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Federal Emergency Management Agency

Region III 6th & Walnut Streets Philadelphia, Pennsylvania 19106

APR 17 1984



MEMORANDUM FOR: Samuel W. Speck, Associate Director
State and Local Programs and Support

ATTENTION: Robert S. Wilkerson, Chief
Technological Hazards Division

FROM: Thomas E. Hardy
Acting Regional Director

SUBJECT: Interim Findings on the Offsite Radiological
Emergency Response Plans for the Limerick
Generating Station

Enclosed is a copy of the above-subject report. You will note that the Region has determined that there are four (4) "Category A" Deficiencies and eleven (11) "Category B" Deficiencies. Because of this, we find that, at this point in the planning process, the local offsite emergency response plans developed for incidents at the Limerick Generating Station are inadequate and are not capable of being implemented.

NUCLEAR REGULATORY COMMISSION

Docket No. 50-352-OL Official Ex. No. FEMA E-7
 In the matter of Phila. Elec. Co.

Staff _____ IDENTIFIED
 Applicant _____ RECEIVED
 Intervenor _____ REJECTED _____

Cont'g Off'r _____ DATE 1/24/85
 Contractor _____ DATE _____
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FEDERAL EMERGENCY MANAGEMENT AGENCY

REGION III

INTERIM FINDINGS

ON THE

OFFSITE RADIOLOGICAL EMERGENCY

RESPONSE PLANS

FOR THE

LIMERICK GENERATING STATION

APRIL 1984



I. INTRODUCTION

A. Identification

The Limerick Generating Station is located in southeast Pennsylvania, with the Schuylkill River separating the western portion of the site (East Coventry Township, Chester County) from the eastern portion of the site (Limerick and Lower Pottsgrove Townships, Montgomery County). The major plant structures are located in Limerick Township. The site is 587 acres in area.

Operated by Philadelphia Electric Company (PECo), the plant consists of two 1100 MWe boiling water reactors, both of which are at various stages of completion.

The Borough of Pottstown, Montgomery County, is the nearest population center, lying 1.7 miles from the site. Its 1980 population was 22,729. The City of Philadelphia, population 1,688,210, lies approximately 21 miles to the southeast.

There are three counties within a 10-mile radius of the facility: Montgomery, Chester and Berks. Within those three counties there are forty-two municipalities.

Within the 50-mile Emergency Planning Zone (EPZ) there are two Maryland Counties: Harford and Cecil, one Delaware County: New Castle, nine New Jersey Counties: Salem, Cumberland, Gloucester, Camden, Burlington, Mercer, Somerset, Hunterdon and Warren, and fourteen Pennsylvania Counties: the three plume zone Counties, Philadelphia, Bucks, Lehigh, Northampton, Monroe, Carbon, Schuylkill, Lebanon, Lancaster, York, and Delaware.

In the event of an incident requiring implementation of the Commonwealth of Pennsylvania's Radiological Emergency Response Plan (RERP), the State agency through which the Governor will exercise coordination/control will be the Pennsylvania Emergency Management Agency (PEMA). As in all emergency situations, the Governor retains directional authority. Primary responsibility for policy and direction, within PEMA, rests with the Pennsylvania Emergency Management Council.

The Bureau of Radiation Protection (BRP), within the Department of Environmental Resources, is responsible for conducting technical assessment of the incident, evaluating protective actions that might be taken and making recommendations to PEMA. The Director of PEMA will activate necessary response mechanisms based upon the incident assessment and advice of BRP.

Each risk County, in coordination with PEMA, is responsible for implementing its RERP to provide protection for the health, and ensure the safety, of all persons within the County. The response activities of municipalities will be coordinated by the respective County as detailed in the County RERP.

