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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL PANEL

In the Matter of  
Philadelphia Electric Company  
(Limerick Generating Station,  
Units 1 and 2)

Docket No. 50-352  
50-353

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BRIEF IN SUPPORT OF APPEAL OF  
THIRD PARTIAL INITIAL DECISION

(LBP-85-14)

ON BEHALF OF  
LIMERICK ECOLOGY ACTION, INC.

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LIMERICK ECOLOGY ACTION FINDINGS OF FACT  
AND CONCLUSIONS OF LAW (3/7/85)

ASLB THIRD PARTIAL INITIAL DECISION (LBP-85-14)

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In the Matter of	)	
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Units 1 and 2)	)	
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BRIEF IN SUPPORT OF APPEAL OF  
THIRD PARTIAL INITIAL DECISION  
(LBP-85-14)

ON BEHALF OF  
LIMERICK ECOLOGY ACTION, INC.

I. INTRODUCTION

This matter is before the Appeal Board on the appeal of Limerick Ecology Action., Inc. (LEA) from the Atomic Safety and Licensing Board (ASLB) Third Partial Initial Decision (LBP-85-14) served May 7, 1985, and various other related interlocutory orders which were heretofore unappealable.

The Commission's emergency planning rule provides for the Federal Emergency Management Agency (FEMA) to review state and local emergency plans to determine whether they are "adequate and whether there is reasonable assurance that they can be implemented". In an NRC licensing proceeding, "a FEMA finding will constitute a rebuttable presumption on a question of adequacy and implementation capability." 10 CFR § 50.47 (a)(2). A FEMA finding only gives rise to a rebuttable presumption. Such presumptions can have the effect of deciding a question only in the absence of persuasive contrary evidence. (See generally, Wright and Graham, Federal Practice and Procedure, § 5126 (1977) and FEMA/NRC Memorandum of Understanding, 45 Fed. Reg. 82713 (Dec. 16, 1980)). 15 NRC 1213 (1982) and 17 NRC 349 (1983)

II. STATEMENT OF ISSUES AND ARGUMENT

THE RECORD FAILS TO SUPPORT A PREDICTION THAT THERE IS REASONABLE ASSURANCE THAT THE BUCKS COUNTY SUPPORT RERP CAN AND WILL BE IMPLEMENTED IN THE EVENT OF A RADIOLOGICAL EMERGENCY AT LIMERICK TO SUPPORT A MONTGOMERY COUNTY EVACUATION, WHICH IS A NECESSARY ASSUMPTION OF THE MONTGOMERY COUNTY RERP

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See statement of Contention LEA-3 on page 296.

Contrary to Board Finding 668, nothing in the record supports the conclusion that the Bucks County response to the Three Mile Island incident is comparable to its potential response to an accident at Limerick.

The record does support the converse conclusion:

1. The Bucks County Commissioners have deep concerns that Bucks residents would evacuate also in case of an emergency at Limerick (Reiser, Tr. 18,275). The nearest point of Bucks County to the Limerick facility is 13 miles (See Annex (Comm. Exhb.E-1) E Map, Appendix 2 ), in contrast with the distance from TMI to Bucks County.
2. Representatives of various emergency and relief organizations and also school officials were contacted by McGill in a period of somewhat over 24 hours for the purpose of accomodating 15,000 evacuees from TMI (McGill, Tr. 20,366). Nothing in the record supports the conclusion that these representatives, their organizations, or McGill were at that point prepared to deal with contaminated persons or their property. Since substantial particulate radioactive contamination did not seem to be a problem at TMI, that eventuality was negligible for McGill and his cooperating agencies. In fact, "the school people...would be in the reception area." (McGill, Tr. 20,366) Clearly, no radiological protection needs were anticipated, or if they were expected, then the proposal to use untrained school personnel was highly irresponsible.

Contrary to Board Finding 669, utilization of the current draft plan by Bucks County would accomplish little in accomodating evacuees from Montgomery County. "The plan simply tells how many people to expect, how they would be entering the county." (McGill, Tr. 20,368 ) In the event of failure of the one-lift principle, evacuees could arrive at the reception centers in a contaminated state. Similarly, after a period of sheltering and a release, it would be possible for some to become contaminated during sheltering en route. That these possibilities exist is acknowledged by the plan, and the plan provides for decontamination procedures. (Appl. Exhb. E-4, App. 5) The plan does not, however, provide for prompt and expeditious treatment of such evacuees, nor does it require them to continue on to a mass care center, sometimes at a considerable distance, regardless of weather and traffic conditions, before they could be treated and appropriate measures taken. (Appl. Exhb. E-4, page 13)

Mere listing of facilities is insufficient to demonstrate the existence of a plan. (Guard v. S. NRC, 753 F.2d 1144. The listing of mass care centers shows a total of 24 for the Neshaminy area on one page of the Bucks County Support Plan and 23 centers for the same area on another. The center omitted from the master list is Morrisville High School. (Appl. Exhb. E-4, pages 4-C-1 and 5-E-1. The listing of "Wilson" High School is incorrect, that not being its name (McGill, Tr. 20,387); it is still<sup>so</sup> listed on the most recent (October 1984) draft. (E-4,4-C-1) Delhaas High School has been closed for a number of years. (McGill, Tr. 20,394)

Delhaas High School appears on the October 1984 draft without revision. Nothing in the record supports the conclusion that the rest of the mass care center listing is accurate with regard either to availability or capacity. No letters of agreement have been executed with the schools which comprise the mass care center listing. (McGill, Tr. 20,394)

The cooperation of the Intermediate Unit (school/administration interface) is cited by McGill. (McGill, Tr. 20,394) Nothing in the record indicates that the Intermediate Unit has any buildings at its disposal for use as mass care centers, nor that it has any legal control over the actions of the autonomous school districts. On the contrary, Centennial School District specifically and officially stated that they would not deal through the Intermediate Unit. (McGill, Tr. 20,395)

The record does not support the conclusion stated in Board Finding 669 that either Bucks County government or Mr. McGill as an employee and agent thereof has any control over the actions and property of the autonomous school districts or to make plans for them to accomodate evacuees if those plans are at variance with the policies of those districts without their knowledge or agreement. In particular, nothing has been shown to indicate that a district would dismiss children contrary to its policy or would admit contaminated persons to its buildings. It has not been demonstrated that the school districts are aware of the specifics of the plan or that those specifics are consonant with the districts' policies.

With regard to Board Finding 670, nothing in the record supports the conclusion that the November 20, 1984 exercise indicates that Bucks County has the capability of implementing the support plan adequately.. The November 20th exercise was a very limited one (McGill, Tr. 20,336); only 1 reception center and 1 mass care center were activated (Kinard, 20,168). It was discovered that there is a need to deploy police for the purpose of keeping order, separating contaminated and uncontaminated vehicles, separating contaminated and uncontaminated persons at mass care centers (McGill, Tr. 20,387). These multiple duties would have to be performed at as many as an estimated 42 mass care centers (if the list were an accurate one). (Appl. Exbh. E-4, pages 4-C-1, 4-C-2, 4-E-2(F)) The amount of manpower required for this purpose is not specified in the Bucks Support Plan; but by simple arithmetic, it could obviously run into the hundreds of officers during a full-scale emergency.



Thirty-seven police officers, an unknown number without vehicles, would be assigned to direct traffic from the evacuation routes to the mass care centers, some of which lie as much as 10 miles from the reception centers. (Hoyt, Tr. 20388-392; McGill, Tr. 20388: also Appl. Exhb. E-4, 3-A-1; Map) Nothing in the record supports the conclusion that 37 officers, some on foot, would be sufficient to direct 24,400 evacuees to mass care centers and another 24,400 through the county safely on the way to a further destination. (Appl. Exh. E-4, p.12).

In the instance of there being no available squad car, there is no provision in the plan for transportation of barricades and flashers (or other devices) for traffic control, nor would a police vehicle be on hand for use for emergency road blocks. Without a full-scale test deployment of these police personnel, nothing in the record can support the conclusion that the traffic control check points could be effectively staffed under the plan.

The above objection is especially true of such Townships as Newtown, in which there are four vehicles, with three Mass Care Centers and one Traffic Control point to be covered (Appl. Exhb. E-4, pages 4-C-1; 3-A-1; 3-B-3). Nothing in the record supports that a suburban police force with four vehicles has sufficient staff to maintain 24-hour capability at four emergency assignments in addition to the other duties that would be required of them.

Nothing in the record indicates that any study or test has been done of the effect upon fire company staffing that would result from holding fire company monitoring / decontamination teams in readiness or dispatching them to some, or all, of the mass care centers. Nothing in the record shows that any census has been taken of the number of fire company volunteers not serving on an active basis, nor of the number of personnel who serve in two or three different emergency units; nor does the record indicate a 24-hour availability of personnel while volunteers are at work in New Jersey, Philadelphia, the Valley Forge/King of Prussia area, or even the EPZ.

Mr. McGill's report to his boss, Mr. Reiser, regarding the November drill, hardly seems substantial enough to sustain the conclusion that there "is no doubt response would be adequate in a full-scale exercise." ( McGill TR 20387)

In fact, the test exercise revealed a number of things which had not been thought about--how to control people, to separate people, how to take care of automobiles, and other things. (McGill, Tr. 20,387) Nothing in the record indicates that the plan deals with the logistics of having to handle a considerable number of potentially contaminated persons, a matter of concern to Mr. McGill. (McGill, Tr. 20387)

There is litigation regarding the construction in Bucks County of the Point Pleasant Pumping Station. (McGill, Tr. 20,381) The phrase "in the interim" misrepresents Mr. McGill's testimony with regard to his having to rely on the unadopted plan as a basis for response to any radiological emergency at Limerick. Nowhere on the cited Tr. 20,400-20,402 is there mention by McGill of the pump. What he did say, in fact, was that he would have no other choice than to follow the present plan if an emergency were to occur tomorrow. (McGill, Tr. 20,402)

As already established above, the plan is little more than a fiat that "a certain number of people would be arriving in Bucks County by certain routes and it would be up to Bucks County to take care of them." (McGill, 20,368) The internal evidence of the draft plan supports this interpretation. For example, the plan refers the Emergency Director to Annex M, Appendix 1 for decontamination procedures. There is no Annex M in the Bucks County Plan; there is, however, an appendix under that rubric and on that topic in the Montgomery County Plan. Similarly, #N on page 4-E-3 of the Bucks County Support Plan presupposes that essential school district employees (electricians, janitors, stationary engineers, plumbers, etc.) would be available. Nothing in the plan, however, shows by what mechanism or agreement these personnel would be obtained or by whom paid. Reference is also made in the plan to "school pick up points"; no host schools are scheduled to receive classes of children in

Bucks County. The plan mentions "predisaster agreements" with the schools (Appl. Exhb. E-4, page 4-E-1); whereas, no letters of agreement have been executed with them, and it is not contemplated to do so. (McGill, Tr. 20,403) In the face of unresolved inconsistencies such as these, the plan has little validity as an implementable document.

Board Finding 672 is not supported by the record. It is meaningless to say that the Bucks County population is not at risk in a Limerick emergency because the nearest portion of Bucks County is at least 13 miles from Limerick. Mr. McGill qualified his reply with the phrase "On the basis on which this plan was developed...". (McGill, Tr. 20,385) He had already made clear that the plan consisted mainly of sending Montgomery County people to Bucks County.

He did not mention 13 miles at Tr. 20,385 nor did he directly address the question whether or not Bucks County people could come under a radioactive plume as a result of being downwind from a Limerick accident. Elsewhere, McGill asked, "If anybody within the ten miles may be in danger of suffering illness or something from the radioactivity...what happens to people who are at 11 miles?" (McGill, Tr. 20,375)

The Criteria for Preparation and Evaluation of Radiological Emergency Response  
(NUREG 0654/FEMA-REP-1, REV 1)  
Plans and Preparedness in Support of Nuclear Power Plants on pages 6 and 10-13  
suggests a potential health risk out to a distance of 50 miles and implies the existence between that distance and the Limerick Generating Station of a general continuum of deposited radiation. It was felt by the Bucks County Commissioners that you could not draw any specific line and the people who were within 13 miles would also feel they should evacuate. (Reiser, Tr. 18,278)

Nothing in the record establishes that it would be impossible for any Bucks residents to receive doses of radiation equal to or in excess of the 25 rem whole body amount allowed for emergency workers. (Appl. Exhb. E-4,5-B-5)

Nothing in the plan provides contingency procedures for diverting emergency personnel from the task of directing, housing, and monitoring evacuees to the task of alerting and relocating Bucks County residents from under a plume.

Furthermore, since no large-scale evacuation preceded or followed by substantial radiation release has yet occurred, "actual evacuation statistics" for past emergencies of other types cannot be relied upon for statements about the number of people needing mass care. Such "historical data" do not apply to radiological emergencies.

Board Finding 673 implies movement of a substantial number of people self-evacuating from Montgomery County toward Bucks evacuation centers, and also Bucks residents self-evacuating to areas beyond Bucks Co. borders. Nothing in the record or the plans however, seeks to address the mitigation of the effects produced by Bucks County's peculiar geographical configuration, with its nearly 50-mile border along the Delaware River which presents a barrier to spontaneous evacuation, from whatever the origin of the evacuees. (See Comm. Exhb. E-1, Appendix 2)

Contrary to Board Finding 674, nothing in the record supports the conclusion that the emergency services personnel designated in the existing Bucks County plan are sufficient for the tasks listed for them (Appl. Exh. E-4), or that they have 24-hour capability, especially during regular work days. There

is no foundation for the assumption that any additional burden would be on mass care space only, not upon police and ambulance emergency services.

There is insufficient evidence in the record to support the conclusion stated in Board Finding 675 that the historical record of response to floods, windstorms, and fires is predictive of behavior if a major radiological emergency occurred. Except for the non-comparable slow-moving, relatively non-contaminating accident at TMI, the Bucks County coordinator's 18 years experience in emergency planning has, perforce, been only with other than radiological events. (McGill, TR 20364-65, Reiser TR 18314-15).

In Board Finding 676, the Board states that there is no basis to assume that Bucks County will not adopt a plan to provide for approximately 24,400 Montgomery County evacuees. It is necessary, however, to determine what is meant by "provide for". Upon reaching the debouchment of the evacuation routes, 48,878 evacuees (Appl. Exhb. E-4, page 12) will be on Bucks County soil, subject to whatever conditions are extant. No provision in the plan is made for aiding those not seeking mass care to leave Bucks County, if that should be their intention.

