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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
METROPOLITAN EDISON COMPANY)
)
(Three Mile Island Nuclear)
Station, Unit No. 1))

Docket No. 50-288
(Restart)



LICENSEE'S MOTION TO RENUMBER
EMERGENCY PLANNING CONTENTIONS

At pages 5113-14 of the transcript of this proceeding, the Board requested that Licensee compile a list of the surviving emergency planning contentions, renumbering them. Licensee prepared a draft of such a list, with an index correlating the original numbering system with the renumbered contentions, and served the documents on the parties with emergency planning contentions by cover memorandum dated November 18, 1980. The November 18, 1980 list was used as a basis for discussion at the November 24 and December 19, 1980 meetings of parties interested in emergency planning issues.

In the November 18, 1980 memorandum, and at the November 24 and December 19, 1980 meetings, Licensee asked that the parties review the draft list for errors; none have been reported to Licensee. Licensee therefore hereby submits the list and index as proposed on November 18, 1980, except as revised to

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reflect both Steven Sholly's withdrawal of contentions in "Response of Intervenors Sholly, ANGRY and Newberry TMI Steering Committee To The Memorandum and Order of November 25, 1980" (12/15/80) and Sholly's "Memorandum" (12/23/80), and the Board's January 27, 1981 bench ruling on ANGRY's oral motion to adopt the then remaining Sholly emergency planning contentions.*

Licensee further moves that the Board adopt the numbering system proposed by Licensee in response to the Board's instruction to Licensee, and that the parties be directed to use the system in the future, to simplify references to emergency planning contentions and to minimize confusion.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

By: 

Robert E. Zanler

Dated: January 30, 1981

* The Board granted ANGRY's motion to adopt Sholly-8(I)b and 8(I)i, and Sholly-9, and denied ANGRY's motion as to all other Sholly emergency planning contentions. See Tr. 11,023-24.

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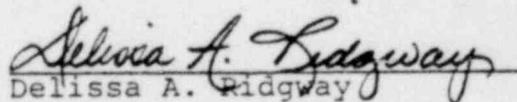
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CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Motion To Renumber Emergency Planning Contentions" were served this 30th day of January, 1981, by deposit in the U. S. mail, first class, postage prepaid, to the parties on the attached Service List.


Delissa A. Ridgway

Dated: January 30, 1981

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*To be addressed in Licensee's testimony on onsite emergency preparedness.

EMERGENCY PLANNING CONTENTIONS

EP-1 (Aamodt)

It is contended that licensee has not made provision for timely dissemination of information in the event of accidental release of airborne radioactive gases or particulates. It is contended that licensee must make information available to the public which will allow appropriate action to be taken to protect persons, livestock, foodstuff and feed in the event of a discharge of significant proportions. All data and plant operating personnel observations relative to all radioactive releases must be transmitted immediately and simultaneously to the NRC, Pennsylvania Department of Environmental Resources, the commissioners of Dauphin, York and Lancaster Counties and the licensee's management. It is further contended that licensee must provide this capability before restart of TMI-1.

EP-2 (Aamodt)

It is contended that present evacuation plans do not provide for care and/or relocation of livestock. It is further contended that such provision should be made before restart of TMI-1.

EP-3 (ANGRY)

The conditions set forth in the NRC's August 9 Order (44 F.R. 47821-25) for TMI-1's resumption of operation are insufficient to provide reasonable assurance that such resumption can occur without endangering the public health and safety for

the reason that they fail to require the development and effectuation of adequate and effective Radiological Emergency Response Plans to protect the population surrounding TMI-1 from the consequences of any future nuclear accident. Such insufficiency is in particular demonstrated by the following flaws:

- 3 (A) There is no requirement that restart be conditioned on the Radiological Emergency Response Plan of the Commonwealth of Pennsylvania being brought into compliance with reasonable standards of adequacy and effectiveness for such plans which include but are not limited to standards promulgated by the NRC itself (e.g., NUREGS 75/111 and 0396; GAO EMD-78-110; H. R. Rept. 96-413);
- 3 (B) There is no requirement that restart be conditioned on the Radiological Emergency Response Plans of local governmental units (counties) surrounding the reactor site being brought into compliance with reasonable standards of adequacy and effectiveness for such plans which include but are not limited to standards promulgated by the NRC itself. (See paragraph (A));
- 3 (C) The NRC's vague instruction to the licensee to "upgrade" in generally unidentified respects its "Off-site monitoring capability" is insufficient to assure that such upgrading will result in the ability to obtain and analyze the type and volume of information

essential for protection of the public health and safety. ANGRY contends that such capability must at minimum encompass the following elements or their equivalent;