B. General Background

No formalized title has been given to the Commonwealth of Pennsylvania's submission. The package has been divided into five areas: Annex E, "Fixed Nuclear Facility Incidents," to the Disaster Operations Plan, Commonwealth of Pennsylvania, dated November 1981; draft Radiological Emergency Response Plans for the three risk Counties - Montgomery, Chester and Berks; draft RERPs for the forty-two risk municipalities; draft RERPs for the thirteen risk school districts and draft RERPs for the two support Counties - Lehigh and Bucks. This totals sixty-one offsite Radiological Emergency Response Plans, as noted above, all except Annex E considered drafts with various dates. At the present time, the Regional Office has received copies of the RERP for the Pennhurst Center, but is still awaiting the plan for the State Correctional Institution Graterford, both of which are State institutions lying within the plume exposure EPZ.

On December 6, 1983 PEMA forwarded copies of the plans to FEMA, Region III for Regional Assistance Committee (RAC) review. This process is essentially complete. A copy of the RAC's comments will be forwarded to PEMA shortly. A full participation exercise is scheduled for July 25, 1984.

As noted above, the Limerick facility is in close proximity to the City of Philadelphia. Because of this, a significant amount of interest has been generated in both the local press and media, as well as in the community surrounding the plant. Various intervenor groups have filed contentions concerning offsite emergency planning, involving both the plume exposure and ingestion exposure EPZ. These matters are under consideration by the Limerick Atomic Safety Licensing Board at the present time.

There are some concerns regarding possible logistical considerations in the event of the need to evacuate residents and transients from the plume exposure EPZ. According to 1980 Census figures, there are 183,868 people who reside within approximately 10 miles of Limerick. Since the local highway network is primarily made up of municipal, State and Federal two and four-lane highways and there are few large capacity expressways in existence, (in conjunction with the fact that it is the Commonwealth's policy to initiate protective actions within the entire plume exposure EPZ), significant problems could develop in the event of an evacuation, especially in inclement weather. This

situation may be resolved upon a review of the Evacuation Time Estimates Study, which has not been completed as of now. In addition, as noted above, there are two major state facilities located within the plume EPZ - a large mental retardation center and a State prison. It would require considerable time and resources to evacuate these institutions.

The only information on the offsite RERPs for Limerick are the FEMA/RAC comments on file in the Regional Office.

II. EVALUATION (FINDINGS)

This portion of the report will concentrate on County, municipal and school district planning, as State planning has been dealt with in detail in the May 14, 1981 interim finding and the May 24, 1982 formal evaluation of the Commonwealth of Pennsylvania's and Risk Counties' Plans and Preparedness, site-specific to the Three Mile Island Nuclear Station. As State planning is generic to all nuclear power plant sites in Pennsylvania, there is no need to repeat previously documented material, except in the case where it has particular relevance to Limerick. Any deficiencies noted in the "350" review for TMI are peculiar to those plans and would have no impact on the Limerick package.

A. Plans

The State, County and Municipal RERPs have been developed under the authority of, and in accordance with, the provisions of the Pennsylvania Emergency Management Services Act of 1978, P.L. 1332, while school district plans are prepared under authority of their respective Boards of Education and are consistent with P.L. 1332.

Annex E consists of a "Basic Plan" and 24 appendices. The appendices deal with such topics as Site Characteristics, Maps, Emergency Action Level Guidelines, as well as specific subject areas, including Notification Procedures, Protective Response, Radiological Exposure Control, etc., and how they will be addressed. The risk County plans are organized in a similar manner.

As an annex to the Pennsylvania Disaster Operations Plan, there is a recognition of the interrelationship between radiological emergency response planning and other man-made and natural disaster planning. The State's overall emergency planning effort is based on the premise that similarities among the various disasters/emergencies require maximum standardization of procedures and practices, to the extent possible. Supporting plans to Annex E include the host and risk county plans as well as the implementing procedures of the various state agencies.

The three risk County plans have been developed, specifically with a concern toward responding to incidents at the Limerick Generating Station, which might impact the health and safety of persons within their respective jurisdictions. Supporting plans and implementing procedures include those for municipalities, school districts, non-profit private schools, colleges, support counties, hospitals and nursing homes, special facilities, prisons and State Police troops, National Guard units, the American Red Cross, etc.