Nothing in the plan provides for even rudimentary screening of vehicles for contamination in the event of a release. Mr. Hippert believes that Bucks County would not refuse to cooperate if there were an accident at Limerick. (Hippert, ff. Tr. 19498, at 5) This belief is irrelevant. Not refusing to cooperate does not guarantee capacity to perform. Additionally, the belief by the Director of PEMA that Bucks County's concerns can be addressed within the text of the existing draft plan incorrectly assumes that the existing draft is an actual plan and not a series of unverified lists. (Guard v. U.S. NRC, 753 F.2d 1144 (D.C. Cir. 1985))

Furthermore a FEMA witness testified that although "the situation does appear more optimistic", we (FEMA) couldn't make a definitive statement that Bucks County would implement their plan. (Kinard TR 20,176)



The Board erred in Finding 677 that meeting the criteria of the draft Memorandum of Understanding between PEMA Director John Patten and Chairman Carl Fonash of the Bucks County Board of Commissioners (LEA Exh. E-61) is not prerequisite to a finding of reasonable assurance that a workable plan can be implemented in Bucks County. In an attachment to a subsequent letter, (LEA Exhb. E-60) expressing their concerns to FEMA and PEMA the Bucks County Commissioners cited both the necessity and the difficulty of prompt relocation (12 hours) of so dense a population from under a plume extending 25 miles, as postulated in the NRC Final Environmental Statement on Limerick. (NUREG-0974, Limerick FES; pages 5-79 and 5-80, App. N-3). This letter (LEA Exhb. E-60) was the basis for Mr. Bradshaw's change of testimony to reflect the fact that the Bucks County Commissioners have not accepted the support plan. (Bradshaw TR 17191 (1); TR 17232).

Likewise, Mr. Rieser, Chief Clerk and County Administrator of Bucks County, and Mr. McGill, Director of Bucks County Emergency Management Agency, discussed concerns about matters not addressed in the plan. Among these were the use of a defined radius of only ten miles, when the distance for radiological exposure would depend upon the prevailing winds after an accident and the effect upon low-capacity highways and upon emergency staffing capability that would ensue upon evacuation from Montgomery County into Bucks. (Rieser TR 18317-19). The plan is not considered implementable as it stands. (Rieser TR 18320).

The reference in Board Finding 677 to approximately 24,000 persons evacuated from Montgomery County fails to state the magnitude of the demands to be made upon Bucks in the event of a Limerick emergency. The number of



people to be directed to Bucks County from the EPZ alone is clearly set forth as 48,878. The plan is ambiguous as to whether or not that number includes school age children if the emergency occurs during a school day, or whether they are in addition to that number; if the latter, no estimate is made of how many children would be expected. (Appl. Exh. E-4, page 6).

Nothing in the record supports the belief that Applicant's contractor has in any way revised the draft plan in accord with the draft Memorandum of Understanding of November 7, 1984 between PEMA and Bucks County (LEA Exh. E-61) outlining the conditions under which Bucks County support could be provided. There is no indication in the record that these conditions for ongoing planning have been met to the satisfaction of the Bucks County Commissioners.

Nothing in the record supports the belief that intention to discuss planning in the future, or willingness to attempt implementation of an unworkable plan constitutes reasonable assurance that the public can and will be protected in the event of a radiological emergency at Limerick.

The Board's Finding is further in error that further planning or analysis under 10 CFR § 50.47, 10 CFR §Part 50, Appendix E, or NUREG 0654/FEMA Rep-1, REV 1. The planning basis of NUREG-0654 is directed to providing dose savings and possibly immediate life saving whenever, in any area, a spectrum of accidents may produce doses in excess of Protection Guides. (NUREG-0654, page 6). In the particular demographic, meteorological and demographic situation of Bucks County, this basis requires active planning in contradistinction to the passive role assigned to it by Applicant's contractors.

In Board Finding 678, the lack of understanding cited by Mr. Hippert (Tr. 19535) applies to his own agency rather than to the Bucks County Commissioners. Nothing in the record, or in the Bucks County Plan, deals with removal of a population if made necessary by conceivable, credible contamination under a plume--unless the population is within the EPZ.

Except for agricultural regulations, nothing in the record or the Bucks County Support Plan gives positive assurance of, or procedures for, health protection within the 50-mile Ingestion Zone for over 400,000 people in Bucks. There is nothing in the record to resolve the internal contradictions and to verify the listed facilities without the Commissioners having to use "their resources and expertise to meet the requirements...as a support county" by constructing a plan de novo.

Despite Board Finding 679, Mr. Reiser was not unfamiliar with the draft support plan for Bucks County. He brought an annotated copy of Draft 4 to the hearing, which Judge Hoyt did not permit him to use on the basis that it was "a copy of an old plan." (Tr. 18,269) Had she permitted a comparison of the documents, it would have been evident that a purported "Final Draft" of the Fixed Nuclear Facility Incident Support Plan for incidents at the Limerick Generating Station, dated October 1984, with no draft number was essentially the same document as Draft 4 of the same Bucks County Support Plan. The similarity of the two drafts was noted by Mr. McGill, who subsequent to Mr. Reiser's appearance, compared the two drafts carefully and found "very, very limited changes in the final draft." (McGill, Tr. 20,373) The October 1984

draft was transmitted to the parties with a cover letter stating that it was the final draft. The cover letter did not accompany the submission of the same document as Applicant's Exhibit E-4. (Hoyt, Tr. 18,268) Until after Mr. Reiser's testimony was given, Mr. McGill had not received the October 1984 draft, nor had he received the letter from Energy Consultants indicating that five copies of a "Final Draft" were being transmitted to him. (McGill, Tr. 20,370) The fact that these two drafts, purporting to be a year apart, did not make substantive revisions, but merely created the impression of a revision, leads to serious question about the bona fides of the planning process by Applicant's contractor.

Contrary to Board Finding 680, Mr. Rieser supervises all operating Bucks County departments including Mr. McGill's EMA. (Rieser TR 18265). Furthermore, the Board improperly excluded any possible testimony by Mr. Rieser regarding the draft plan. Reiser had reviewed Draft 4 which, as Mr. McGill later pointed out, was virtually identical to the so-called final draft, which not even Mr. McGill had then received. (McGill TR 20370). Mr. McGill was thus permitted as Applicant's rebuttal witness to testify regarding material that Mr. Reiser was not permitted to testify to as a witness for LEA. Judge Hoyt's refusal to allow comparison of the two documents left Mr. Rieser with the impression that he had never previously seen applicant's Exhibit E-4. (Hoyt TR 18269-71; McGill TR 20373).

Mr. Rieser had met with Mr. McGill two or three times a week, on various occasions discussing omissions and inconsistencies in the Bucks County support plan. (Rieser TR 18272). Mr. Rieser was aware of the Bucks County

Commissioners' misgivings about the possibility of a plume extending into Bucks County. (Rieser TR 18348-49).

Mr. Rieser's testimony regarding Mr. McGill's competence rests upon Mr. McGill's long experience with storm warnings, snow emergencies and floods such as those following Hurricane Agnes. (Rieser TR 18315). Because of Bucks County's considerable distance from Three Mile Island, Mr. McGill by necessity did not acquire direct hands-on radiological experience in that event. (McGill TR 20366). Nevertheless, Mr. McGill has expressed significant concerns about decontamination procedures, highway and weather conditions and the geographical scope of the plan. (Rieser TR 18316-17). These objections have not been responded to by Applicant's contractor in the form of appropriate revisions that might be expected in response to a man in Mr. McGill's position. Indeed, ECI's regard for Mr. McGill's opinions and function is evidenced in their failure either to send to him or to verify his receipt of the document purported to be the "final draft" of the plan. (McGill TR 20370). Nothing in the record indicates that, whatever Mr. McGill's competence or limitations, any genuine planning, revisions or interaction took place between him and Energy Consultants Inc.

The Board Finding 681 of a commendable general humanitarian attitude toward their neighbors on the part of the Bucks County Commissioners serves no evidentiary purpose in predicated the existence of an adequate plan. The preponderance of evidence (LEA Exhs. E-53, E-60, E-61, E-72, LEA Findings of Fact #623-633) which refer<sup>to the record</sup> regarding the Commissioner's attitude and intentions, emphasizes their care in requiring that reasonable concerns be met to ensure the safety of their own population as well as that of guests seeking asylum within their borders. To this end, there has been ample testimony that the conditions set forth in the draft Memorandum of Understanding

(LEA Exh. E-61) between PEMA Director Patten and Carl Fonash, Chairman of the Bucks County Board of Commissioners, must be met before development of an adequate Bucks County plan can proceed. (McGill TR 20396)

### CONCLUSION

Board Finding 683, which states that Bucks County would act to aid evacuees in the face of an emergency is supported in the record, but the more important finding (669) that the Bucks County Support RERP could be implemented in the event of a radiological emergency at Limerick, so as to accomodate evacuees from Montgomery County is not so supported and much in the record is contrary. LEA urges the Appeal Board to review the Bucks County letter identified as LEA Exhb. E-60, dated November 16, 1984 which characterizes the Draft Support Plan as "fatally flawed", clearly states that Bucks' participation in the November 20, 1984 test drill should not constitute evidence of the "appropriateness or feasibility of the draft plan", and details the inadequacies of the plan.

The important test is the adequacy of the plan. The authorities burdened with execution of such a plan, by virtue of their superior local knowledge, are those persons best suited to assess its implementability. Regardless of their willingness to help, Bucks County officials have repeatedly challenged the adequacy of the draft support plan prepared by the Applicant's consultants and attached reasonable prerequisites to Bucks County's full and active participation in the planning process. Applicant has not met its burden of proof to provide reasonable assurance that the Montgomery County RERP (App. Exhb. E-3, which has an implicit assumption that the Bucks County Support RERP (App. Exhb. E-4) can be implemented) will adequately protect the public in the event of a radiological emergency at Limerick. (See 10 CFR, Part 50 Appendix E, Section III which states:)

"Plans shall be an expression of the overall concept of operation; they shall describe the essential elements of advance planning that have been considered and the provisions that have been made to cope with emergency situations."



THE USE OF UNRELIABLE MAIL SURVEY DATA, INSTEAD OF THE USUAL U.S. CENSUS FIGURES TO PLAN FOR AND ALLOT BUSES FOR THE TRANSPORT DEPENDENT:

- 1) REDUCES NUMBERS IN BUS POOLS TO EVACUATE SCHOOL CHILDREN (LEA-11) AND UNDERCUTS REASONABLE ASSURANCE
- 2) IS A FALSE ASSUMPTION OF THE EVACUATION TIME ESTIMATE STUDY AND MAKES THE TIME ESTIMATES USED IN DOSE SAVING DECISION-MAKING UNDULY HAZARDOUS TO A LARGE SEGMENT OF THE URBAN PUBLIC (LEA-23)

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(See Board Findings 35-44 and 379-395)

The list of transport-dependent are on file at the municipal level and their authenticity verified by telephone calls during the drill. (Board Finding 36) The Board never addresses those without transportation that are not on the list, therefore no predictive finding can be made to assure that the transport-dependent are adequately identified.

Clearly, the ASLB erred in arguing in Board Finding 36 that verification of the lists of transport dependent individuals was performed during the July 25 and November 20 Exercises, since it is impossible to determine who is not on a particular list by calling everyone whose name is actually listed. LEA's assertion that the list is incomplete, especially in urban areas, by way of a comparison with the U.S. Census Estimates indicates, and is not even remotely countered by spot checking the incomplete list of those needing transportation which does not exist, based upon responses mailed back to a one time mail survey sent to households billed by Philadelphia Electric Company. If the U.S. Census estimates are closer to the fact, then the number of buses needed for urban areas such as Pottstown and Phoenixville is greatly understated. Buses and drivers to provide transportation must come from the pool of buses already being used for schools and other transport dependent needs. The ASLB's statement that double counting could occur if the U.S. Census Estimate data was used for planning purposes does not negate its close correspondence between the U.S. Census data and the actual survey results in more rural and affluent areas. (Board Finding 42)



The Board's interpretation, based on the Applicant's witness' statement that "the previous estimates for mobility-impaired individuals, based upon Federal estimates, closely approximate actual survey results" support the comprehensiveness of the survey (Board Finding 38) does not correctly interpret Applicant's witness statement. What Mr. Bradshaw said was that the largest difference between the utility survey and the U.S. Census were in urban areas where in urban areas where more friends, neighbors or relatives would live in close proximity. Only in the less populated areas, does he state that the survey results and Census estimates are comparable. (Bradshaw ff Tr 17191 at 18-19)

Without the proper identification of the transport-dependent population, thousands of individuals within the planning zone could be left unplanned for. The reason for this is the method the applicant used to identify those without transportation. PECO and their consultants relied upon a general population survey sent out once in the Fall of 1983 to utility customers only in the planning zone, instead of upon the U.S. 1980 Census information. (Campbell TR 19998, Bigelow TR 14135). Large discrepancies exist between the 1980 Census figures identifying those in need of transportation and the results of the utility survey, especially in the most densely populated areas of Phoenixville and Pottstown.

In Phoenixville, population 14165 (Appl. Exh. E-67), the difference between the survey and the Census was 1961 transport-dependent people (2269 less 308 equals 1961 without transportation). The U.S. Census calculates these numbers by using the 876 households with no vehicles times 2.59 persons per household. (LEA Proposed Finding 137)

In Pottstown, where the total population is 22,729, 4,175 are without transportation according to the drafts which used the U.S. Census figures. (LEA Exh. E-40, E-42) This sharply contrasts with a figure of only 605 people needing transportation based on survey forms returned by utility customers. (Appl. Exh. E-17) (LEA Proposed Finding #138) PECO assumed that if a survey form was not returned no transportation assistance was needed.

In Royersford, Montgomery County the 1980 Census estimates listed 647 residents as transport-dependent (LEA Exh. E-43) versus the utility survey showing only 169 residents needing transportation. (Appl. Exh. E-18)

There is no assurance that the transport dependent population in the EPZ has been adequately identified or planned for in the event of a radiological emergency at Limerick. The earlier drafts of the RERP's show a large discrepancy between the survey done by Energy Consultants and the 1980 U.S. Census data. This is especially true in the Boroughs of Phoenixville and Pottstown. (LEA Exhb E-40-42)

Individuals with questions were advised to contact the county office of emergency management. (Bradshaw TR 17,191) This in no way addresses those who have not been identified because they do not have a PECO utility bill coming to their residence.

The first evidence that the Applicant's surveys were faulty was recorded by witnesses who direct day care centers. The survey that began "Dear Residents" was overlooked by the day care, nursery and pre-school centers in the three-county area. (LEA Exh. E-44).