- (1) Permanent offsite monitoring devices which register all forms of ionizing radiation and which can be remotely read onsite.
- (2) Information analysis capability equal to or greater than that provided by the Atmospheric Release Advisory Capability System (ARAC). This contention now challenges the adequacy of the licensee's MIDAS radiological assessment system (EP, p. 6-9) to the extent that the information analysis capability it provides does not equal or exceed that provided by the ARAC system.

EP-4 (ANGRY)

The licensee's Emergency Plan (EP) fails to satisfy reasonable and applicable standards of adequacy and effectiveness in the following principal respects:

- 4(A) There is no provision in the EP for the prevention of damage to property (e.g., livestock) in the area surrounding the plant site as required by Appendix E to 10 CFR 50, §§ II(C), III, and IV(C).
- 4(B) The perfunctory form letters found in Appendix C to licensee's EP provide no indication, let alone assurance, of the existence of "mutually acceptable

criteria" for implementation of emergency measures as required by Emergency Planning Review Guideline No. One, Revision One (EPRG) IV(A)(1). Also N. 0654 A3.

- 4(C) The adoption of the Commonwealth of Pennsylvania Disaster Operations Plan Annex E (DOP) designation of "the 'risk county' as responsible for the preparation and dissemination of information material on protective actions to the general public" (p. 6-8) conflicts with the requirements in EPRG II(A)(7) and RG 1.101 § 6.4(2) to

make available on request to occupants in the LPZ information concerning how the emergency plans provide for notification to them and how they can expect to be advised what to do.

Also, N. 0654 G4.

- 4(D) The licensee's "Onsite Emergency Organization" (Sec. 4.5.1.3) contains insufficient personnel and expertise in the area of Health Physics to discharge adequately the responsibilities of dose assessment and projection in the event of a rapidly developing accident sequence. The time required for the mobilization of offsite health physics support (2-4 hrs. - See Table 8), which is given responsibility for "overall assessment of the impact of liquid and gaseous effluents with respect to . . . protective action guides" (p. 5-12), is inconsistent with adequate radiological assessment capability.

- 4 (E) The licensee's EP fails to provide for furnishing to the Pennsylvania Bureau of Radiation Protection (BORP) information called for in the latter's plan such as "nature of the failure, the status of safeguards, the condition of consequence mitigating features" (p. VI-1).
- 4 (F) The provisions for the conducting of a "Radiation Emergency Exercise" of the licensee (EP, p. 8-8) and of the Commonwealth (Pa. DOP, App. 14) are inadequate in that they do not clearly provide for the participation therein of federal agencies. The necessity for such participation is clearly established by the extensive involvement of federal agencies in the TMI accident. Second, the aforementioned appendix to the Commonwealth's emergency plan indicates that "all major elements of the plans and preparedness organizations" may be tested only over a period of five years. All such elements should be tested in an exercise prior to the restart of TMI-1.
- 4 (G) The licensee's emergency notification procedures (pp. 6-2, 6-3, 6-4; Figure 15) (See also Pa. DOP Appendix 3) are inadequate with respect to certain areas directly at risk in the event of a nuclear accident, namely, York and Lancaster Counties. Although the Dauphin County Emergency Operations Center receives immediate notification of an emergency declaration, notification of York and Lancaster Counties must follow an excessively circuitous path:

1. Licensee to Dauphin
2. Licensee to PEMA
3. PEMA to BORP
4. BORP to Licensee
5. Licensee to BORP
6. BORP to PEMA
7. PEMA to Dauphin
8. PEMA to York, Lancaster, and Cumberland Counties.

Such a notification sequence is in direct conflict with requirements that "delegations of authority that will permit emergency actions (such as evacuation) to be taken with a minimum of delay should be carefully considered" (NUREG 75/111, § A3) and that "Upon declaration of a 'general emergency' immediate notification shall be made directly to the offsite authorities responsible for implementing protective measures . . ." (EPRG II(A)(5)) (Emphasis in original). Also, N. 0654 J7.