NUREG-0654 Standards

A. Assignment of Responsibility (Organization Control)

The various risk County Radiological Emergency Response Plans identify the major State, local, Federal and private sector organizations intended to be part of the overall response network. Entities listed include the Commonwealth of Pennsylvania (specific State agencies, such as State Police, National Guard, etc.), the Federal Government, municipalities, and the American Red Cross.

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.

Each organization has identified a specific individual, by title, who would be in charge of their emergency response. At both the County and municipal levels the governing bodies have the overall responsibility for the health and safety of their residents. Emergency Management Coordinators (EMC) have been designated to coordinate response actions. School Superintendents are responsible for assuring the safety of all students and staff in their district, while building principals are responsible for the coordination of protective actions and for the safety of students and staff within their schools.

Each County calls for 24-hour response through paid staff supplemented by volunteers. Twenty-four hour emergency response at the municipal level is not assured due to the fact that many staff positions are vacant, according to the latest municipal draft plans.

Since the municipalities have a significant role to plan in the emergency response effort, and a large majority of them have not established a 24-hour response capability, this planning standard is incomplete at present.

C. Emergency Response Support and Resources

The risk Counties will cooperate with the Federal Government, PEMA and the Pennsylvania Department of General Services in planning for, and making, necessary support arrangements. PEMA is the lead agency responsible for finalizing the arrangements to support Federal Government response personnel.

None of the three risk Counties will have a representative at the Limerick Emergency Operations Facility as they have no involvement with accident assessment. As noted in the introduction, this function is the concern of the Bureau of Radiation Protection.

Support facilities, organizations or individuals have been thoroughly documented in the various RERPs. Agreements and Statements of Understanding are in various stages of development with some complete and some still in the process of being formulated. When finalized, these documents will cover such critical areas as the American Red Cross, EBS stations, amateur radio organizations, transportation resources, 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.

This planning standard is incomplete at present.

D. Emergency Classification System

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.

Detailed response plans have been developed by all political jurisdictions 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 lies only with the Governor and is based on recommendations received from PEMA and BRP. The County Commissioners can recommend an evacuation but cannot direct that one take place.

There are some differences as to the possible organizations which would make protective action recommendations to the three Counties. Montgomery County cites the Limerick Generating Station or the Philadelphia Electric Company. Chester County cites PEMA and Berks County cites PEMA and BRP. These discrepancies will need to be addressed before this planning standard can be considered complete.

E. Notification Methods and Procedures

The method of notifying the risk Counties is incomplete due to the fact that the general public alert and notification system is currently undergoing a complete revision. Specific details are needed in the plans as to the method to be utilized and the organization(s) who will be performing the notification to the Counties, at each classification level. Provisions have been made for the logging of information on an official "Incident Notification Form," which appears to be very comprehensive.

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 communication. The Region is recommending that an abbreviated "Incident Notification Form" should be developed for use by the municipalities.

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 - the American Red Cross, health care and other special facilities, recreation areas, major industries/utilities, transportation systems, etc. Notification will occur, for the most part, at the Alert stage, with partial mobilization taking place at that point. Call down lists are included in applicable plans.

The three Counties have determined the point (Montgomery and Berks - Alert, Chester - Site Emergency) at which they may commence issuing public information releases via the press or media; these statements will explain actions being taken to protect residents and transients within the plume EPZ.

At the point it becomes necessary to alert the public (due to potential dangers and/or the need to take protective action) PEMA will coordinate among the three risk Counties the specific 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. Of concern to the Region is that, according to the Pennsylvania EBS Operational Plan, dated December 1983, Montgomery and Chester Counties have designated EBS Stations which are not considered to be the primary points of contact for the Philadelphia Operational Area. In Chester County's case it is acknowledged that the station is not on the air 24-hours a day. In both cases, there is no mention of backup power. Bad weather or a power failure could result in a significant delay in getting critical information/instructions to the public.

As noted above, because of a decision by the utility to switch from a community-wide telephone alerting system to a standard siren system (after the plans were submitted for informal review), the plans do not reflect the current situation.

Draft messages have been included in the County RERPs to be utilized, whenever necessary, during an emergency. The messages appear to be comprehensive in nature and should be easily understood in an emergency situation.