Board Finding 388 states that FEMA has not before reviewed nor seen public needs surveys of the kind used at Limerick, which purport not only to identify the public without transport, but also the needs of day care facilities. A survey was sent out with no specific mention of day care facilities. The Applicant's consultant testified that no day care center in Chester County requested any transportation. (Bradshaw TR 13239-40).

Chester County Emergency Coordinator. Tim Campbell. testified that those pre-schools, day care or special facilities located in a church or school might not have received a survey form because forms were sent only once and only to utility customer lists. (Campbell TR 19899, LEA Proposed Finding 484). Both Chester and Montgomery Counties have admitted that there is a problem identifying day care, pre-school and nursery school facilities. (Campbell TR 19999, Bigelow TR 14134, LEA Proposed Finding 484). With this population added to the already distorted transport-dependent numbers, it is clear that the transport-dependent are yet to be identified and planned for. The U.S. Census is the recommended data to be used according to NUREG App. 4-2A. <sup>0654</sup>

The development of a Model Day Care RERP is a step in the right direction, but still does not address the question of whether or not transportation needs have been identified and planned for within the Limerick EPZ. There are an estimated 2000 children in the EPZ who should be included.

Subpoenaed witnesses testified to their basic concerns and to the limitations of the general survey in their municipalities and boroughs. (August TR 18886, LEA Proposed Findings 292 & 294, Whitlock TR 18482, LEA Proposed Findings 289 and 291, Mattingly TR 17837, LEA Proposed Findings 205 & 206, Giamo TR 19086, LEA Proposed Finding 191, Kelly TR 18575, LEA Proposed Finding 270) Ralph Hippert of the Pennsylvania Emergency Management Agency stated that a general population survey could be redone to further identify any special populations not accounted for by the Fall 1983 survey. (Hippert TR 19587-88, 17022-23 and 17348, LEA Proposed Finding 212)

Mr. Whitlock testified that a 10% return is a good return on a mailout, and a 13-15% return would be an excellent return. (Whitlock TR 18383, LEA Proposed Finding 291). He thinks a door-to-door survey would be more correct and accurate to use in disaster planning. (Whitlock TR 18384, LEA Proposed Finding 291). Others share his view. (August TR 18914, LEA Proposed Finding 294). Mr. Mattingly, Pottstown transportation officer, wanted more buses available because he believed that the survey would identify only some of the people requiring transportation and he feels he would have to try to plan for "a lot more than what has already been stated." (Mattingly TR 17837, LEA Proposed Finding 298).

There simply does not now exist bus transportation adequate to evacuate people without cars or personal transportation especially in urban areas in the EPZ since the three risk counties have used the results of a clearly inadequate survey developed and interpreted by EC, but sent out by the counties. The results of these surveys

show numbers of people needing bus transportation much smaller than those indicated by the U.S. Census results used in previous drafts. The U.S. Census data is the approach recommended by NUREG 0654 APP 4-2 A. although "other reliable data" can be used. Energy Consultants competency in developing and interpreting survey results is not in evidence. In fact, the EC explanation of the U.S. Census- EC survey discrepancies does not stand up to even the most cursory common sense analysis (see LEA Proposed Findings 137,138 based on data in evidence). The ASLB, as a matter of simple logic, erred in concluding that one can verify the completeness of a list by spot-checking the needs of those on that list. It is clearly those people not named and therefore not spot-checked who are not counted simply because they did not return a survey form. (See Board Finding 36)

If the U.S. Census numbers are more correct in identifying transport-dependent than the public survey numbers, and the numbers from the public survey that are currently being used are low, the result would be insufficient buses available as well as drivers, the possible need for multi-lift trips which would mean training of bus drivers in the use of KI and dosimetry and abandoning the one-lift principal as well as longer evacuation time estimates due to the need for additional vehicles on the roadways. An example would be if 101 buses for Chester County are needed instead of the 38 now assigned (App1. Exh 2) due to the difference in the use of the Census estimates instead of the survey, (LEA Findings 141-142) then there is a shortage of 63 buses for Chester County alone.

If the multi-lift approach is used, there is a tendency for delay. Drivers must complete one lift. probably for schools be notified, return to a transportation staging area, receive a strip map, get briefed, and travel back into the area where the transport-dependent persons are located. This will happen at probably a more congested point in the evacuation scenario, than the relatively prompt one-lift school evacuation situation. (LEA Proposed Finding 142)

Buses and drivers to provide transportation must come out of the same pool of buses already being used for schools and other transport-dependent needs. The ASLB's statement that double counting could occur if U.S. Census estimate data were used for planning purposes is not supported by the close correspondence between U.S. Census data and actual survey results obtained in more rural and affluent areas. (Board Finding 42).

Timothy Campbell, Director of the Chester County DES testified that he knew of only one case where the transportation needs of identified day care, pre-school, and nursery facilities within Chester County had been identified at the time he testified. (Campbell TR 19,915)

The Boards order dated September 24, 1984 "Memorandum and Order Ruling on Reworded and Respecified Off-site Emergency Planning Contentions, according to section 338 of the 3rd P.I.D., ruled out intervenors specifications dealing with communications with bus drivers, mobilization time, and concerns about whether some drivers are being assigned to evacuate both the school and the transportation dependent population.

However, the actual ASLB Memorandum and Order dated September 24, 1984 states explicitly on pg. 9 that those parts of specification 7 ruled out under LEA 15 "arguably fall within the scope of LEA-11." On page 8 the Board specifies what part of specification 7 it is



talking about: "that part of item 7 which is concerned about whether some drivers are being assigned to evacuate both the school population and the general public." Therefore, in its 3rd P.I.D. this Board errs when it does not entertain evidence as to the effect of transport dependent bus needs on the availability of buses for school evacuation, or in the course of the hearings it ruled such questioning out.

THE BOARD'S GENERALIZED ASSERTION AND FINDING OF BUS AND DRIVER RESPONSE IN NUMBERS "SIGNIFICANTLY GREATER THAN REQUIRED" BASED UPON THE PURPORTED "HISTORICAL RECORD" AND ALLEGED "CONSERVATISM" OF BUS PROVIDER ESTIMATES UNSUPPORTED BY THE RECORD, IS CONTRARY TO SPECIFIC PERSUASIVE EVIDENCE AND ERRONEOUS AS A PLANNING PRINCIPLE

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The weight of particular testimony in this proceeding, including survey results, clearly contradicts the notion that a "historical record" of emergency response can be used to predict availability of bus drivers. For example, the testimony of Roger Tauss, President of Local 234 Transport Workers Union AFL-CIO, which represents Philadelphia and Frontier Division bus drivers, was very emphatic in his position that SEPTA drivers would not go into an area of nuclear emergency during a Limerick accident. (Tauss, Tr. 16,741-42)

As in Cincinnati Gas and Electric Co. (Zimmer Unit 1) ALAB-727,17 NRC 760, 772-73 (1983), the only evidence in the record raises serious concerns as to whether volunteers would be willing to respond in an emergency. The generalized "history of emergency response" argument is exactly the kind of generalized and generic argument that the ASLB refused to allow LEA to litigate in its LEA-Contention 8. (See ASLB Order 4/20/84, p.42-43, It is improper to allow the Applicant to argue & 55.) the human response issue in precisely the same general form that the ASLB denied for LEA in rejecting LEA-8.

sent the same kind of historical record evidence as LEA had proposed for LEA-8, it may appear that the evidence in the record supports the Applicant's position. However, the generalized "historical record" argument does not support specific conclusions about specific categories of workers in the Limerick RERP's, (cf. ASLB Order 4/20/84, p. 55)

Considered in its particulars, the record in this proceeding contains evidence indicating a level of non-availability of volunteers even more complete than in Zimmer, supra.

Board Findings 202-215 discuss the testimony of School Superintendents whose districts would be providing buses to satisfy unmet needs of the risk school districts in the event of an emergency in Montgomery County.

Board Finding 202 cites the example provided by the testimony of Dr. Bruce Kowalski, where he indicated that the Wissahickon School District Board of Education acted upon an absolute commitment and unanimous consensus that the property of the school district would be made available to Montgomery County residents to transport them to safety in times of disaster.

The record in this proceeding does not support the statement made in Board Finding 209 that "none of the superintendents of school districts outside the EPZ who testified expressed any doubt that his district would furnish buses and drivers upon request during an emergency at Limerick, and thereby honor the commitment in its letter of understanding." The Board cites the following testimony: Kowalski TR 16,207; Davis TR 16659, 16679.

The referenced testimony of Dr. Kowalski discusses whether or not the School Board would honor its agreement if called upon. There is no discussion of whether or not the drivers could reasonably be expected to honor a commitment made by the Board of Education. At TR 16,176 Dr. Kowalski testified that he had not discussed this matter with the drivers. Nor had he discussed the need for bus driver training with Leona Flood, the Director of Transportation for the Wissahickon School District. (TR 16,219-220). At TR 16,158 Dr. Kowalski testified that there had been some disagreement among School Board members as to how the language "to the maximum extent possible" could be interpreted. He explained that the basic disagreement was the extent to which the School Board could compel its employees, and in particular the bus drivers, to drive the property of school buses to an area for the

purposes of evacuation. At TR 16,159 he indicated that specific discussion relating to emergency conditions in the event of a radiological emergency at Limerick was one of the factors that entered into the Board's discussion. He further stated that the only disagreement among members of the Board was whether or not the School District could be compelled to force its employees to drive the buses of the School District into areas of disaster in order to evacuate residents of Montgomery County. (TR 16,160) In LEA Exhb. E-33 Dr. Kowalski explains that "the possibility of a nuclear accident and the implication for the use of our buses was the basis for considerable disagreement. The Board's action to participate in the plan was based on the assumption that the evacuation plan was a draft and would be returned for final approval to school district agencies.....A strong consensus emerged that in the case of a nuclear emergency our buses would be made available and our drivers would be contacted. The Board does not believe however, that it has the authority to order any of its employees to drive into an area of nuclear hazard." (See LEA Finding 354)

At TR 16,166-167 Dr. Kowalski explained "In entering into this present agreement, the School Board recognized that there were uncounted dangers which could result in disaster in the county and they did not want to make any decision which would not give them the opportunity to participate in aiding the residents of the county. At the time which the Board was asked to enter into this agreement there was in fact no nuclear power facility which in fact could cause any radiological danger, so they felt that in entering into this agreement, they were simply agreeing to enter into agreement to aid people in other kinds of circumstances. They felt that they would have the right to go back and review their agreement at such time that the Limerick Operating Station would come on line and that they would be brought information pertaining to their direct participation in evacuation plans in case of such an emergency."

Dr. Kowalski testified that he was not able to speak to what the drivers would think was their first priority in the event that they were called upon to assist in an evacuation of EPZ school children in the event of a radiological emergency at the Limerick Generating Station. (TR 16,179) A request to the School District Solicitor regarding whether or not the School District had the authority to order its employees to drive a bus into an area of nuclear hazard was withdrawn. The School Board decided that it wasn't necessary because "they were entering into an agreement at a time when there was no operating nuclear power plant...It was their understanding that the county would be back to them in the future with specifics regarding evacuation of schools in case of a nuclear accident"...It was their feeling that the School Board "would have the right to withdraw from its agreement". (TR 16,181-182) The witness was not permitted to answer LEA's question whether or not the agreement was considered to apply to incidents at the Limerick Generating Station in view of the fact that the plant was not yet in operation. (See TR 16,182-185)

Contrary to the impression given by Board Finding 198, the Custer Bus Company does not have sufficient buses to provide transportation for the Spring Ford School District. Dr. Welliver discussed the unmet bus needs at TR 15,521-22. At TR 15,523, Dr. Welliver reported on the results from bus drivers he had surveyed, which indicated that out of 40 employees, 13 were willing to serve, 13 did not respond at all, and that 6 said no. (See Appl. Axhb. E-73 & E-74)

Several of the Board's Findings make broad general statements which appear to apply to all Montgomery County bus providers outside of the EPZ based on very limited testimony from one or two school district superintendents. The record in this proceeding does not support such generalizations, nor does the Board properly document other testimony that it has relied upon in the record for making such sweeping conclusions.

(See Louisiana Power and Light Company (Waterford Steam Electric Station, Unit 3) ALAB-732, 17 NRC 1076 (1983)

and also:

South Carolina Electric & Gas Company, et al. (Virgil C. Summer Nuclear Power Station, Unit 1) ALAB-710, 17 NRC 28)

For example, Board Finding 214 refers only to the testimony of Dr. Kowalski at TR 16,201-202. Even in this limited instance however, the Board has failed to address conflicting testimony given at TR 16,166 and as well as those examples previously cited by LEA where Dr. Kowalski testified as to the numerous concerns of the School Board regarding the provision of drivers for school buses in the event of a radiological emergency.

Board Finding 209, which states that none of the superintendents from outside the EPZ who testified expressed any doubt that his district would furnish buses and drivers (emphasis added) upon request during an emergency at Limerick is totally unsupported by the record in this proceeding. (See LEA Findings 453,471,472,473)

The Board's statement that a total of 545 buses in Chester County have been identified for use in an emergency is based testimony by Tim Campbell which followed a statement made by counsel for the Applicant at TR 19,980. Mr Rader stated, "You identify a number of other buses with whom I think you testified you were having negotiations at this time". Subsequent questioning indicated that as of Jan. 24, 1985 Chester County did not even have verbal agreements with any of those providers listed in Annex Q. At TR 19,869, Mr Campbell clarified that many of the bus resources listed as having been "identified" would only be available if commandeered by the Governor. This is a significant fact that the Board fails to acknowledge.

At TR 19,869 Mr Campbell is asked why buses from Tredyffrin/Easttown School District are listed on page I-1-2 of Draft 10 (Chester Co/Comm Exhb E-1) under the heading "bus resources" despite the school district's refusal to enter into an agreement with Chester County due to concerns expressed in LEA Exhb E-69, which states, "Without use of the buses, we



would not be able to safely and expeditiously deliver students to their homes". Mr Campbell then testified that the Great Valley School District informed Mr Force that they were unable to provide buses. Mr Campbell stated he intended to begin another cycle of negotiations with all potential bus providers including Great Valley and Tredyffrin/Easstown School Districts to see if he could "change their positions and obtain commitments of buses" (Campbell TR 19,873). Judge Hoyt would not allow LEA to determine if there was a particular reason why Mr Campbell stated that he hoped to change their position, or to further determine why they had refused to agree to provide buses.