- 4(H) RG 1.101 Sec. 6.4 requires the licensee to specify "criteria for implementing protective actions. . ."
- The licensee's EP fails to set forth the following mandatory items of information regarding the time required for protective action implementation:
1. Expected accident assessment time. RG 1.70 , Sec. 13.3.1-2.
 2. Time required to warn persons at risk. RG 1.101, Sec. 6.4.1-2(b); RG 1.70, Sec. 13.3.1-3,4.

3. Time required for a general evacuation. RG 1.70, Sec. 13.3.1-5,6; November 29, 1979 letter to "All Power Reactor Licensees" from Brian K. Grimes, Director, NRC Emergency Preparedness Task Group.
4. Time required to evacuate special facilities (e.g., hospitals). November 29, 1979 letter, supra.

See, N. 0654 J8.

- 4(I) The time provided in the EP for accident assessment, 1/2 hour (EP, p. 6-7), is in excess of the maximum permissible therefor specified in the Standard Review Plan, NUREG 75/087, Sec. 13.3(II)(3). (EP fig. 21 shows the thyroid PAG of 5 rems being reached in 12 minutes at 600 meters.) Moreover, the estimate given is unsupportable for monitoring of off-site locations on nearby islands or on the west shore of the Susquehanna River. Such factors may become critical in the event of a general emergency, which produces a "shift in emphasis to greater offsite monitoring efforts" (EP, p. 6-6). (See Contention EP-3(C)(1)).
- 4(J) The licensee's Onsite Emergency Organization staffing provisions as set forth in Table 8 of its EP fail to conform to the standards of N. 0654 Sec. B5 in the following respects:
 1. Under said standards two control room operators are assigned the function of "plant operations and assessment of operational aspects." Another

shift employee is given the exclusive task of providing communications liaison with off-site officials. Under the licensee's staffing provisions, by contrast, the two control room operators are assigned to "operate equipment in control room and act as communicator" (emphasis added). This divided responsibility compromises the licensee's ability to provide prompt off-site notification of emergency conditions. The inadequacy of these staffing provisions is aggravated by the absence of any provision for the addition of three more persons with communications responsibilities within 30 minutes, as required by the aforementioned acceptability standard.

2. A similar confusion of assignments exists with regard to the shift supervisor and shift foreman, who are expected to fill three roles between them.
3. Although N. 0654 requires the emergency operations facility director to assume his assignment within 30 minutes, under the licensee's plan this will not occur for as long as four hours.
4. Two radiological analysis support engineers, who are the only employees identified as having the training and primary responsibility for performing "dose projection calculations and source term calculations" (EP, p. 5-10) will not be available for as long as 60 minutes.

EP-5 (ANGRY)

The Commonwealth of Pennsylvania Disaster Operations Plan, Annex E (DOP) and the Bureau of Radiation Protection (BORP) plan for Nuclear Power Generating Station Incidents fail to satisfy reasonable and applicable standards of adequacy and effectiveness in the following principal respects:

5(A) The Commonwealth's plan for distribution of a thyroid blocking agent to persons at risk in the event of a nuclear accident with offsite radiological consequences (Pa. Dept. of Health RERP, App. I) is deficient for the following reasons:

1. The plan assumes an advance warning time (1 hour; p. 2) that is in excess of that which NUREG 0654 concludes may be available before an initial release of radioactive materials to the environment.
2. The postulated warning time is that which is deemed the minimum necessary to enable Dept. of Health officials "to move ahead of evacuees in their distribution efforts." However the plan is silent with respect to the much more critical time period that would actually elapse between the initial notification of the Commonwealth of an emergency situation and the availability to the public of the medication. ANGRY submits that given the logistics of the distribution process as set forth in the plan such a time period would be well in excess of one hour. The "assumption"

stated in Sec. IVA(1), p. 13, of the distribution plan is unsupportable as a planning basis.

3. In the case of York County, the movement of large numbers of people to the single designated distribution point for the medication, the County Courthouse, would require complete departure from predetermined evacuation routes, particularly for residents of Fairview and northern Newberry Townships. It would also cause massive traffic congestion in the center of York City.
4. The plan would be useless in the event of a nuclear emergency for which sheltering was the chosen protective action. It is also useless to those farmers who "consider evacuation unfeasible and elect to seek or use sheltering for themselves . . ." (Pa. Dept. of Agriculture Plan, p. 17). The stated condition to the advice to "take prescribed dosage of SSKI" (Ex. 9 to App. 1, Sec. 3(c)), namely, its availability, would of course not be met under the plan as presently outlined.