This planning standard is incomplete at present.

F. Emergency Communications

Items discussed under Planning Standard E. that relate to this planning standard include: the need for a complete description of the notification to the local emergency response network, i.e., the method to be utilized (including means of communication) and the organization(s) who will be performing the notification; the need to explain, in detail the communications that will be utilized between the facility/EOF and the County EOCs; and the fact that the Counties and municipalities have delineated their alerting and activation procedures in an adequate manner.

The Montgomery County RERP describes, in a thorough manner, the capabilities of their communication system, including the equipment that would be utilized to interface with other Counties. Although the Chester and Berks County plans have somewhat similar information that details communication equipment, capabilities are not addressed. Neither of the latter two plans address inter-County communications.

The three risk Counties maintain an emergency medical communications network that provides for direct communications with their respective ambulance associations.

This planning standard is incomplete at present.

G. Public Education and Information

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. In addition, 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. Until such time as these programs have been established and reviewed by the Regional Office, this planning standard will remain open.

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. The centers will be staffed by their respective Public Information Officers (PIOs).

The Chairman of the Board of County Commissioners, or his designee, will serve as the County's spokesperson. They will coordinate with their respective PIOs prior to the release of public information. However, there appears to be no statement calling for the exchange of information between designated spokespersons, thus creating the possibility of confusing and/or contradictory information being given to the public.

Each County will establish a Rumor Control Center whenever the EOC is activated, which will be staffed and operated by the PIO in Berks and Chester County 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.

This planning standard is incomplete at present.

H. Emergency Facilities and Equipment

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. Although timely activation of the facilities and centers described in the plans is called for, there is a concern regarding the staffing of the municipal EOCs, in particular, as many staff positions remain vacant at the present time.

Monitoring (or survey) equipment is necessary for decontamination monitoring of emergency workers and the general public. The CDV-700, a geiger counter, will be utilized for this purpose. Chester and Berks Counties have determined the need for 270 survey meters between them, while Montgomery County has not made a determination as of yet. The two support Counties (Bucks and Lehigh) need approximately 265 survey meters. According to a recent telephone conversation with PEMA, adequate numbers of equipment are available to handle the monitoring requirements of emergency workers and the general public.

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. There is no statement that calibration of equipment will be at intervals recommended by the supplies.

Information regarding emergency supplies is scattered throughout the different plans in various stages of completion.

This planning standard is incomplete at present.

I. Accident Assessment

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.

It has been clearly stated in the interim and formal review of the offsite emergency plans site-specific to the Three Mile Island Nuclear Station that this planning standard has been adequately met. This has been confirmed at numerous full participation exercises conducted in conjunction with the various nuclear power plants throughout the Commonwealth of Pennsylvania.

This planning standard has been completely satisfied.

J. Protective Response

Protective measures have been identified for both the general public and emergency workers. For the public they 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, agricultural, transportation and medical support, etc. Protective measures for emergency workers will take the form of radiological exposure control. They will be provided with the necessary dosimetry, potassium iodide 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. Protective actions for institutional personnel and other transit-dependent individuals will be discussed later in this section.

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 protective action guides) 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 and/or resources that are lacking at the present time. These include vacant positions at the municipal level, unmet needs and resources, outstanding letters of agreement, incomplete information on transit-dependent individuals, including residents with special medical requirements, lack of information on parks and recreation areas, etc.

An evacuation map has been included in the County and municipal plans, while maps showing reception centers, mass care centers and host schools are still under development.

The means for dealing with mobility-impaired individuals is incomplete at present. This is due, in part, to the fact that the Regional Office has not received a copy of the plan 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.

There are two hospitals and four nursing homes in the Montgomery County portion of the EPZ and three nursing homes and one hospital in the Chester County portion; there are no health care facilities in the Berks County portion of the plume exposure EPZ.