Mr Campbell testified that Chester County DES had attempted to enter into a written agreement with the Gross Bus Company for the provision of buses and drivers in the event of a radiological emergency at Limerick. (TR 20,062) He stated that Mr Gross had given Mark Force of his staff some indication of his concerns in a June 1984 meeting. Mr Campbell indicated that the concerns expressed by Mr Gross in a letter marked as LEA Exhb E-30 are very similar to the concerns Mr Gross expressed to Mr Force, and that he had received a copy of the letter (LEA Exhb E-30) in November from Energy Consultants.

"The fact that I am willing to assist in an evacuation and do whatever I can...I cannot make this commitment for my employees....it is impossible to predict what people would do under these circumstances..." (LEA Exhb E-30) When discussing the provision of drivers for buses in a radiological emergency, Mr Campbell testified that it is an issue that has surfaced time and time again. (Campbell TR 20,066) He added that in mid-to late November Mr Gross had indicated that he still had concerns whether the issues of liability and compensation had been addressed. (Campbell TR 20,067)

Dr. Claypool, the Superintendent of the Owen J. Roberts School District had several discussions with Mr Gross about transportation arrangements for the school district in the event of a radiological emergency. (See LEA Findings 465 & 466, Claypool TR 15,980 and LEA Exhb E-29, page 2)

Dr Murray, Superintendent of the Phoenixville Area School District had similar concerns about the availability of sufficient buses and drivers to evacuate the schools in one lift. (See LEA Finding 415) Contrary to the impression given by Board Finding 196, there is no assurance that the Gross Bus Company has sufficient resources to provide for needs of the school district. At TR 15,083-15,084 Dr Murray testified that he wanted written assurance that he "would have the buses which Gross does not have in the event of a total evacuation. (See LEA Finding 367) Dr Murray testified that he still had some unanswered questions relating to unmet transportation needs and as a result, was discussing alternatives to consider provisions for walking students 2-3 miles out of the EPZ. (Murray TR 15,148-15,149)

#### BUS DRIVER AVAILABILITY

Board Finding 340 indicates that training should address any misconceptions held by drivers as to the nature of their emergency responsibilities or risks that they are likely to face in carrying out their assignments. However, based on the fact that many non-EPZ bus drivers are not likely to be informed of their role and responsibility to drive a bus prior to a radiological emergency at the Limerick Generating Station, such training cannot be relied upon to provide reasonable assurance that bus drivers are adequately prepared and can therefore be relied upon to perform their respective role in the event of a radiological emergency. (See LEA Findings 342,343,446,447,448,449,450,454,467,468)

Board Finding 212 states that bus providers inside and outside the EPZ have far more drivers than buses and drivers committed by Letter of Agreement. The example of Wissahickon School District is referred to. Dr. Kowalski's statement that a few out of the 60 Wissahickon School District drivers live within the Limerick EPZ (TR 16,208) is the only testimony referred to for the Board's generalization that the great majority of drivers employed by providers outside the EPZ themselves reside outside the EPZ.

Although Board Finding 339 states that FEMA's witnesses did not have an opportunity to review any letters of agreement with regard to the provision of buses and drivers prior to their testimony, the Board has ignored the concerns of the FEMA witnesses on this subject as stated in LEA Findings 319-322, 332, and especially 336, where he indicated that in his professional opinion, letters of agreement should mention a specific number of buses to be provided. (Asher TR 20,196)



LEA-23 and LEA-24/FCE-1

LEA-23

The draft county plans are deficient because they do not contain reliable evacuation time estimates.

LEA-24/FOE-1

There is no assurance that plans for evacuation of the ten mile radius will not be impeded by traffic congestion in the vicinity of Marsh Creek State Park, Exton area (involving Route 100) and Valley Forge Park, King of Prussia area.

These areas should either be included in the Emergency Planning Zone or adequate plans for traffic control and direction should be made to avoid adverse effects on EPZ evacuation.

In the Memorandum and Order Ruling on Reworded and Respecified Off-site Emergency Planning Contentions dated Sept. 24, 1984, the ASLB ruled: We accept all of the items in the list accompanying the contention. The Applicant objects to, among other things, LEA's questioning certain of the Evacuation Time Estimates Study's assumptions related to the areas the contention lists. While LEA is not exactly crystal clear in alleging deficiencies in the Study, we do not rule out this item, for if we are to consider what impact traffic in the areas the contention lists would have on evacuation, we necessarily will consider traffic patterns, capacities, and rates, both in the plume EPZ and in the named areas. Thus, we cannot but inquire into whether the Study has properly analyzed these named areas. In addition, the ASLB Oct 26, 1984 Order on the Deferred Contentions admitted two specifications to LEA 23.

The two admitted specifications are:

- 1) There is no basis for the assumption in the Applicant's HMM Evacuation Time Estimate Study that " up to one hour may be required to assemble buses, transport vehicles and to load students onto buses." (App1 EXH E-67pg5-5)
  
- 6) The survey performed for ECI through the Counties and upon which the number 3,039 (HMM ETE App1 EXH E-67) used by HMM to estimate evacuation times for transit dependent populations varies considerably from U.S. Census figures used in earlier draft plans. The larger Census figures, arguably more accurate due to large non-response to the survey or its non-receipt by many, would affect evacuation time estimates for particularly urban areas making them more realistic.

BASIS: NUREG 0654, Appendix 4, 10 CFR 50.47 (2)

The Board errs in Finding 41 because in fact a rather detailed breakdown of the U.S. Census data for Chester County is available in this record in LEA EXH E- 40 which is listed municipality by municipality. Both Annex G of Appendix 3 listing homebound persons needing an ambulance and Annex I of Appendix 2 which lists the Transport dependent can be therefore compared with the analagous data from the EC devised survey which is listed in App EXH E-67 the ETE on pg A1-26 for Chester County. For all of the Chester County EPZ a total of 48 needing an ambulance is shown from the ETE survey list while the statistical analysis conducted by the U.S. Department of Health and Human Services shows a total of 27 needing an ambulance. However the survey based total for the transport dependent is 803 for the county vs. a 3813 total from the U.S. census. This comparison for Chester County clearly contradicts Board Finding 38 and its underlying testimony.

A similar comparison between data in LEA EXH-E-42 which is an earlier Pottstown draft plan and the survey data listed in the ETE for Pottstown on pg A1-28 shows that the ETE shows a total of 25 people needing an ambulance while the earlier draft plan shows 9 persons needing an ambulance (Attach F) Comparison of the US Census total of 4175 from LEA EXH E-42 with the survey based data from the ETE shows a large difference, but in the opposite direction. Interestingly enough there is testimony in this record from Mr. Mattingly, the Pottstown Boro Transportation Officer, that in the course of verifying his survey based list of just those who needed an ambulance, he found that some were listed who didn't really need an ambulance. (see LEA Finding 206 ). This would of course move the survey totals back down towards the earlier US Department of Health estimate of 9. Further comparisons can be made of numbers in evidence to support LEA's position that the Board's Finding 40 and its underlying testimony by Applicant's consultant Bradshaw are in error. In any event the record on this matter shows that the Applicant has not met its burden of proof in verifying the reliability of the data developed by its consultants and used in the ETE. The U.S. Government figures are clearly more credible than a one time survey which if a person doesn't send back in the mail , doesn't list that person but assumes he or she doesn't need transportation. In real terms this effects not only the ETE estimates for sectors with a large urban population, but also the numbers of buses available for school evacuation ( LEA 11) in view of the greatly increased requirement for the transport dependent.

In Board Finding 49 the Board errs in describing LEA's position as being that the one hour mobilization period utilized in the ETE study (APPL EXH E-67) and the Unit Mobilization times cited by bus providers in the Montgomery County Plan are identically defined or congruent (LEA proposed Finding 31; APPL EXH E-67 p. 5-5; APPL EXH E-3, annex I, App I-2) For as Klimm, TR 17260-62 and Cunningham TR17258-59 and Klimm/ Cunningham TR 17374 admit, and the respective ETE and Montgomery plans show, the two time frames are more accurately described as being additive. That is , they are largely non-overlapping timeframes since the bus provider mobilization time does not include travel time to the risk school, time spent at a interim Transportation Staging area such as at King of Prussia Plaza, and time to load the students.

Board Finding 295 states that "All vehicles entering the EPZ for the purpose of evacuating school children or transportation dependent persons will first pass through a county transportation staging area."

In Board Finding 48, the Board concedes that in a worst case scenario bus driver mobilization time in a few cases would exceed one hour.

Contrary to the Board's Finding 49 LEA argues that it is because the two mobilization times are differently defined that the Evacuation Time Estimate's "up to one hour" assumption is unrealistically brief given that the Unit mobilization times under the Montgomery County Plan (Appl. Exhb. Annex I do not include travel time to the school and time to load the E-4) buses. The Board's summary of LEA's position is clearly faulty. In addition the Board in its Finding 50 is incorrect to assume prepositioning of buses. ( cf. Zimmer <sup>17 NRC/</sup> 772-773 ) And in Finding 51 it is essential to

remember that the bus provider estimate of up to 2 hours for 6 out of the 32 bus providers does not include travel time or bus loading time.

Board Finding 52 ignores the buses needed for the transport dependent, which, if the U.S. Census figures for urban areas are correct, must reflect transportation for many thousands of people in Pottstown and Phoenixville alone. And in NUREG 0654 App 4-14, the #6 S-curve indicates that the transport dependent is the slowest group of those represented to evacuate.

Despite the Board's Finding 51 that even a 100% increase in the ETE study's mobilization time period for buses would not significantly increase evacuation time estimates, the fact is that an increase from the up to one hour to a two hour time frame (100% increase) would change the 30 minutes to 90 minutes assumption for school bus departures used by the ETE (APPL EXH E-67 5-5) to a 90 minute to 150 minute time frame. 150 minutes is the outside, or slowest, time frame associated with vehicle evacuation departures (Klimm TR 13869-70, TR14038-39). Therefore such a 100% increase in bus mobilization time (or one hour) could place buses among the slowest vehicles of the evacuation.

Furthermore, buses for the transport dependent, which buses are subject to the same mobilization times from the bus provider as buses for schools since the source is the same, are already among the slowest vehicles in an evacuation scenario. (for example see #6 S curve in App 4-14 of NUREG 0654 and also APP 4-9 which states that "An estimate of the time required to evacuate that segment of the non-car owning population dependent upon public transport shall be

made, in a similar manner to that used for the auto- owning population. This estimate shall include consideration of any special services which might be initiated to serve this population subgroup. Such services might include fixed-route departures from designated assembly points")

Contrary to the Board's Finding 7, the NRC Staff witness did testify that "it is my opinion that this study was prepared in a way to suggest that the error was in the range of 10 to 20%" ( Urbanik, tr. 19,249 at 10 ) Therefore LEA's assertion in LEA Proposed Finding 38 was correct. The Board's citation of Urbanik tr. 19211-12 proves another point about such Evacuation Time Estimate Studies as Appl EXH E-67, that is should they be shown to be in error more than in a range of 20% " obviously one would be uncomfortable with the results if they had a reason to believe that they were widely off the mark. So, you know, in a hypothetical basis we could perhaps say that at a certain point we would be unhappy with the estimate " ( Urbanik, tr. 19,249 lines 10-19 ) 20% of about 5 hours would be 1 hour. For the Limerick EPZ, the projected evacuation time is generally about 5 hours or more. ( Urbanik Tr 19,212 ) The Board's misunderstanding in Finding 7 however is fundamental to its faulty analytical framework in assessing the Applicant's ETE. This error therefore extends to decisions about the criticality of transport dependent transportation or traffic control arrangements beyond the EPZ to the overall usefulness of the ETE prepared by Mr. Klimm. Simply put, given an already acknowledged error of 10-20% in the ETE Appl Exh E-67 (or up to one hour ) further errors added to that more easily push the time estimates over the roughly 20% error bound, which begins to affect the ETE's usefulness to emergency coordinators in making protective action decisions.



Important in this framework also, and related to the Board's views in Findings 29-31, is the testimony of Pa. Bureau of Radiation Protection official Margaret Reilly which specifies two principles of sheltering , that is, that it is the protective action of last resort, and that buildings in the Limerick area are suitable for sheltering if winter worthy only up to about two hours. (see Reilly , tr. 19396 )

And again in Board Finding 53 the Board errs in assuming that "ample lead time by way of early notification is likely to exist in the event of a radiological emergency."

The assumption that "ample lead time is likely to exist in the event of a radiological emergency" is improper in view of the NUREG 0654 principle of planning for a wide range of the possible accident sequences ranging from as quick moving as one half hour and up (see NUREG 0654 I.D. Planning Basis pg 6-7; pg. 13 part 3 Time Factors Associated with Releases; pg. 17 Table 2) Clearly, to assume (Board Finding 56) a zero base flow of traffic pre-supposes that either the traffic which pre-exists an evacuation on a given route is from the EPZ itself, as Mr. Klimm reasons in his "Double counting" argument, or if it is inter-regional traffic from elsewhere (as LEA Proposed Finding 131 based on Mr Wagenmann's testimony, and the Upper Merion Township Wide Traffic Study identified as LEA Exh 56, but not admitted would show) that the traffic is cleared off the routes prior to EPZ traffic entering them. This clearing the roads of traffic is to be done by closing off access to the roads to all other traffic. (Klimm 13939 )

Peak hour flows of regular commuter traffic would show the context of the amount of cars already on the roads which would have to be returned to a zero base flow condition prior to an evacuation entering them in order for the ETE assumption to be valid. Nothing precludes doing this. (Urbanik tr 19213-16)

COMPLEXITY AND SENSITIVITY TO ERROR OF TRAFFIC ROUTES AND FLOW ARE A BARRIER AND AN IMPEDIMENT TO REASONABLE ASSURANCE OF AN EFFICIENT AND SAFE EVACUATION.