For all the foregoing reasons ANGRY submits that the only method of distribution capable of insuring the availability of a thyroid blocking agent is its pre-distribution to all potentially affected households and businesses, and that such pre-distribution should be accomplished prior to the restart of TMI-1.

5(B) The Emergency Planning Review Guideline requires state/

local plans to designate "protective action guides and/or other criteria for implementing specific protective actions . . ." (Sec. IV(B)(1); emphasis added) and "information needs" for implementing such protective actions (Sec. IV(B)(2)). The BORP Plan both fails to explicitly impose upon the licensee clear responsibility for fulfilling such information needs or, where required, to undertake to satisfy them at its own initiative.

1. Section VIII(A) of the BORP Plan indicates "time to onset of release" as a significant factor in determining the appropriateness of recommending evacuation. However, nowhere is the licensee given explicit responsibility for providing such information, nor does the Plan contain an analysis of how variation of this factor will affect the choice of appropriate protective action. See, e.g., NUREG 0610, p. 13, par. 4(c).
2. A second factor listed is "time required to effect relocation." NUREG 75/111, Sec. J(6) requires an adequate state plan to include development of "bases and time frames for evacuation" resulting in "estimates of the time required to carry out evacuation procedures" that reflect consideration of such factors as "impaired mobility of parts of the population" (Sec. J(7)(c)) and "potential impediments to use of egress routes, such as rush

hour traffic and inclement weather" (Sec. J(7)(f)). The availability of this and other information specified by the President's Commission is an essential prerequisite to adequate emergency planning and decision making whether or not in the context of an actual emergency situation. See too, N. 0654, Section j(10) (k; note requirement for specification of "contingency measures"), (l) & (m).

- 5(C) In order to assure proper execution by emergency response personnel of duties assigned to them the Commonwealth should adopt and apply to all levels of the emergency response network the principle that such personnel should "not have more important commitments to families within the immediate area of TMI" (Dept. of Health Plan, App. I, p. 5).
- 5(D) Warning.
1. The physical means to provide warning to all persons within the plume EPZ in a manner conforming to the standards set forth in N. 0654 Sec. E6 (and App. 3 referenced therein) and in the Pa. DOP, App. 13, Sec. IIIA(6) should exist before TMI-1 is allowed to restart.
 2. The Commonwealth's DOP fails to identify the time required to alert the public within the plume EPZ under present circumstances as required by the aforementioned provision of N. 0654. Such estimates

as the Commonwealth has provided elsewhere are founded upon a totally inadequate data base and are thus not credible. Although the Pa. DOP App. 13, Sec. IID states that "the primary means of emergency warning is outdoor siren systems", the York County plan reveals that less than 1/2 of the population in York County within 10 miles of TMI are capable of being warned by sirens (Annex C). Information as to the time required for implementation of "back-up" notification measures of mobile "public address systems" and "knocking on doors" (Annex G, App. 1) is to be provided in local emergency plans which do not as yet exist.

- 5(E) There is no reasonable assurance that appropriate protective measures will be taken in the event of a nuclear accident with off-site radiological consequences for the following reasons:
1. The Commonwealth's criteria for appropriate protective action choice, as set forth in Sec. VIII of its BORP plan, are inconsistent with those of the licensee (EP, p. 6-13). According to the licensee evacuation is the appropriate protective action if dose projections approach the lower limits of EPA PAG's. According to BORP this would not be the case unless the upper limits of the PAG's were approached. Although the licensee indicates that sheltering is the appropriate choice

for atmospheric releases of short duration, the BORP plan proposes evacuation for "sudden severe accidents." The licensee would not recommend evacuation in the event of a continuous release if "evacuation cannot be well underway prior to plume arrival," while BORP would order an evacuation in such a case regardless of wind speed and warning time.