Potassium iodide (KI) tablets and dosimeters are distributed to the Counties along with liquid KI to all designated hospitals and nursing homes. The latter is due to the fact that the evacuation times of certain health facilities are expected to be greater than that of the general population. The lists of the dosimetry/KI kits in the Montgomery and Berks County plans are incomplete, while the distribution policies and procedures also appear to be somewhat vague. An adequate supply of KI does not yet exist and PEMA is currently negotiating with the utility to obtain the necessary numbers of CDV-730s (or DCA-622s) and thermoluminescent dosimeters.

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

The principal means of relocation in the event of an evacuation 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. It is expected that sufficient transportation will be provided to move all students inside the EPZ to host schools in one lift.

The assumption has been made that 50% of the people evacuating the plume exposure EPZ would need mass care services. This would amount to a total of approximately 92,000 spaces. Adequate mass care facilities are located in the three risk Counties along with the two support Counties - Bucks and Lehigh, all of which are outside a 20-mile radius of the Limerick Generating Station.

Traffic capacities of evacuation routes under emergency conditions and 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.

The Pennsylvania State Police, supported by the National Guard and municipal police, will control access into the plume exposure 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 many of the municipality-determined posts.

Removal of traffic obstructions, roadway clearance, and 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 included, 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.

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 needing mass care 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 EOC. 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.

This planning standard is incomplete at present.

K. Radiological Exposure Control

Each emergency worker assigned tasks within the plume exposure pathway EPZ will be provided two self-reading dosimeters, one DCA-622 or CDV-730 (0-20R) and one CDV-742 (0-200R), along with one thermoluminescent dosimeter (TLD). An adequate supply of dosimetry is not currently available; negotiations are currently underway with PECO to obtain the needed equipment.

Each emergency worker is instructed to read their self-reading dosimeter 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 the BRP, who will deliver the TLDs to the service contractor, while BRP will retain the dosimetry records for analysis, reporting and storage.

Elected officials in authority may authorize, in advance, volunteer emergency workers to exceed the protective action guidelines (25R whole body exposure) to a maximum of 75R for a life-saving mission. This is intended to avoid delays in performing a necessary life-saving mission. However, a decision chain has not been established for authorizing emergency workers to incur exposures in excess of the EPA General Public PAGs, i.e. 1-5R whole body (as called for in this Planning Standard). Emergency workers have been given the authority to automatically exceed the Emergency Worker PAGs.

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.

Each Radiological Exposure Control Annex to the County RERPs has an appendix detailing decontamination procedures. General information includes organization at mass care centers, equipment and personnel requirements, record keeping and progress reports, etc. Procedures for 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.

This planning standard is incomplete at present.

L. Medical and Public Health Support

A large number of hospitals (twenty) with radiation exposure/contamination treatment capability are referenced in the risk County RERPs. The Hospital of the University of Pennsylvania has been designated as the referral center for the entire Delaware Valley with the other hospitals serving in a backup role. 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 it is assumed that persons providing radiation treatment at the hospitals are adequately prepared to handle contaminated victims, further information is needed regarding the capabilities of emergency medical service (EMS) personnel.

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. Ambulance services located outside and not serving the plume EPZ, and support County ambulance services, will evacuate health care facilities located within the EPZ, evacuate homebound invalids and provide any other needed assistance.

This planning standard is essentially complete.

M. Recovery and Reentry Planning and Post Accident Operations

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.

This planning standard has been completely satisfied.

N. Exercises and Drills

The County plans need to be updated to reflect the revised FEMA rules regarding exercises. Specifically any reference to small-scale exercises needs to 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 Commonwealth of Pennsylvania will participate fully at Limerick as part of the rotational process among the five facilities located in the State and will support the Counties to the necessary degree when not participating fully.

PEMA is relied on for the development of exercise scenarios. The Counties and municipalities, and school districts, when applicable, will take part in full participation exercises, which will test as much as is reasonably achievable. The Counties will participate, as appropriate, with Federal and State representatives in critique and evaluation activities and will coordinate the participation of risk municipalities within its jurisdiction in critique and evaluation activities, as necessary and appropriate. Based on the results of the critique and subsequent evaluation, the Counties will update their RERPs for Limerick and institute corrective actions, where needed; the Counties are also responsible for assisting risk municipalities within their jurisdiction in accomplishing the same tasks.