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Mr. Klimm was wrong when he, in a response to Dr. Cole, testified that the ETE All-7 map accurately depicted that queuing outside the EPZ in the King of Prussia area to have dissapeared by T=270 minutes (see LEA Proposed Finding 81 ) Mr. Klimm was allowed to answer Dr. Cole's question at tr 14101 but not LEA's identical question at tr 13,931 where Judge Hoyt improperly sustained an objection to the question. LEA was therefor not in a position to follow-up to show that Mr. Klimm was wrong

<sup>85</sup> Despite the testimony of Mr. Klimm at TR 14101 , the fact is that since it is capacity restrictions on such routes as 363-County line Expressway ramps (ETE Appl. Exhb. E-67, pg. 7-10) or as indicated on pg. 6-6 of the ETE on the Countyline Express ramps between Audubon Road and the Turnpike or the Turnpike ramps (ETE 6-8), the map on ETE pg. All-4 or All-7 which show no queuing outside the EPZ must be wrong since at T=270 minutes (4½ hours) or even at 4 hours 50 minutes it is that very queuing which reflects the capacity limitations outside the EPZ on the Countyline Expressway - Turnpike ramps which is determining the evacuation time. In fact considering the ramp capacities as indicated in the ETE App 10 tables (see LEA Finding 66 ), and assuming even the traffic control arrangements in Mr. Klimm's prefiled testimony all along 363-Countyline, Rt. 202, Rt. 76 (Schuylkill Expressway) and Rt. 276 (turnpike), congestion and queuing at those ramps and cloverleafs must continue long after the last vehicle has left the EPZ are on the Valley Forge Evacuation Corridor. (see LEA Finding 83)

The recently completed Schuylkill Expressway Extension cannot be used by traffic previously assigned to old route 422 since to do so would add thousands of additional cars to the same Valley Forge-King

of Prussia Evacuation corridor under discussion here. However the record indicates, and the letter transmitted by FEMA dated May 30 does not indicate any traffic control arrangement to prevent that additional traffic from Royersford, Limerick Township for example (see LEA EHB E-16 PEMA/PENNDOT map) from entering the King of Prussia area as well. Again additional hearings will assure that all such concerns are addressed. (LEA Proposed finding 84)

Furthermore, there is no evidence in the record that Upper Merion Montgomery County, or others will implement a planning principle of keeping up to 200,000 workers and shoppers ( Wagenmann, tr 17436-7 ) in the Valley Forge-King of Prussia area, from leaving the region on the main highways they used to enter the area. (see LEA Proposed Finding 156-159)

The Board erred in adopting the Applicants Consultant's Klimm's position that the more urban areas to the South and East of the EPZ would not significantly affect the EPZ evacuation was specifically contradicted by the more probative testimony of Dr. Urbanik the NRC Staff witness who has evaluated the ETE's and traffic plans for most of the nuclear plants in the country as well as having written the guidance of NUREG 0654 for ETE's. ( Urbanik TR 19277 )

The Board ignored the testimony that traffic control was needed at the Downingtown Interchange of the Turnpike to keep cars from entering the Turnpike going East and interfering with Turnpike capacity in the King of Prussia-Valley Forge area. Therefore Board Finding 85 is not based on the evidence with respect to that aspect. ( Urbanik TR 19234-237 )

LEA's traffic contentions, the validity of which was accepted only in part by the ASLB, in fact involves a network of major highways and evacuation corridors, and the interrelationship of EPZ and non-EPZ traffic using these roads previous to and during an evacuation.

The Board's procedural errors in limiting the litigation, for example, in precluding testimony as to spontaneous evacuation outside the EPZ as it would affect the ability of EPZ traffic to use Upper Merion evacuation corridors, or by not admitting evidence indicative of the scale of the problem, such as exclusion of relevant portions of the Upper Merion and Uwchlan Township Traffic Studies (LEA Exhbs. E-56 and E-46) tended to unduly narrow and understate in the record the scale of the traffic problems actually present.

The Board's Findings overlook evidence from the Chester County portion of the Valley Forge-King of Prussia area, particularly in Schuylkill Township and the Phoenixville area. The NRC Staff's witness, Dr. Urbanik, testified that traffic control in areas fairly remote from the King of Prussia area could adversely affect the ability of EPZ traffic to use key evacuation routes just outside the EPZ, which would back up into the EPZ during an evacuation if these corridors were filled beyond capacity. (See LEA Findings 39-41)

From LEA Proposed Findings

39 The Pa. turnpike (Rte. 276) is being used as an evacuation route in the King of Prussia area. And unlike the local area, there is the possibility of through traffic being on these facilities, or other people using them. The fact cannot be ignored that there may be some people from beyond the EPZ using the Pennsylvania Turnpike at the time it is being desired to use it for evacuation also (Urbanik TR 19,234-19,235)

40 "At the same time the plan calls for folks from another area, also through a rather (sic) set of loops and ramps and everything to get on the Pennsylvania Turnpike in the area we have just been referring to, near Interstate 276 and 76. So, those folks, could in fact, conflict in the sense of both trying to use the same facility at the same time." (Urbanik TR 19,237)

41 The Board cannot limit its concerns to the one example cited by Mr. Urbanik, the Pennsylvania Turnpike. The same principles would apply to other limited access highways carrying long distance traffic and parts of several of them make up the set of loops and ramps in King of Prussia or what has been described as a hook made up of Routes 202, 76, 276, + 363 - Countyline Expressway.

The principle discussed by Dr. Urbanik with respect to the Downingtown exit of the Pa. Turnpike would apply to similar limited access highways traversing the King of Prussia area and used as evacuation route links, such as Routes 202 and 363, the County Line Expressway, the Schuylkill Expressway, and the new Schuylkill extension-Pottstown expressway. However, its application is a relatively complicated matter requiring much local participation and local traffic knowledge. Furthermore, the commitment of local officials to implement a planning assumption that non-EPZ traffic would be prevented from using the major highways in the King of Prussia area prior to and during an EPZ evacuation is critical to determining that there is reasonable assurance of plan workability and implementability in this area. According to the PEMA/PENNDOT Evacuation Map, dated June 1983 (LEA Exhb E-16, received into evidence as part of Comm. Exhb E-1), some 9499 cars are assigned to the basic Route 363-Turnpike evacuation corridor. In addition, 4222 cars are assigned to Route 252 through the western part of Valley Forge Park and onto Route 202 where an additional 3421 cars merge from other parts of Chester County. As indicated in Appl. Exhb. E-67, the ETE assigns a portion of the Route 363-County Line Expressway traffic to Route 202 west, but does not simulate numerically its effect on the other Route 202 west traffic, since no link is calculated between that last traffic node and the first Route 202 traffic node from the Chester County EPZ traffic.

Testimony in evidence indicates that approximately 40,000 workers and up to 200,000 shoppers are in the King of Prussia area on heavy shopping days. Furthermore, addition of EPZ traffic attracted onto the new Schuylkill Extension-Pottstown Expressway instead of the previously designated old Route 422 corridor (which does not enter



King of Prussia) would increase the problem since the new expressway connects right into King of Prussia. 4615 cars are presently assigned to old route 422 and must be prevented from entering the new Schuylkill extension.

The completion of the Schuylkill Expressway Extension does not reduce overall EPZ evacuation times due to capacity deficiencies along Route 363-Countyline Expressway South, which would serve as a major exiting corridor, with or without the new expressway extension. The simulation was run using the winter weekday fair weather conditions. (Appl. Exhb. E-67 ETE pg. 7-10).

Procedural errors made by the ASLB tend to cause the scope of the King of Prussia traffic problems to be understated in the record during the hearings, although clear indications exist as to the scale of what needs to be done. (See LEA Findings 39,40,41,42,43,44,52-54,56,65,156,157,158) In addition, Mr. Anthony's ( representative of FOE) consolidation with LEA resulted in numerous procedural problems which prevented LEA from fully developing the record on several critical issues. Mr. Anthony prevented a stipulation agreed to by all parties except himself with regard to admission of LEA Exhibit E-56, the Upper Merion Township-wide Traffic Study, although LEA had been designated as 'lead' intervenor for LEA-24/FOE-1. Furthermore, following Mr. Anthony's direct examination of Mr. Wagenmann, the Upper Merion Township Manager, LEA had no opportunity for cross-examination.

The Board at 68 has no basis to conclude that a one half hour period to man traffic control points to prevent access to the King of Prussia Valley Forge Evacuation Corridor is "ample". Klimm's identical characterization that one half hour was "ample" at TR13941 was rather more a rationalization under cross-examination than a basis for a ASLB's Findings. More serious, is the Board's calculation and position that it is

because there are "ample" numbers of police available in police departments outside the EPZ that in effect traffic control points in the areas of concern to Dr. Urbanik need not be all identified. This is contrary to the fundamental planning principal that it is thorough planning which provides the basis for an expanded response

It may be useless to assume that there is no level of traffic control which would work as the Board argues in 69. However this is clearly not LEA's or Dr. Urbanik's position which is on the contrary that is the degree and quality of traffic control and its accurate function on a system of highways, which insures that an evacuation is reasonably orderly, safe, and efficient. Only in that context can it be assumed that traffic regulations will be obeyed. (see for example Vutz TR 14511, LEA Finding 278) Dr. Vutz is the Schuylkill Township Emergency Coordinator, a Majority Republican Supervisor in that Township, assistant Roadmaster, and incidentally holds a doctorate in Nuclear Science ( Vutz, TR 14425-33) His entire testimony which lends substance to the more abstract concerns expressed above is exactly the kind of probative, site specific and relevant testimony this Board chose time and again to ignore in favor of the more generalized and inevitably slanted testimony of the Applicant's consultants. (see also Feters, Brown, Kelly, Mattingly, Lowery, August, Lukcas, et al.) It is important in evaluating the weight of testimony to consider the consultant arrangement as a factor as well as Mr. Klimm's proprietary interest in the Hmm Computer model (question improperly excluded).

The Board's Finding 107 is not based on the evidence in that the computer simulation as performed for the ETE does not in fact simulate numerically the effect of the traffic which must be assumed to enter Route 202 heading South or West in order for the amount of traffic assigned to the King of Prussia evacuation corridor to be handled by the single lane ramps and interchanges in the amount of time estimated (see LEA Finding 155 ). That West and South 202 traffic is not therefore simulated as it would affect the capacity of Route 202 to handle other EPZ traffic including that from Phoenixville and Schuylkill Township. This can be seen in a numerical way from material and procedures in evidence by examining the tables in APP10 of the ETE (APPL EXH E-67) with reference to the maps in APP 11 and seeing that (as per the principles described in detail on the record at Klimm TR13846- 865 ) that no movement of traffic is simulated from nodes 113 or 405 to node 410 which is the entry onto Route 202 of the Chester County Traffic referenced above.

This lack of simulation could spell disaster in a real emergency if capacity would therefore be lacking on 202 in a similar way to Dr. Urbanik's discussion of the Pa. Turnpike situation. None of this assumes any entry onto 202 of non-EPZ traffic from the congested High Tech Corridor along 202 in the whole area which represents a continuation of the Valley Forge -King of Prussia development into Chester County. The record show no access control of the type postulated now for the rest of the King of Prussia limited access routes to this corridor which is also the subject of Dr. Urbanik's concern and part of LEA's contention as part of the King of Prussia - Valley Forge area. For instance the Schuylkill Township-Valley Forge corridor enters 202 here.

LEA believes that these are issues material to the safety of the public and testified to by Dr. Urbanik but not dealt with by the Board by a license condition with no opportunity for LEA to cross-examine the corrective actions accepted by the Staff in this relatively complicated and intricate matter of a comprehensive traffic plan to assure that traffic assumed to be able to leave the EPZ can in fact do so. And in this connection LEA wishes to point out that at a 20 foot per car assumption which is part of the ETE ( Kimm TR13,830 ) the queuing of literally thousands of cars along a main evacuation corridor due to poor analysis of conditions and an incomplete traffic control plan could have the disastrous effect of backing up traffic literally miles into the EPZ. For example just 1000 cars x 20 feet is nearly 4 miles. Furthermore, at best assuming that all of the ETE assumptions can be carried out and the evacuation routes controlled efficiently and accurately, traffic moves very slowly in these corridors and it takes a vehicle entering the evacuation traffic stream at T=150 minutes for instance which is at the end of the assumed response curve for vehicle entry, up to two hours(T=270 Minutes) JUST TO REACH THE EPZ BOUNDARY in the King of Prussia direction, only a matter of a maximum of 8 miles from home. This is only meant to roughly indicate (as were the more detailed calculations in LEA Finding 83 the criticality of these heavy evacuation corridors to a timely and effective measure of traffic control. As Dr. Urbanik testifies at Tr. 19277, the Limerick Site is unusual;

The EPZ exists in a bigger environment. And at most sites that bigger environment is yet generally rural. But in some sites that environment may be urban.

"And in this case, in those portions beyond the EPZ that are urban, one needs to take any measures that would be necessary to assure that people that reach the EPZ can, in fact, go beyond the EPZ." (Urbanik TR 19,277 lines 11-24)

From LEA Proposed Findings

121) King of Prussia is what most people commonly recognize as being really Upper Merion Township. It is the heart of the community and Valley Forge National Park is in fact within Upper Merion Township. About two thirds of the land area of the Park is within Upper Merion Township. (Wagenmann TR 17,419) The western end of Upper Merion Township to Route 363 "is an industrial commercial zone that is intensively developed. A high percentage of the area is paved." (Wagenmann TR 17,420)

122) Mr. Wagenmann, currently Township Manager of Upper Merion Township, was assistant Township Manager of Lower Paxton Township, Dauphin County, which is 2-2½ miles from the edge of Harrisburg, Pa. Lower Paxton Township is in the vicinity of the Three Mile Island Nuclear Plant. Mr. Wagenmann's duties included working with the Township's emergency plan, which did not involve preparation for a nuclear emergency. There was a nuclear emergency during the time Mr. Wagenmann was Assistant Township Manager. Mr. Wagenmann had occasion to witness spontaneous evacuation at that time. (Wagenmann TR 17,418-19) The FOE representative's question as to whether Mr. Wagenmann was of the opinion that such a spontaneous evacuation could happen in Upper Merion was objected to by the Applicant as "beyond the scope of the contention," and the objection was sustained by Judge Hoyt. (Wagenmann TR 17,419 line 13) (Also at TR 17,480)

145) The evacuation route in Upper Merion Township comes down what is called the Pottstown or Countyline Expressway to the interchange with Route 202 Northbound. It takes 202 Northbound to the Schuylkill Expressway extension. Evacuees will then pick up the Schuylkill Expressway Westbound to the Pennsylvania Turn-

pike, which they will enter, and then proceed eastward on the Turnpike. The turn from the Countyline ( or Pottstown ) Expressway onto Route 202 is an interchange ramp of approximately a 270 degree turn. There is a similar 270 degree turn from 202 onto the Schuylkill Expressway. Route 202 and the Expressway are very high traffic volume roadways at those locations within Upper Merion Township. They handle approximately 60,000 vehicles per day. (Wagenmann TR 17,450 ). " The Schuylkill Expressway ramp is a clover leaf style ramp so therefore traffic that would be entering off of Route 202 Northbound to pick up the Schuylkill Expressway Westbound or the Turnpike would be crossing or have to cross the path of traffic that was exiting the Expressway Westbound to pick up the off ramp for Route 202 Southbound." It is a highly congested area and there are frequent accidents. Cars have to slow down and the ramps are single lane on and single lane off. (Wagenmann TR 17,451 ) Compare to Klimm's simplified version in Board's Finding 104

146) Route 202 handles approximately 60,000 + vehicles per day. That would be in both directions. ( Wagenmann TR 17,468 )

Mr. Wagenmann describes at TR 17,469- TR 17,470 lines 10 through line 23, the kinds of day to day traffic information available to Upper Merion Township, which is the basis for charts in the Upper Merion Township Wide Traffic Study (marked as LEA Exhb. E-56)



123) The current population of Upper Merion Township is approximately 27,000 people. (Wagenmann TR 17,436). Upper Merion uses an estimate of 40,000 people who work in Upper Merion. (17,436 line 13). Each of 2 shopping malls in the King of Prussia area can get in excess of 100,000 shoppers during peak shopping periods, according to the malls own estimate. During a normal heavy shopping day you could have approximately a quarter of a million shoppers (Wagenmann TR 17,437)

124) Shoppers, workers, and visitors enter Upper Merion Township by routes 363, route 23, 202 east and west, the Pennsylvania Turnpike east and west, the Schuylkill Expressway, and North and South Gulph Road. All these roadways serve as access highways into and out of Upper Merion Township. (Wagenmann TR 17,439)

Also see LEA proposed Findings 68 and 69.

