.a. A In the event of an incident at the Limerick Generating Station, BRP will issue a statement indicating whether or not decontamination monitoring is required and PEMA will send this message through emergency management channels. Generally, 0.05 mR/hr, or more, above background is the action level set by BRP indicating that decontamination of an individual is necessary.
- K.5.b. A Each Radiological Exposure Control Annex to the County RERPs has an appendix detailing decontamination monitoring procedures. General information includes organization at mass care centers, equipment and personnel requirements, record keeping and progress reports, etc. Procedures for decontamination monitoring teams are explained in a thorough manner, concerning the decontamination of people, wounds, clothing and supplies, instruments and equipment; disposal of contaminated wastes is addressed, as well.
- L. Medical and Public Health Support
- L.1. I A large number of hospitals (Montgomery County - 12, Berks County - 3, Chester County - 5) with radiation exposure/contamination treatment capability are referenced in the risk County RERPs. The University of Pennsylvania Hospital has been designated as the referral center for the entire Delaware Valley, with the other hospitals serving in a backup role.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

For Berks County, the Reading Hospital and Medical Center has been designated as the primary treatment facility, with two other hospitals as secondary treatment facilities. Although no specific statement has been made, it is assumed that persons providing radiation treatment at the hospitals are adequately prepared to handle contaminated individuals. Further information is necessary concerning the abilities of emergency medical service personnel to deal with contaminated individuals, i.e. the training that these personnel are expected to receive.

- L.4.           A       Ambulance services located within or serving the plume exposure pathway EPZ will not routinely be used for evacuation support to health care facilities. They would be available for the continued EMS coverage of their service area, including transporting victims of radiological accidents to medical support facilities. It is recommended that Montgomery and Chester Counties designate those ambulance services located within the plume EPZ as has been done in the Berks County RERP. See final statement under element L.1. regarding concern over abilities of EMS personnel to deal with contaminated individuals.
- M.           Recovery and Reentry Planning and Post Accident Operations
- M.1.           A       Each County has an annex dealing with reentry, delineating specific responsibilities to the County staff, the municipalities, and the school districts, thus providing for an orderly return of evacuees. PEMA will advise the Counties that reentry is permissible, based upon technical information supplied by BRP.
- N.           Exercises and Drills
- N.1.a.       A       Annex S should be updated to reflect the revised FEMA rules regarding exercises. Specifically, any reference to small-scale exercises should be deleted and a full participation exercise including the three risk Counties, municipalities, school districts, etc., along with the utility should be referenced as taking place every two years. It is expected that the State of Pennsylvania will participate fully at Limerick as part of the rotational process among the five facilities located in the Commonwealth and will support the Counties to the necessary degree when not participating fully.
- N.1.b.       A       The Counties will rely on PEMA for the development of exercise scenarios. Once again, any reference to full- or small-scale exercises should be deleted.



PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

The Counties (risk and support) and municipalities, and school districts, when applicable, will take part in full participation exercises, which tests as much as is reasonably achievable. The Counties will participate, as appropriate, with Federal and State representatives in critique and evaluation activities. These critiques will be conducted by Federal and/or State representatives at the conclusion of each exercise.

N.2.,  
N.2.a.

A

Communications drills test both the adequacy of communications links and response agency understanding of emergency action levels and message content. The test involves a combination of radio contact and telephones. A communication drill between the facility, State and the risk Counties will be held monthly. The Counties will verify the testing of communications links with municipalities and other response organizations within County jurisdiction and in testing the public alert system as part of monthly communications drills and routine communications procedures.

N.2.c.

A

Medical emergency drills involve the testing of the emergency medical services' abilities to care for a simulated contaminated offsite individual. Provisions should be made to hold this drill annually outside of the exercise process since it is likely that the Counties will no longer be holding small-scale exercises.

N.2.d.

A

Radiological monitoring drills involve the testing of designated, and trained, monitoring/decontamination team members to effectively monitor and simulate decontamination procedures for a simulated off-site contaminated individual. Provisions should be made to hold this drill annually outside of the exercise process since it is likely that the Counties will no longer be holding small-scale exercises.

N.3.a.

A

The risk Counties will coordinate arrangements for appropriate supervision and evaluation for all drills in which the Counties are a participant and will rely on PEMA for the development of the full-participation exercise scenario.

N.3.b.

A

See comments to element N.3.a.

N.3.c.

A

See comments to element N.3.a.

N.3.d.

A

See comments to element N.3.a.

N.3.e.

A

See comments to element N.3.a.

N.3.f.