2. The BORP plan fails to quantify protective action selection criteria such as "time to onset of release . . . time required to effect relocation," and the definition of "puff release." Such quantification of criteria is a necessary ingredient in effective planning and is required by N. 0654 Sec. J10(m).
3. The Commonwealth does not comprehend the distinction between "core-melt" and "melt-through" accidents as those terms are employed in NUREG CR-1131.
4. The Commonwealth declines to employ "state-of-the-art" calculational methodology, as set forth in EPA 520/1-78-001B, in turn referenced in N. 0654 at p. 55, n.1(3), in conjunction with hypothetical accident release characteristics to assist it in making appropriate protective action selection.
5. The Commonwealth's discussion of the sheltering option is inadequate in that it fails to emphasize the importance of the use of building basements

(see NUREG CR-1131) or of ventilating the shelter at the appropriate time (see WASH 1400, App. VI, Sec. 11.1.2) as means to maximize the effectiveness of this measure. This inadequacy is carried through to instructions to be provided the public as set forth in County plans.

- 5 (F) TMI-1 should not be permitted to restart until persons responsible for implementing emergency response plans at all levels of the response network within the plume EPZ have successfully completed the training mandated by N. 0654 Sec. 04 and provided for in Pa. DOP App. 10.
- 5 (G) The Commonwealth's Dept. of Agriculture Plan is inadequate for the reason that it provides no information on measures for the self-protection of farm personnel who "consider an evacuation unfeasible and elect to seek or use sheltering for themselves . . ." (p. 17). The plan offers the farmer no choice between the two extremes of exposing himself to potentially dangerous levels of radiation or complete abandonment of his investment in his livestock.
- 5 (H) The Commonwealth plan for hiring and training a nuclear engineer to be dispatched to the TMI-1 control room upon the occurrence of any future nuclear accident should be completed before restarting is authorized.

EP-6 (ANGRY)

York County "Evacuation Plan" is seriously deficient in the

following primary respects:

- 6(A) There is inadequate provision in the York County plan for providing medical services for contaminated individuals, for training persons providing these services, and for transporting radiological victims to medical facilities, all as required by N. 0654 Sec. L.
- 6(B) Although the Pa. DOP, Sec. IXB(1)(p), delegates the responsibility for arranging for emergency wrecker and fuel services to risk counties, the York County plan assigns this responsibility to the Pa. National Guard (Sec. VIA(7)(c)).
- 6(C) There is no assurance of the operability of county-local government communications links on a 24-hour basis as required by N. 0654 Sec. F1(a) and Pa. DOP Sec. IXB(1)(f).
- 6(D) There are numerous assignments of responsibility to persons and organizations that are not documented by written agreements demonstrating knowledge of and ability to perform assigned roles as required by N. 0654 Sec. A3. The most important of such delegations are:
 - 1. American Red Cross (operation of relocation centers; Annex I).
 - 2. Maryland Dept. of Health (provision of ambulances and helicopters for hospital evacuations; Annex J).
 - 3. Amateur radio operators (communications with local governmental units and school districts; Annex D § VE).

4. "State C.D." (50-2 passenger ambulances for evacuation of nursing homes; Annex J, App. 2).
 5. School Districts (transportation of school children to relocation centers and provision of facilities for such centers; Annex O).
 6. York Area Transit Authority (evacuation of nursing home patients; Annex K).
 7. State of Maryland (overflow mass care capacity; Annex I Sec. IVD).
 8. Adams County (relocation center; Annex I).
 9. York Chamber of Commerce (notification of business and industry; Sec. VIA(7)(a)).
 10. York County USDA Disaster/Emergency Board (monitoring crop and animal surveillance; Annex R).
- 6(E) The provisions in the York County plan for thyroid blocking agent distribution (Annex A, App. 3, Health-Medical Operations) are not coordinated with the state plan.
- 6(F) The preparation of a "list of homebounds and invalids" and a plan for their evacuation (Annex J) and satisfaction of unmet "resource requirements" (Annex L) should be accomplished prior to TMI-1 restart.
- 6(G) The York County Fairgrounds is an inappropriate location for the agricultural "Information Center" (Annex R, Sec. IVF) since it is within the 20-mile distance from the plant to which under the plan's assumptions

a total evacuation may be required. The provision establishing this center fails to provide also for the necessary predetermination by farmers wishing to avail themselves of its services of the nature and timing of the "essential functions" for their farms, the number of persons needed to perform such functions, and the identity of such persons. Dissemination of information concerning this program and the compiling of information provided in response thereto should be accomplished prior to TMI-1 restart.