The designation of a few traffic control points does not meet the concerns of Dr. Urbanik, especially in view of his not reviewing the new arrangements (see Giordano Memo 5/17 which states that only the Pa. State Police have reviewed the plan & HMM). In fact, there is no mention in this list of TCP's of the single new TCP which Dr. Urbanik did specifically mention--that at the Downingtown Interchange of the Turnpike. That control point was considered by the NRC Staff witness to be needed to control traffic which could otherwise enter the Turnpike and affect the King of Prussia corridor. (Urbanik, Tr. 19,237 and LEA proposal finding 39,40,41)

Outside the EPZ in the Valley Forge Area for instance, it is assumed that 30 minutes following notification, evacuating EPZ traffic will not be affected by pre-existing traffic or flow since it was a planning assumption that non-EPZ vehicles access to all evacuation links would be restricted such that those vehicles would not be on those roadways at the time evacuation loading begins 30 minutes after notification. (Klimm, TR 13,869-870). The same principles apply to all links including those south of the EPZ.

Mr. Waters did not make the decision to use the King of Prussia Plaza as a transportation staging area and does not know who made that decision. ( Waters TR 17,447 )

129) Mr. Waters has talked to Mr. Bigelow about these plans. The Upper Merion Township Supervisors are aware of the fact that Upper Merion is not within the 10 mile radius and aware of the fact that there is a staging area in Upper Merion Township. The Upper Merion Emergency Management Co-ordinator has not talked with emergency planning people about plans to block off highways that run through the township, or heard any plan mentioned.  
( TR 17,448 )

130) In regards to Route 202, Mr. wagenmann is certain that stopping traffic would create major congestion. He has seen it stopped for accidents and the results were " Traffic jams that were many miles long." ( TR 17, 449 )

NUREG 0654 App 4-5 III TRaffic Capacity states that " Care shall be taken to avoid depending only on high-capacity interstate and similar type routes because of limitations of on-ramp capacities. Alternatively, special traffic management plans may be developed to effectively utilize available capacity."

See PEMA MEMO 5/16/85 attached to FEMA 5/30/85MEMO From Krimm  
The 17 traffic control points listed on pg4&5 hardly constitute a " special traffic management plan " as referenced in NUREG 0654 app 4-5 iii. In fact a comparison with those traffic control points already before the Board and the Parties during the hearings ( as were reflected in the Montgomery County RERP, the ETE. and the testimony of Mr. Klimm tr13869 show that very little has been added to satisfy the concerns of NRC Staff witness Dr. Urbanik beyond what was already reviewed at the time by him and found to be inadequate to insure the implicit assumption that traffic would continue to move beyond the EPZ boundry.

54) There are essentially no traffic control points beyond the Emergency Planning Zone. (Urbanik TR 19,278 lines 24-25) The areas of concern are to the more urbanized areas to the south and to the east generally. (Urbanik TR 19,281) The location of traffic control points needs to be analyzed in a broad context, and Dr. Urbanik does not attempt to state exactly the points with which he is concerned because "somebody might miss a point that I didn't say." (Urbanik TR 19,281, lines 6-10)

CRITICALITY OF ACCURATE AND EFFICIENT TRAFFIC CONTROL AND  
PLANNING TO DOSE SAVINGS AND SAFETY OF THE PUBLIC

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65) For winter weekday, fair weather conditions, the estimated evacuation time for the full EPZ is 4 hours, 50 minutes, according to pg. 6-7 and pg. 6-8 of the Evacuation Time Estimate Study prepared by the Applicants Consultant HMM and marked Applicants Exhb. E-67. "This time is the same for the corresponding Montgomery County Analysis Area. This evacuation time is influenced primarily by the capacity limitations of access ramps to Route 363 and to the Pennsylvania Turnpike in the extreme southeast corner of the EPZ (i.e., just east of Valley Forge National Park). Another location where queueing is indicated is along a section of Route 422 eastbound in Collegeville Borough." (Appl. Exhb. E-67 pg. 6-8) It is clear from the above that the King of Prussia-Valley Forge area is critical not only to the evacuation of the Montgomery County EPZ, but sets in effect the outside limit for the whole EPZ's evacuation time.

Clearly the doctrine of " irreparable harm " is inherent in the NRC regulation requiring reasonable assurance that protective actions can and will be taken prior to operation above 5% rated power. Operation of a fixed nuclear facility above 5% rated power is therefore by NRC definition a hazard to the public if it should occur without what amounts to a workable evacuation plan.

Each amount of such operation without an adequate plan would constitute an unnecessary and undue risk imposed upon the members of LEA and the public.

The ASLB has improperly delegated its responsibility to the NRC Staff, through the Director of the Office of Nuclear Reactor Regulation to receive and make a determination on the verification of the license condition imposed by the ASLB's order with regard to the implementation of traffic control in the King of Prussia area.

"While certain matters may be "left to" the staff to resolve following the hearings" (Consolidated Edison Co. of NY (Indian Point Station, Unit 2), 7 AEC 947, 951-952(1974)) these matters typically are of a minor nature and/or are such that on-the- record procedures, including cross-examination, would be unlikely to affect the result. " San Onofre <sup>15 NRC</sup> 1216

" But there are limits to the approach of leaving an open matter for Staff resolution..." Beyond these limits "Such an approach would effectively deprive an intervenor of an on-the- record hearing on the adequacy of the emergency plans supporting the license, in violation of Section 189A of the Atomic Energy Act." <sup>15 NRC</sup> San Onofre 1217

And in the Indian Point supra. decision the Commission stated  
" the 'post-hearing' approach should be employed sparingly and only in clear cases" 7 AEC at 952.

In San Onofre the Board found one planning defect on which an opportunity for further hearing is required. "Questions of adequacy on a subject of this complexity involve large elements of judgment and expertise. These are the kinds of questions for which cross-examination is required- in the words of the Administrative Procedure Act (5 U.S.C. 556(C)) "for a full and true disclosure of the facts."

In its ruling at 120 on traffic, the Board does not state what process or Agency will be used to provide verification to the Staff that there is "sufficient" assurance "that all the traffic evacuating along the Route 363-to-Pennsylvania Turnpike can continue to move upon reaching the EPZ boundry" It is not stated whether FEMA or PEMA neither of which felt they had enough expertise at hearing time to testify as to the adequacy of the traffic plan and the Evacuation Time Estimate or NRC Staff consultant Dr. Urbanik, who under cross-examination testified to the problem supposed to be addressed and who was the witness who most caused the license condition to be considered needed, will be called upon to verify that his concerns have been met. Even if he were, LEA would require the right to cross-examine him especially since it was only through cross-examination that his testimony in the first place led to at least partial proof of LEA's original traffic concerns. (tr 19281 ) It should be noted that in the context of all the traffic testimony and material brought before this Board LEA only had 30 minutes to cross examine this key witness due to a time limit imposed by this Board.

Furthermore, since the record is clear that at the hearing time neither Upper Merion or Montgomery County officials or emergency coordinators were seen to have knowledge of any traffic planning principle such as that outlined by the Applicant's witness Mr. Klimm that is of preventing access to the major routes in the King of Prussia area to all but traffic originating in the EPZ by means of a relatively few traffic control points, LEA requires the opportunity to cross-examine the relevant authorities as to the intent to implement such measures and the extent of preparation. (see LEA Proposed Findings 317, 129, 242)



EPZ traffic needs to use the full capacity of these evacuation corridors. There are several problems here. One is the amount of time required for non-EPZ, but pre-existing flow on these corridors to clear out before the EPZ traffic needs the capacity. This process of clearing out only begins once traffic control is established, and depending on the time of day and the choices allowed such non-EPZ traffic vis-a-vis its normal destinations, could be a significant problem affecting the evacuation time estimates beyond the 10-20% error implicit in its methodology. Secondly, there is the kind of ongoing downstream access of non-EPZ traffic from entrances far away from the few assumed traffic control points on entrances near the EPZ. An example of this is the Pennsylvania Turnpike situation of concern to Dr. Urbanik, but the instances of 202 North and South, the Schuylkill Expressway and the County Line Expressway represent a parallel problem. Thirdly, a lack of complete and integrated traffic planning outside the EPZ results in poor choices which would affect overall plan workability in unexpected ways. For example, the location of a transportation staging area at the King of Prussia Plaza if 100,000-200,000 shoppers and workers in the area were beginning to enter the roads of Upper Merion Township, which have not been closed to them and reserved for EPZ traffic, could seriously affect the feasibility of evacuation of the school or transport-dependent population dependent on buses to be processed through that area. Shutting down major interstate routes and thereby causing congestion at the access controlled ramps could delay resources from ever reaching, let alone leaving, the King of Prussia Plaza staging area in a time range consistent with the emergency plans and evacuation time estimates. Finally, at some point, traffic control requires more resources than one officer,

ACCORDING TO THE REGULATIONS OF 10CFR 50.47(C)(2) VALLEY FORGE NATIONAL PARK HAS A DE FACTO EVACUATION PLAN AND TRAFFIC CONTROL FUNCTION WHICH FOR THE SAKE OF CONSISTENCY AND PROPER REVIEW SHOULD BE CONSIDERED PART OF THE EPZ

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The Board in Finding 120 errs as a matter of fact and law when it rules that there is no reason shown in this record for including Valley Forge Park and Marsh Creek State Park in the Emergency Planning Zone. With respect to Valley Forge National Park the Board's Findings 92-102 LEA agrees with most of the factual material in them , but would add to #99 the point( which can be seen visually from the Board's map Figure 2) that a significant portion of Valley Forge Park is within Schuylkill Township the rest of which township is within the EPZ. LEA Proposed Findings 86-99 supplement the material the Board has emphasized. Also important is the point that North Gulph road ( Route 363 ) is a two lane road which is the main access road to Valley Forge Park ( LEA Finding 102, Wagen mann Tr. 17431-3). North Gulf Rd. actually merges with what is called the Countyline or Pottstown Expressway and crosses the river to Trooper Rd. ( see LEA Proposed Finding 69, Wagenmann Tr. 17,472)

Given the Valley Forge Park's decision to notify its visitors most of whom are expected to voluntarily evacuate (Board Finding 96), given the traffic control responsibilities assigned to Park Rangers, given the physical inclusion within the Park of key intersections of the King of Prussia Evacuation Corridor (see Board's Figure 2 or Commonwealth Exh E-9 ) there are topographical demographic and emergency planning reasons why Valley Forge National Park is already de facto part of the Limerick Emergency Planning Zone. The question facing the ASLB Board and now the Appeals Board is whether the guidance or regulations of the Commission could mandate inclusion or some procedure to verify that there are not some non-emergency planning or non-safety reason why Valley Forge National Park has not been included in the EPZ. Furthermore, the NRC must weigh the issue as to whether there are significant emergency planning or legal procedural reasons why inclusion should be done.

Steve Grenz, Vice-Chairman of the Uwchlan Township Board of Supervisors, testified to a concern the Township EMC Mr. Minihan had relayed to him concerning traffic. He considered that Routes 100 and Route 113 were bad enough during rush hour and based upon that Mr. Grenz doesn't know whether the Uwchlan Plan is capable of being implemented, in reference to that kind of total emergency. "I would doubt that a 2 lane highway could handle something like that." (Grenz, trans 17963)

Mr. Grenz anticipates that based upon his knowledge of people in the Township that in an evacuation that traffic from outside the EPZ in Uwchlan Township would be on the routes and contribute to the amount of vehicles on the road. (Grenz trans 17941)

In reviewing the draft Uwchlan RERP Vice-Chairman Grenz and the other Supervisors would take a close look at the roads and intersections and consider the volume of traffic traveling on these roads. Some of the people the people that are in the zone will have to use the roads outside the EPZ to leave where they live. The Traffic Engineering Plan LEA EXH-45 contains the kind of information that they will consider. It is the official traffic plan for the township (see Resolution LEA EXH E-45) (Grenz, 17929)

Improperly not admitted into evidence was the Uwchlan Twp. "Traffic Engineering Master Plan Study" at tr. 17190. The rejection of this document material to the traffic routings and traffic base data of one of the two areas admitted to be litigated under LEA seriously limits the record as to the substance of the contention,

**NEED FOR HEARINGS ON DRILLS AND LICENSE CONDITIONS FOR A  
FULL AND TRUE DISCLOSURE OF THE FACTS**

Furthermore, additional hearings are necessary to determine compliance with the 2 license conditions imposed by the ASLB's Order with regard to (1) the verifiability of 24 hour municipal staffing capabilities and (2) local traffic control arrangements, especially as they affect the King of Prussia evacuation Corridors, and the more urbanized areas east and south of the EPZ as well as (3) to evaluate the status of implementability and adoptability of municipal RERP's where problems were identified during testimony on this record which would preclude workability of the respective RERP, or where a lack of sufficient knowledge or readiness resulted in uncertainty whether the RERP could be implemented.