A

See comments to element N.3.a.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

- N.4. A A critique will be conducted by Federal and/or State representatives at the conclusion of each exercise to evaluate the ability of organizations at all levels to respond as specified in their respective RERPs. The Counties will participate, as appropriate, with Federal and State representatives in critique and evaluation activities, as necessary and appropriate.
- N.5. A Based on the results of the critique and subsequent evaluation, the Counties will update their RERPs for the Limerick Generating Station and institute corrective actions, where needed. They will also be responsible for coordinating assistance for risk municipalities within their jurisdiction with updating their RERPs for Limerick, and instituting corrective actions, where needed.
- O. Radiological Emergency Response Training
- O.1. I Chester County will "encourage," Montgomery County will "coordinate and encourage," and Berks County will "ensure" the training of appropriate individuals. It is realized that the risk Counties cannot coerce individuals to participate in training, but, at a minimum, they should actively promote and coordinate the program.
- O.1.b. I All three risk Counties will see that radiological emergency response training is included as part of County-sponsored fire, police and ambulance/rescue training, as well as for municipal emergency management officials. Montgomery County also states that training will be offered to health care, school and special facilities staff while Berks and Chester Counties will offer training to those departments and organizations which have mutual aid agreements with risk municipalities, departments and organizations. The three risk County plans should be revised to reflect that training will be available for all the above-referenced organizations. One County should not be offering training to more groups than the other Counties as all the organizations named are critical to an emergency response.
- The Montgomery County RERP states that their training will include information on radiation, nuclear generation, RERP procedures, and dosimeters and radioprotective drugs. The other Counties' plans do not address the content of their training programs.
- O.4. A A listing of training courses that the risk Counties and municipalities will participate in (sponsored by the Federal and State governments and the Philadelphia Electric Company) is listed in Annex R of the respective County RERPs. The

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

number of spaces needed in the various courses for both initial and replacement training is not complete, in all cases.

O.4.c.	I	Although this element is listed as N/A in the cross-reference, Annex R, Section III.A. of the Montgomery County RERP acknowledges that additional training in monitoring/decontamination procedures will be coordinated for appropriate emergency workers. Since this is an important part of the total emergency response effort, all three risk Counties should make plans to provide training to monitoring/decontamination personnel.
O.4.d.	A	See comments to element O.4.a.
O.4.f.	I	See comments to element O.1.b.
O.4.g.	A	See comments to element O.4.a.
O.4.h.	A	See comments to element O.4.a.
O.4.j.	A	See comments to element O.4.a.
O.5.	I	All risk Counties recognize that training for radiological emergency response is an ongoing activity. Refresher training is anticipated for County and municipal personnel who have received initial training. Montgomery County calls for <u>initial and refresher</u> training annually, Chester County calls for refresher training on an annual basis while Berks County talks about refresher training on a periodic basis. Consistency on this issue is needed between the three County RERPs.
P.		<u>Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans</u>
P.1.	A	Since it is assumed that individuals responsible for the planning effort would be considered "appropriate County and municipal personnel" expected to participate in training activities, this element has been adequately addressed. Also see comments to element O.1.
P.2.	A	The respective County Commissioners have appointed a Director and/or Coordinator who is responsible for the development and implementation of their RERP and for ensuring that it is consistent with the Commonwealth's RERP and is also consistent with and supported by municipal RERPs for each municipality located within the plume EPZ. The Director and/or Coordinator reviews and updates the plan on an annual basis.

PLANNING STANDARD/  
ELEMENT

RATING

COMMENTS

P.3.	A	See comments to element P.2.
P.4.	A	Although Chester County states that their Director reviews and updates their plan on an annual basis and certifies the review to PEMA, the other two risk Counties call for an expanded role of coordination of any changes with PEMA, school districts, special facilities, other Counties, and municipalities within the plume EPZ. The municipal and school district plans establish the municipal EMC and the Superintendent of Schools, respectively, as the individual responsible for the annual review. Based upon exercise critiques, the Counties will assist the risk municipalities within their jurisdiction in instituting corrective actions, where needed.
P.5.	A	As revisions are made, revised and dated pages will be provided to all individuals and agencies listed as holding RERP copies. A "Record of Changes" page will be used to keep summary records of all changes to date. Whenever appropriate, revised pages will be marked where changes have been made.
P.6.	A	Each risk County plan contains two annexes detailing Supporting Plans and Implementing Procedures and Municipal Plans, while the risk municipalities RERPs also have a listing of Supporting Plans.
P.7.	A	The various plans contain detailed annexes, appendices, and attachments containing information on procedures required to implement the plan.
P.8.	A	The various plans contain tables of contents and the risk County RERPs are cross-referenced to the criteria of NUREG-0654/FEMA-REP-1, Rev. 1.
P.10.	I	Provisions have been made in many, but not all, cases to update telephone numbers quarterly. Critical areas where this has been omitted include municipal contacts, transportation resources, special facilities, industrial and utility contacts, etc. It is realized that in most instances, telephone numbers remain stable for long periods of time. There have, however, been incidents during RERP exercises where contact could not be made because of an out-of-date telephone listing, specially in the area of municipal emergency management coordinators.