The risk Counties will coordinate arrangements for appropriate supervision and evaluation for all drills in which the Counties are a participant. A communication drill between the facility, State and the risk Counties will be held monthly, involving a combination of radio contact and telephones. The drill will test both the adequacy of communications links and response agency understanding of emergency action levels and message content. Medical emergency drills will involve the testing of the emergency medical services ability to care for a simulated contaminated offsite individual, while radiological monitoring drills will 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. The latter two drills are expected to be conducted annually.

This planning standard is essentially complete.

O. Radiological Emergency Response Training

Chester County will "encourage," Montgomery County will "coordinate and encourage," and Berks County will "ensure" the training of appropriate individuals. Radiological emergency response training will be 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.

Although it is understood that the Counties cannot coerce individuals to participate in training, they should, at a minimum, actively promote and coordinate the training program. In addition, each County should provide training to all the above-referenced organizations, as they are all critical to an effective emergency response.

The Montgomery County plan states that County-sponsored training will include information on radiation, nuclear generation, RERP procedures, and dosimeters and KI. The other Counties' plans do not address the content of their training programs. 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 number of spaces needed in the various courses for both initial and replacement training is not complete in all cases. At the present time, Montgomery County is the only jurisdiction that calls for training in monitoring/decontamination procedures.

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 initial and refresher 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.

This planning standard is essentially complete.

P. Responsibility for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans

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 and certifies the review to PEMA. Montgomery and Berks Counties go even further, calling for an expanded role of coordinating any changes with PEMA, school districts, special facilities, other Counties, and risk municipalities. The municipal and school district plans establish the municipal EMC and the Superintendent of Schools, respectively, as the individual for the annual review. Based upon exercise critiques, the Counties will assist the risk municipalities within their jurisdiction in instituting corrective actions, where needed.

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 occurred.

Provisions have been made in many, but not all, cases to update telephone numbers quarterly. The primary area of concern is municipal contacts. There have been incidents during RERP exercises where contact could not be made because of an out-of-date telephone listing.

This planning standard is essentially complete.

B. Capability

As noted under the INTRODUCTION, a full participation exercise is scheduled for July 25, 1984. Thus, no statement can be made concerning the application of the plans or resources at the present time. FEMA region III will prepare a comprehensive Exercise Report evaluating the results of the exercise.

C. Support Activity

Training programs, drills and exercises were discussed in general terms in the review of Planning Standards N and O. Additional information has been obtained from Energy Consultants, a firm hired by the utility, concerning training sessions for offsite emergency responders. As of the end of February, a total of 46 sessions had been held with a total of 1,367 participants. The classes are divided into the following subject areas: school administrators, school staff, bus drivers, agriculture, emergency workers I, and emergency operations center I. An additional 31 sessions were to be given in March for 973 people. Future plans call for a minimum of 6 sessions in April for 163 participants and 5 sessions in May for 155 individuals. The Regional Office intends to observe various training sessions in order to make an overall determination on the adequacy of the training program. This will be dependent on receiving the necessary funding from FEMA Headquarters.

D. Deficiencies

"Category A" Deficiencies are those that would cause a finding that offsite emergency preparedness was not adequate to provide reasonable assurance that appropriate protective measures can be taken to protect the health and safety of the public living in the vicinity of the site in the event of a radiological emergency. "Category B" deficiencies are those where the plans are considered faulty, corrective actions are considered necessary, but other factors indicate that reasonable assurance could be given that, in the event of a radiological emergency, appropriate measures can be taken to protect the health and safety of the public.