Specific examples to be considered are the communications problems addressed in the testimony of Lower Providence Supervisor Chairman Richard T. Brown at TR 18,151 & TR 18,134 and Mr. Harry Miller, Lower Providence Twp. Fire Chief at TR 18,142 which would preclude implementability of the Lower Providence Twp. RERP. LEA will provide

At Tr. 8086 during the Oral Argument on Admissibility of Contentions, LEA agreed to withdraw its contention on drills and exercises (provisionally labelled LEA XVII-A at Tr. 8086 at 22) located on page 42 of LEA's Off-site Planning Contentions filed on January 31, 1984 before the then ASLB headed by Judge Brenner. This agreement was based on information provided to LEA during the hearings by Judge Brenner and the Parties and in the spirit of avoiding unnecessary litigation. The representation made to LEA was that there would be a FEMA hearing or public meeting subsequent to the completion of the exercise(s) but prior to the reviewing agencies issuing a final report. (Tr 8086) Ms. Wright of the NRC Staff and Ms Ferkin of PEMA concurred in their assurances that LEA would have input and a right to comment at that public meeting. However, FEMA's Mr. Krimm wrote on May 30 1985 to the NRC's Mr. Jordan that the last Of the two P.I.D. license conditions had been verified by FEMA; and with Mr. Krimm's memo to the NRC

of May 21, 1985 which contains FEMA's "reasonable assurance" finding on page 2 based in part on the attached FEMA Exercise Evaluation Report for the April 10, 1985 drill, it has become apparent that no public meeting is scheduled prior to the reviewing agencies final report on this completed series of exercises beginning on July 25th 1984. LEA seeks based on 10CFR 50.47(a)(2) Union of Concerned Scientists v. NRC, 735 F.2d. 1437 (D.C. Cir. 1984) the aforesaid meeting or equivalent opportunity for comment and questions "before the reviewing agencies issue a final report" ( Judge Brenner, tr.8086 at15). In lieu of that LEA would seek to litigate the filed contention which LEA in good faith stipulated to withdraw "based on the information provided" (LEA Representative Zitzer, tr. 8086 at24) LEA applies at this time to the Appeals Board in this since the matter involves a reversible error of the ASLB on matters relating to the admission of an Off-site Emergency Planning Contention, and since the current ASLB by its Order of May 24, 1985 authorizing the issuance of a full power license has in effect moved LEA to the Appeals Board in this as in LEA's other claims of ASLB Board error.

FUNDAMENTAL BOARD ERROR IN INTERPRETING LEA-26 IS PREJUDICIAL  
TO LEA, WHILE PERSUASIVE MUNICIPAL EVIDENCE SUPPORTS CONTENTION

Notification and Route Alerting Board Findings 460-470

The Board simply fails to make the distinction between "implementing an evacuation alert" and merely sounding the sirens. Whereas sounding the sirens, though not route alerting, could be done with minimal County and municipal workers, there is clear indication that in order to implement an evacuation significant levels of personnel must be in place. For example, traffic control personnel must be in place, in part so that access to evacuation corridors can be directed. This is especially true in the King of Prussia area. (Klimm, Tr. 13,942) Ambulance, fire, police, and municipal staff all have a key role to play in an evacuation scenario. It is the thrust of this contention that notification of these personnel should not delay the ability to call for an evacuation.

The failure of the Board to make this distinction which is clear in the wording of the contention itself prejudices its evaluation and admission of evidence.

Sheltering is, according to the Bureau of Radiation Protection, a last resort to be used only when nothing else is available. (Reilly, Tr. 19,346 )

Strongly material to this contention is the testimony of Lower Providence Supervisor Chairman Rick Brown at Tr. 18151, Tr 18,134, and the rest of his panel.



**LEA-1: THERE IS NO REASONABLE ASSURANCE THAT THE PRESENT STATE OF PLANNING IS PREDICTIVE OF FINAL APPROVAL OR IMPLEMENTABILITY**

LEA Contention 1, which addresses the status of adoptability and implementability of the RERP's was improperly dismissed by the ASLB in its Third Partial Initial Decision, based largely on the provisions of Penna. P.L. 1332, which all municipal and school district witnesses said they would try not to violate, regardless of whether problems with the RERP's were still, in their own view, unresolved in their jurisdictions. It is improper for the Board to make a predictive finding of reasonable assurance based on good intentions to attempt to comply with a general state emergency planning law, since it is really the state of adoptability and implementability which the municipality or school district has actually achieved that can be reasonably relied upon to predict a state of adequate preparedness. It is clear that the mere intent of a local jurisdiction to work on the problems that it has so far identified, does not provide sufficient basis for an assumption that the problems will necessarily be resolved or that new problems won't be discovered as the plan is reviewed and readied for adoption. It is particularly significant that even now, only a few of the 43 municipalities within the Limerick EPZ have adopted a radiological emergency response plan, despite the testimony provided by Energy Consultants that review and consideration for adoption was to occur from February to April 1985. In addition, the testimony provided by government officials subpoenaed by LEA indicates that many public officials not critical of local plans had delegated responsibility for the plan development to others, but had not yet begun any substantive plan review. The record does not indicate the results of that local review, except for the usually thirdhand testimony provided by Energy Consultants. Under current NRC precedent, LEA understands that plan adoption is not necessarily a prerequisite to NRC approval for full power operation, nonetheless, significant deficiencies which exist at the municipal level, and which are judged to be serious enough by the responsible municipal officials to preclude plan workability and adoption cannot be dismissed proforma by the ASLB, FEMA or PEMA.

Under the Pennsylvania Commonwealth system of government, the counties have no legal authority over the municipalities, but each has its own responsibilities with the municipalities being more fundamental. Therefore, the testimony of the County Emergency Coordinators can at best be limited to the county RERP, which is in a coordinating and supplementary function, rather than in an implementary role. The existence of P.L. 1332 and the law abiding tendencies of public officials proves nothing about the proposed RERP's. In addition, P.L. 1332 clearly shows the pre-eminent role of the municipality in the Commonwealth of Pa. with regard to general emergency planning.

The counties consider that the plans are still in a draft stage and subject to changes, and they are not yet ready to send them to PEMA for review. (Hippert TR 19,519) PEMA has at times asked for the balance of the draft plans, but the counties are reluctant to send the plans in without the approval of the municipalities, the same as PEMA is. Some of the municipalities consider the plans in draft form, not their plans and various other problems that they have mentioned. That is the reason according to Mr. Hippert (Hippert TR 19,597)

Since December 1983 PEMA has had numerous letters from school districts and municipalities bringing up the issue of why these plans were submitted in 1983 without their expressed approval. This has also been brought up in public meetings that Mr. Hippert attended. He stated, "When we submitted the plans in 1983, we were under what we now find is the erroneous assumption that they had all been informed what we were doing. So here again, we are being very cautious not to submit anything that has not come through the proper channels." (Hippert TR 19,597-19,598)

Furthermore, the July 25 and Nov. 20 Limerick Exercise participation is not predictive that municipalities or school districts will achieve a "reasonable assurance" standard of emergency preparedness for radiological emergencies. No legal connection can be drawn between drill participation in a practice drill and the endorsement, approval and workability of a proposed RERP in a real emergency.

Dr. Giamo considered the two exercises (July 25 and November 20) to have been training sessions (Giamo TR 19,142) and is apparantly unaware of any regulatory or legal implications others may be trying to draw from his township's participations.

The Boro of Phoenixville (14,000 pop) did not participate in any of the drills conducted to be observed by FEMA. Whatever participation on the part of somebody did occur on July 25th 1984 was not a legally sanctioned drill by the Boro of Phoenixville. (August Tr 18897 ) In fact, in a specific vote the Boro Council voted against any participation. The mayor who under the laws of Pennsylvania is a so-called "weak" mayor, was not entitled to order participation according to the boro solicitor ( August, TR 18899 ) The Phoenixville activities on July 25 th occured not at Boro Hall but at the Phoenixville Hospital.

Therefor FEMA erred when it found that for the case of Phoenixville those aspects of the purported Boro plan requiring demonstration had in fact been verified.

The Board clearly and as a matter of law erred in accepting as probative third hand testimony offered by the Applicants Energy Consultants panel.

That is , testimony of the following sort is clearly not admissable as allowable hearsay because it is at least at a third remove.

Example: Mr. Bradshaw of EC testifies as to what a EC staff person such as Ron Deck relays to him from a third person at the municipal level what the local situation is, often involving the intentions of a 4th person who is listed as being a township volunteer.

In addition most of the EC testimony is tautological, in that, EC who wrote and coordinated participation in the plan , obviously adds very little probative value when EC maintains that the plan is adequate. If they didn't feel it could be considered adequate presumably they would be in a position to change the problem they perceived.

Mr. Bradshaw has no direct knowledge of whether or not supervisors or boro council members have reviewed the plans. To the best of his knowledge, no municipalities have set a date for review, public input and adoption of their respective municipal plans. (Bradshaw TR 17,205).

Mr. Bradshaw has had very limited direct exposure or discussions with municipalities. He is aware of no Board or individual who has said that they will indeed adopt the proposed Radiological Emergency Response Plan. (Bradshaw, TR 17,211) Mr. Bradshaw's testimony that the plans provide assurance is limited to those plans "as amended" for municipalities who participated in the July 25, 1984 test drill. Those are the plans in the Applicant's exhibit list, with the exception of municipalities who participated in the November 20, 1984 drill. (Bradshaw, TR 17,211-212).

It was Mr. Deck & Mr. Dunn who worked on the municipal plan development for Energy Consultants (Bradshaw TR 17,287).

LEA Findings 312-317 make it clear in quoting from the testimony of Montgomery County Commissioner Chairman Paul Bartle that adoption of the proposed Montgomery County RERP is not certain and that in fact Chairman Bartle has "little faith" that a winter night evacuation of 60,000 Montgomery County residents could be done but that as the conditions improved "you are going to get more out safely". Mr. Bartle was incorrect in using the figure 60,000, when in fact, the population figures contained in Appl. Exhb E-67 indicate 153,184 people for a winter week day population in Montgomery County and 124,496 for a winter week night scenario, such as he describes. A knowledge of the true population and larger dimensions of the problem can be reasonably be expected to increase Chairman Bartle's concerns, who stated, "I will use my own good common sense and judgement in the end to determine what I would do". (Bartle TR 18,620) Furthermore, Montgomery County has a history and a record of opposing Limerick, according to Chairman Bartle (Bartle TR 18,680, LEA Exhb E-55) Therefore, it cannot be assumed that there is reasonable assurance that the Montgomery County RERP will be judged to be workable and adoptable by local authorities, especially in such aspects as the King of Prussia Traffic plan, implementation of the Bucks County Support Plan, provision of buses and drivers for school evacuation, estimation of the transport dependent population and the provision of necessary transportation resources, telephone communications reliability such as the concerns of Lower Providence Twp. officials, and matters pertaining to the provision of sufficient ambulance resources. Based on these concerns, there is no basis to make a predictive finding that the Montgomery County RERP can and will be implemented, as the Applicant contends, and the ASLB seems to accept.

Although all public officials intend to try and comply with state law, there are, as Supervisor Chairman Brown of Lower Providence (pop 18,000) points out situations where municipalities have been unable to comply with all sorts of regulations due to lack of means to do it.

Chairman Brown's testimony on PL1332 illuminates the local reality: "they are [mandatory], but a lot of municipalities have not conformed to the law. We also have mandatory guidelines for solid waste which haven't been directed yet. We just don't have the manpower and the staff to do everything that is

necessary to do. Solid waste and hazardous waste is one of these things that we have to address along with this. We have some other documents like this, we cannot do everything at once. We are limited in our finances to do all these things". (Brown TR 18.227).

The issue in LEA 1 expresses it, is not the willingness to try to comply with a general ~~State~~ Law PL 1332, and to cooperate with all relevant agencies, but rather the ability to comply and how that is planned to be implemented. A predictive finding cannot be simply based on a willingness to try, but on an expectation that performance will be achieved.

THERE IS NO EVIDENCE IN THIS RECORD TO SUPPORT A REASONABLE ASSURANCE FINDING THAT THERE IS SUFFICIENT MUNICIPAL STAFFING AS REQUIRED IN 10 CFR 50.47 (B) (1) FOR CONTINUOUS OPERATION

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#### LEA-2

The unadopted RERPs fail to provide reasonable assurance that each principal response organization has sufficient staff to respond to and to augment its initial response on a 24-hour continual basis, or that the assigned staff can respond in a prompt manner in case of a radiological emergency at Limerick.

According to FEMA Region III policy, FEMA will not evaluate substitute page changes updating staffing changes, such as those contained in the attachments to FEMA Exhb E-3 unless the information is transmitted to them through the proper channels by FEMA or the NRC under the provisions of the MOU. (Asher TR 20,322-20,323)



The attachments to FEMA Exhb E-3 represent pages from 18 different municipal plans which were entered into evidence in this proceeding by the Applicant, representing updates in staffing which occurred during November, December, and early January. (Bradshaw TR 20,338) There are updated pages from 19 municipal plans attached to FEMA Exhb E-3. (Judge Hoyt TR 20,342-344)

The information was provided to Energy Consultants in writing and verbally over the telephone by the emergency planners of those municipalities. Mr. Bradshaw was unsure if the changes had been transmitted by the municipalities to the county offices of emergency preparedness. (Bradshaw TR, 20,338-20,341) Using the example of Schuylkill Township, Mr. Bradshaw did not believe that it would be a routine matter for Mr. Vutz to forward that sort of updated information to Mr. Campbell, apart from a complete plan review. (Bradshaw TR 20,341)

FEMA regards municipal governments in the Commonwealth of Pennsylvania as principal organizations (Asher and Kinard ff. TR 20150 at 3).

Applicant's witness from Energy Consultants, Mr. Bradshaw testified that only about 50 positions are now manned by PECO volunteers, out of 400 positions needed in the municipal plans. (Bradshaw TR 17293) However, according to the NRC Staff Proposed Finding 378(D) information supplied by Energy Consultants dated August 27, 1984 (LEA Exhb. E-37) indicated that "the staffing needs of most municipal EOC's had been dealt with through the assistance of Philadelphia Electric Company personnel".

According to Board Finding 523, FEMA witness, Mr. Kinard said that he would accept Mr. Bradshaw's testimony regarding current staffing of the various jurisdictions subject to verification by the jurisdiction involved. (Kinard TR 20,253-20-257) Also, FEMA has relied on drill results to indicate that staffing deficiencies, as for example, in 16 municipalities subsequent to the July 25, 1984 Exercise (FEMA Exhb. E-4, page 135; see "Summary of Category A Deficiencies")

Clearly the "predictive finding" rule cannot be used to depart completely from the present state of implementability of the municipal or school district RERP's. The basis for a predictive finding must be fact though certainly from the basis of fact projection and prediction as to the future more complete state of reasonable assurance that protective actions can and will be taken . could in many cases be properly made. San Onofre ,supra, makes clear the kind of predictive finding which is permissible and the kind of broader extrapolation or projection which is beyond any "predictive finding rule".