EP-7 (ECNP)

The fractions of EPA PAGs listed on p. 4-1 of the Plan, with their associated action levels, do not take into account the total accumulated dose and dose commitment. As a result, the total exposures may exceed by large margins the listed PAG fractions prior to the advancement to a higher emergency category.

EP-8 (ECNP)

The various emergency categories (p. 4-2 to 4-8) each list a number of triggering events or conditions. Many of these are questionable indicators. For instance, on p. 4-3, "Valid" alarms are referred to. But there is no mention of the definition of a "valid" alarm, or what would be an invalid alarm. A number of reactor coolant activities (50, 130, and 300 ci/ml) are referred to, but no mention is made of how much full damage it takes to produce these readings. In addition, there is no indication of how or how rapidly these coolant activities will be determined.

EP-9 (ECNP)

Reliance on "adverse meteorology" (p. 4-5, 4-6), can prove to provide little or no "built-in conservation" (p. 4-7, 4-8) since, for instance, such conditions were not at all uncommon during the nighttime in the nights following the TMI-2 accident (for instance, the night of March 29, from 10 p.m. to 8 a.m., March 30; night of March 31, about 8:00 p.m. to 8 a.m., April 1).

EP-10 (ECNP)

Appendix D of the Plan contains reference to the need for the decontamination of radiologically contaminated individuals (p. 16) but does not provide any information as to how many people may be contaminated, the kind and degree of contamination expected or to be planned for, or the number of facilities and medical personnel appropriately trained in decontamination and radiation injury treatment techniques which may be necessary.

EP-11 (ECNP)

The BRP plan (Appendix 8) relies on the infant thyroid dose (1.5 rem) as the dose from milk ingestion to be avoided (p. IX-4). This does not take into account the fetus, whose sensitivity may greatly exceed that of the infant. In addition, the value of 1.5 rem to the thyroid from milk ingestion does not take into account the inhalation exposure.

EP-12 (ECNP)

ECNP contends that the routing of all information through the Governor's Press Secretary to the public adds unnecessary complexi-

ties to the entire plan. For example, since the Press Secretary of the Governor can reasonably be expected to be a political appointee and not necessarily knowledgeable at all in the area of nuclear accidents and their consequences, or the nature of radiation injury, the designation of the Governor's Press Secretary as the official and sole spokesperson adds one more pathway for and perhaps impediment to information in the cumbersome and circuitous route between an event or accident at TMI and the public. There is no need for this extra step. In addition, this extra step offers one more opportunity for errors and omissions to be introduced into the information and only adds further delay. It is not expected that this extra step will result in the removal of errors from the messages. Furthermore, the possibility exists, with this extra, unnecessary step, for political pressure to be brought to bear to alter, delay, or even withhold crucial information from the public.

EP-13 (ECNP)

The evacuation plans for Cumberland, York, and Lebanon Counties are based, at least in part on the assumption that many if not most, evacuees will stay with friends or relatives outside the evacuation zone. This assumption is highly questionable, since during the early days of the still-ongoing TMI-2 accident, after women and children were ordered out of the area within five miles of TMI, many tens of thousands of people outside this area themselves evacuated voluntarily. In the event of another accident at TMI which causes a twenty-mile evacuation, for which

each of the five counties expresses preparedness, the resultant voluntary evacuations of persons beyond the 20-mile radius might well mean that there will remain no friends and/or relatives for the 20-mile evacuees to reside with temporarily.

EP-14 (Newberry)

Evacuation planning being done by the York County Commissioners is inadequate to insure the safety of the public, particularly those persons who live within a five (5) mile radius of the nuclear power plant located at Three Mile Island, Pennsylvania. Operation of TMI Unit No. 1 should not be resumed until a plan is in place for the evacuation of the public in the maximum area which could be affected by an accident or incident and the plans submitted by the York County Commissioners to that end are deficient as follows:

- 14 (A) Section VI, Concept of Operations, Subsection 7(a) is deficient in that there is an assumption that notification by siren can be heard throughout Newberry Township and surrounding communities. It is questionable at best whether this is, in fact, true in that at least in the York County Plan there is an assumption of one Civil Defense siren being in place in Newberry Township which does not exist. Oversights such as this may still exist within the Emergency Plan drafted by York County and verification of all sirens must be required in order to insure at least minimum siren

coverage of the county. Therefore, it is Intervenor's position that there are not sufficient numbers of Civil Defense warning sirens in place in the county in order to adequately insure that all members of the community are within hearing distance of a siren. It is Intervenor's contention that until the Emergency Plan specifically states that a siren alert system is in place and that the warning emitted by the system can be heard at any point in the county surrounding the plant site, that the Emergency Plan as drafted is unacceptable.