FEMA Region III has determined that the following items are deficiencies from either a planning or resources standpoint:

"Category A"

1. Twenty-four hour emergency response at the municipal level is not assured due to the fact that many staff positions are vacant, according to the latest municipal draft plans. The risk municipalities have an important role to play in the coordinated response effort and thus their ability to operate 24-hours a day over an extended period of time is considered vital.
2. The means for dealing with mobility-impaired/transit-dependent individuals is incomplete. This is due, in part, to the fact that the Regional Office has not received a copy of the plan for the State Correctional Institution, Graterford. However, other items are unresolved as well, including the lists being compiled by the municipalities of those individuals with special medical requirements and those persons requiring transportation assistance. In addition, although the municipalities have estimated that 317 buses and 30 ambulances will be needed to transport individuals from the plume EPZ, there is no indication from the plans of the number of resources available, mobilization time, etc.

3. Potassium iodide, low-range, self-reading dosimeters and thermoluminescent dosimeters are not available in adequate numbers for emergency workers. There is no indication, at present, as to what plans the Pennsylvania Department of Health has for purchasing KI, while it is understood that PEMA is currently negotiating with the utility for the necessary dosimetry. Until such time as this equipment is obtained, emergency workers would not have an adequate means of determining whether they were receiving any health-impairing doses of radiation.
4. Large numbers of traffic control points and/or access control points in the Montgomery County and Berks County RERPs have not had responsible agencies designated to man them. Since an evacuation would, most likely, be an extremely dangerous time period for those leaving the plume exposure EPZ and it is important to prevent those from outside the area from entering the affected area, this is considered to be a critical problem that needs to be addressed. Access control would also be important if sheltering became necessary.

"Category B"

1. All letters of agreements/statements of understanding need to be developed and/or signed. These documents cover such important areas as American Red Cross support, EBS stations, amateur radio organizations, transportation resources, roadway clearance and fuel resources, etc.
2. Since the County Commissioners can recommend that an evacuation should take place, the three risk Counties should agree on the same organizational source(s) for protective action recommendations.
3. The County plans do not reflect the current public alert and notification system as it was decided to utilize a siren system after the plans were submitted to the Region. Thus, the plans also do not reflect the method to be utilized in notifying the Counties of an incident at Limerick. The means to be utilized (type of communication) and the organization who will be performing the notification at each classification level, needs to be specified.
4. Montgomery and Chester Counties should give serious consideration to designating WIP and WMMR-FM (the primary EBS stations in the Philadelphia Operational Area) as the point-of-contact for emergency information. These stations have 24-hour capability, back-up power and can be clearly received in the plume exposure EPZ.
5. Public information brochures need to be developed for residents and transients and forwarded to the Regional Office for review.
6. The designated County spokespersons should commit themselves to the exchange of information in order to prevent the possibility of confusing and/or contradictory information being given to the public.

7. Provisions should be made to perform an inventory-inspection-operational check of the special issue and set-aside equipment quarterly, or after each use; to assure that sufficient reserves are available to replace that equipment which has been removed for calibration or repair; and to calibrate equipment at intervals recommended by the supplier.
8. The study of traffic capacities of evacuation routes under emergency conditions and a time estimates study for evacuation of the plume exposure EPZ needs to be completed, analyzed by the Counties and a summary of the findings included in their respective RERPs.
9. Additional information is needed in certain municipal plans regarding the handling of potential impediments to evacuation, specifically the removal of disabled vehicles from evacuation routes.
10. A decision chain for authorizing emergency workers to exceed the General Public Protective Action Guides should be established, in order to keep potential doses to a minimum.
11. Each County should take an active role in promoting and coordinating a training program, including providing for initial and refresher training on an annual basis. All organizations, including those which have mutual aid agreements with risk municipalities, departments, etc., should be provided necessary training.

A copy of this report will be forwarded to the Pennsylvania Emergency Management Agency for their use in upgrading the offsite emergency response plans.

III. RECOMMENDATION

The Federal Emergency Management Agency, Region III acknowledges that a significant amount of effort went into the development of this complex set of plans. Overall, it is felt that they are well organized and when completed will be comprehensive in nature. However, as noted above, there are presently four "Category A" and eleven "Category B" Deficiencies that are a result of gaps in either planning or resources. For these reasons, we find that, at this point in the planning process, the local offsite emergency response plans developed for incidents at the Limerick Generating Station are inadequate and are not capable of being implemented.