The Applicant has had ample time to develop and promote workable evacuation plans for the Limerick area. Of course, it is performance that counts. Should municipal support for such plans be lacking, the Applicant could propose to implement the plan aspects itself, as is implicit in its providing some 400 PECO employee volunteers for the July 25th, 1984 full scale exercise due to a lack of municipal staff volunteers. However, whatever incipient PECO employee response organization which was demonstrated on that day last year has according to testimony in this record not been maintained and continued by most municipalities at the local level (Bradshaw tr17293 ) Therefore the results of the July 25th drill cannot be held to be predictive of the present let alone the future state of adequacy of municipal plans.

The ASLB acknowledges that the thrust of LEA-2 is "that unmet municipal staffing needs preclude a reasonable assurance that the requirement in 10 CFR § 50.47(b)(1), i.e., that each principal response organization has sufficient staff for initial and continuous response, will be met. (Board Finding 507)

The ASLB further acknowledges the validity of LEA's concerns as stated in this contention by concluding that prior to operation above 5% of rated power FEMA must receive verification of satisfaction of the unmet staffing needs. (Board Finding 524). However, the Board ignores the testimony of FEMA's witness Mr. Kinnard at TR 20,166 which states that the names of response personnel would have to be officially recorded in the plans before FEMA would regard the situation as being resolved. Instead, in Board Finding 523, the ASLB states that Mr. Kinard testified that he would accept PECO's consultant, Mr. Bradshaw's testimony regarding current staffing of the various jurisdictions subject to verification by the jurisdiction involved and that with such verification the "Category A" deficiency stated in its April 1984 Interim Findings would be satisfied and resolved. Kinard TR 20253-57. It is unclear what procedure will be used to verify that this unmet need has been resolved, and whether or not LEA will have an opportunity to review and comment on the information provided within the context of an adjudicatory proceeding.

Furthermore, LEA believes the ASLB should give more weight to the significance of the identified municipal staffing deficiencies. As stated in 10 CFR § 50.47(b)(1), municipal staffing is a critical part of evacuation plan workability and implementability. The license condition imposed by the ASLB is only a partial recognition of the fact that most of the Applicant's volunteers who participated in the July 25 Exercise are not now included in the municipal plans as suitable volunteers. Therefore, a FEMA evaluation on the sufficiency of municipal staffing based on the July 25 Exercise may be hopelessly outdated. Evidence in this record shows that the 400 PECO "volunteers" who participated at the municipal level in the July 25 Exercise have largely, with the exception of 50 or so, not been accepted or incorporated into local municipal staffing

positions. A review of the FEMA evaluation combining the levels of staffing in the July 25 and November 20 Exercises indicates that the combination of these two staffing levels cannot reflect the current situation, since, according to the Applicants witnesses own testimony, most of the PECO "volunteers" used last summer are not being used by the municipalities.

Through procedural errors and rulings which unduly limited, constrained, or narrowed the scope of the emergency response planning litigation, the ASLB prevented LEA from fully challenging and developing a thorough record on unworkable aspects of the RERP's.

Time limits for cross-examination imposed by the ASLB towards the end of the hearings were not adequately weighted towards the importance of witnesses or the number of contentions covered by a particular witness's testimony. Therefore, while there may have been ample time for cross-examination of some witnesses whose testimony was relatively minor, in most cases there was insufficient time to develop a thorough record with regard to the testimony of PEMA and FEMA witnesses and Dr. Urbanik, the NRC Staff's witness on traffic issues relating to LEA-24/FOE-1. LEA attempted repeatedly to obtain the requisite time for key witnesses with testimony on multiple contentions, and maintains that the extended cross-examination of Energy Consultants conducted by LEA, which the Board cites as the reason for time limits thereafter being imposed, was in fact directly proportional to the weight both the Applicant and the Board would give to their testimony and the degree to which the Applicant would rely upon that testimony to attempt to prove its case. Clearly, in the beginning of the hearings, some time was used while LEA's representatives were adjusting to the hearing format, but it was most often the Applicant's objections which contributed to delay, often at the most critical times in cross-examination. The record shows that such objections, even when sustained by the ASLB were often groundless and led to more confusion and imprecision than would have otherwise occurred.

The DRBC recently ( May 29, 1985 ) turned down Philadelphia Electric's main request to obtain cooling water for summer operation from the Blue Marsh Reservoir near Reading ( DRBC Docket D-69-210 CP (Final)(Revised). PECO's secondary and minor request for the substitution of dissolved oxygen monitoring for a long standing 59 degree Schuylkill River temperature limit was approved for this year. However, as PECO admits the lifting of the temperature restriction would only allow a few days of testing this late into the summer in a drought year. PECO has applied to shut down two operating coal plants temporarily and have the water allocation thereby saved be used for Limerick testing. The DRBC will hold its required public hearing on the matter on July 3, 1985 and could vote on the request at their next meeting at the end of July. Even if granted, these requests would only allow up to 25% testing. Therefore, for a couple of months the critical path for Limerick testing is the water and the Applicant will suffer no financial damages while further hearings were held on some of the key issues LEA wishes full and honest disclosure on through cross-examination. Even if a few days of low power just above 5% power were available to the Applicant, the fiscal consequences of the loss of that operation is essentially zero in the context of a 5 month or so test program. Meanwhile, the public would benefit for years from the resolution of the complex evacuation safety issues LEA has raised, remembering too that the Applicant and State and Federal agencies are all more ready to act to resolve th problems before a full power license makes it all somewhat academic and anti-climatic. Therefore, LEA in view of maximizing public safety and minimizing undue risk asks that hearings on the license conditions and other matters be held as soon as possible and prior to issuance of a full power license to test above 5% power. And to conclude, LEA wishes to review by example two of the key and substantive issues involved.

The Board improperly and inaccurately mischaracterizes the testimony of DR. Urbanik in saying that the number of Traffic Control Points within

the EPZ is necessarily far greater than that which would be needed outside the EPZ. Dr. Urbanik indicated that the number might be "somewhat" less but that he couldn't say for sure without further study ( Urbanik, TR19281 ) The difficulty which the Board overlooks in finding for a mere license condition, which difficulty is shown by the record and by evidence improperly excluded is in the development of a coordinated King of Prussia corridor traffic control plan including Route 202 and the Turnpike. People not from the EPZ should also be given alternatives to the major roads reserved for EPZ traffic. This will improve in our view traffic control for everybody and free up incoming routes.

Contrary to the Board's intent as expressed in Board Findings 523-524, the preceding letter from Klimm of FEMA dated May 21, 1985 served to all parties in this proceeding did not in its entirety verify that FEMA had in fact received verification of Mr. Bradshaw's testimony from the municipalities. Since that was the intent of the license condition, LEA believes that it is entitled to know through whatever procedure possible the extent to which FEMA has in fact fulfilled its task. It is LEA's assertion that in lieu of such a specified report and verification LEA has no assurance that the Board's condition has been met, and in any event on such a matter as municipal staffing, which in a way lies at the heart of LEA 1 as well, thorough opportunity for a hearing or other cross examination must be afforded to LEA to find out the true facts of the situation and the basis for FEMA's finding of reasonable assurance.

The two license conditions ordered by the Atomic Safety and Licensing Board's Third Partial Initial Decision on Offsite Emergency Planning are issues which require additional adjudicatory proceedings to verify resolution, prior to full power licensing.

The delegation of these determinations to the NRC Staff precludes any participation by Limerick Ecology Action, Inc. in any adjudicatory proceedings where there would be an opportunity for testimony under oath and cross-examination of witnesses, thus circumventing the adjudicatory safeguards entitled to by LEA and its members.





# Federal Emergency Management Agency

Washington, D.C. 20472

Attach, 1

MAY 30 1985

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: Update on Limerick - Access Control Points at  
King of Prussia

This is an update to my memorandum of May 21, 1985, which provided a finding on offsite planning and preparedness at the Limerick Generating Station. The one remaining condition set forth in the Third Partial Initial Decision issued by the Atomic Safety and Licensing Board (ASLB) on May 7, 1985, requiring a response is:

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

#### FEMA RESPONSE:

FEMA has received verification that traffic control points and access control points will be established and manned to ensure that evacuating traffic could continue moving upon reaching the EPZ boundary. This information will be incorporated into the Montgomery and Chester County plans.

The condition addressing unmet municipal staffing needs was addressed in my memorandum of May 21, 1985. Therefore, the two conditions raised by the ASLB on May 7, 1985, have now been resolved.

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

Attachment  
as Stated

050000 387 TP

Attach 2

~~MAY~~ 17 1985

MEMORANDUM FOR: Richard W. Krimm  
Assistant Associate Director  
Office of Natural and Technological Hazards Programs

FROM: *Paul P. Giordano*  
Paul P. Giordano  
Regional Director

SUBJECT: Traffic Control in Limerick EPZ

The last remaining problem of the Limerick Emergency Planning Zone, as pointed out in the findings of the Atomic Safety and Licensing Board, is addressed in the attachment.

This was surveyed by a traffic engineering firm and reviewed by the Pennsylvania State Police before being submitted to FEMA by the Pennsylvania Emergency Management Agency.

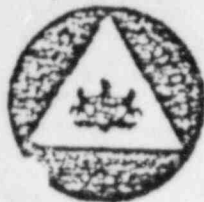
This office feels that this plan offers a reasonable solution to the problem and feels the order issued by the board has now been corrected.

Attachment

cc: Chron  
Limerick

NTH/JAsher/8664/jj/5-17-85

	ORIGINATOR	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE
	JAsher	WPferson	THardy			
Name	<i>JRA</i>	<i>W</i>	<i>TH</i>			
Date	<i>5-17-85</i>	<i>5-17</i>				



PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY  
P.O. BOX 3321  
HARRISBURG, PENNSYLVANIA 17103



May 16, 1985

Attach 3

Mr. Paul Giordano, Director  
Region III  
Federal Emergency Management Agency  
Liberty Square Building  
105 South 7th Street  
Philadelphia, Pennsylvania 19106

Dear Mr. Giordano:

During the Atomic Safety and Licensing Board hearings, relative to offsite emergency response plans for the Limerick Generating Station, concern was expressed regarding traffic control in the King of Prussia area if it became necessary to evacuate the EPZ. This concern was reflected in the Order issued by the Board as part of its May 2, 1985 Third Partial Initial Decision on Offsite Emergency Planning. Specific reference was made in the Order to the requirement that the plans include provisions "to assure that all the traffic evacuating along the Route 363-to-Pennsylvania Turnpike can continue to move upon reaching the EPZ boundary."

The area in question is primarily within Upper Merion Township in Montgomery County, but there is also some impact on the adjoining Tredyffrin Township in Chester County. During the last few weeks the need for additional traffic and access control points has been under review by the townships and counties involved, as well as by EDM Associates, Inc., the firm retained by Philadelphia Electric Company to prepare an "Evacuation Time Estimates" study. As a result of this review, it has been determined that a total of 15 control points are needed in Upper Merion Township and two additional points will be required in Tredyffrin Township. The TCPs and ACPs will be manned by personnel from the respective townships and will be incorporated into the next draft of the Montgomery and Chester County plans. The control points that have been identified are as follows:

Upper Merion Township

<u>Description</u>	<u>Location</u>	<u>No. of Personnel</u>
TCP/ACP	King of Prussia Plaza Goddard Boulevard at Conrad Boulevard	1
TCP	King of Prussia Plaza Goddard Boulevard at Plaza Entrance #6 Gimbels Upper Level/Atrium Building area	1
TCP	King of Prussia Plaza (interior traffic control/security)	2
TCP	Goddard Boulevard at North Gulph Road (Route 363)	1

Mr. Paul Giordano  
May 16, 1985  
Page 2

<u>Description</u>	<u>Location</u>	<u>No. of Personnel</u>
TCP	Route 202 at Goddard Boulevard	1
TCP	Allendale Road at Mother Divine Providence School	1
ACP	County Line Expressway Southbound at Route 23 (Valley Forge Road) off-ramp	1
ACP	County Line Expressway Southbound on-ramp at First Avenue and North Gulf Road (Route 363)	1
TCP/ACP	County Line Expressway Northbound on-ramp at Valley Forge Road Eastbound (Route 23)	1
ACP	County Line Expressway Southbound on-ramp at Valley Forge Road East/Westbound (Route 23)	1
TCP/ACP	County Line Expressway Northbound on-ramp at Valley Forge Road Westbound (Route 23)	1
ACP	County Line Expressway Northbound on-ramp at Route 202 Southbound	1
TCP/ACP	Continental Drive at South Warner Road Route 202 Northbound on-ramp	1
TCP	North Gulph Road (Route 363) at Valley Forge Road (Route 23) intersection	1
ACP	Route 76 Westbound off-ramp to Conrad Boulevard	1

Tredyffrin Township

<u>Description</u>	<u>Location</u>	<u>No. of Personnel</u>
TCP	County Line Expressway Southbound off-ramp onto Route 202 Northbound	1
ACP	County Line Expressway on-ramp Northbound at Route 202 Northbound	1

With the inclusion of these TCPs and ACPs, and provisions for their activation in the respective county plans, PEMA believes there is reasonable assurance that adequate traffic control would exist in the King



# Federal Emergency Management Agency

Washington, D.C. 20472

Attach 4

MAY 21 1985

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

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

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

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

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

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

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



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

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

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

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

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

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



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FEMA RESPONSE:

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

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

FEMA RESPONSE:

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

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

Attachments  
as Stated

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of )  
PHILADELPHIA ELECTRIC COMPANY )  
(Limerick Generating Station, )  
Units 1 and 2 )

Docket Nos. 50-352  
50-353

DOCKETED  
USNRC

85 JUN 18 A11:15

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

CERTIFICATE OF SERVICE

I hereby certify that copies of Limerick Ecology Action's Brief in support of LEA's Appeal of the Third Partial Initial Decision (LBP-85-14) have been served on the following by deposit in the United States Mail, this 13th. day of June 1985.

Christine N. Kohl, Esq.  
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U.S. Nuclear Regulatory  
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Washington, D.C. 20555

Dr. Jerry Harbour  
Administrative Judge  
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June 13, 1985



Phyllis Zitzer, President  
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