14 (B) Section VI, Subsection 7(b). The York County Plan as drafted indicates that selective evacuation of pregnant women and pre-school children and their families would be effected upon order of the Governor. Again, the notification would be by a five (5) minute steady siren which cannot be assured will be heard in all points within the affected areas. Moreover, the Plan assumes that there will be appropriate FBS announcements followed by door-to-door notification which would be conducted by appropriate boroughs and townships. Again, the Intervenor raises the contention that the time factor required in order to recruit volunteers to man vehicles and the many miles of road which are located in the various rural communities which would have to be traveled in order to ensure that notification of all members of the population of the impending emergency conditions would render the Plan as written inoperable.

Moreover, it is contended by the Intervenor that the selected evacuation notification is initially effected by the same type of notification that would be required in a general evacuation. Both evacuations are initiated by a five (5) minute steady siren tone, then followed by appropriate EBS announcements. It is Intervenor's contention that similarity and warning evacuation tones may lead to confusion on behalf of the public and that orderly evacuation of the affected areas could not be effected. Furthermore, this section of the York County Plan anticipates parents and/or families evacuating the area will be able to pick up children at schools. This again would lead to confusion within the Plan in that if a selected evacuation was ordered and pre-school children were to be removed from the area, the Plan anticipates that action would be taken by school superintendents in the evacuation of the children from schools and that there may be interference or lack of effective execution of the Emergency Plan set forth for the school system.

14 (C) Section VI, Subsection 7(c). This section of the York County Plan is deficient in that it depends upon the York County Chamber of Commerce to notify and pass on the general evacuation information to business and industry. There is no assurance that the Chamber of Commerce has the necessary manpower, equipment, and training to pass on such information to the general public. For example, does the York County Chamber of

Commerce possess necessary trunk lines to advise all industry within an affected area? What happens in the event that telephone communications are jammed or overloaded and that notification of industries cannot be effected by the York County Chamber of Commerce? Furthermore, does the York County Chamber of Commerce and all industry within the possible affected area have radio communication capabilities?

The Plan is also defective in that it is anticipated that the Pennsylvania National Guard will provide tow trucks and gasoline along evacuation routes; however, nowhere in the Plan does it indicate that the Pennsylvania National Guard has the necessary tow trucks and fuel trucks to effect such a plan. Finally, it's noted that there is no reaction time indicated in the Plan in order to assure that such tow trucks and fuel trucks could even arrive within the evacuation area due to traffic flow on the interstates and access highways.

Subsection (c) of this Plan also provides that a County Medical Officer will coordinate with the Pennsylvania Department of Health the distribution of thyroid blocking agents and other radiological health materials. The assumption is that these materials would be stored in an area in close proximity to the affected area without any assurance that such thyroid blocking agents and other radiological health materials are even available and could be delivered to the Exit 6 area of I-83 within a

timeframe that would be sufficient to effect the Plan.

The Plan in Subsection (c) also assumes that homebounds and invalids will be able to be transmitted by means of ambulance and bus and that individuals with no transportation could request the same through local fire companies for bus pickup. The capabilities to effect such a plan within Newberry Township are nonexistent. For example, Newberry Township has two ambulances that could be placed into service, assuming that a volunteer would operate the same. Local communities surrounding the Newberry Township area include Goldsboro Borough and Lewisberry Borough, each borough having an ambulance to effect evacuation of their homebounds and invalids. It is submitted that within the 34 mile square area that encompasses Newberry Township and the boroughs of Lewisberry, Goldsboro and York Haven that four (4) ambulances would not be sufficient to evacuate homebounds and invalids. Moreover, transportation through local fire companies will be impossible, as local fire chiefs have indicated that they could not guarantee that any personnel could or would effect such an evacuation service. Finally, it is submitted that if local volunteer fire companies cannot assure manpower staffing during a general emergency situation, that they cannot be again counted upon to provide transportation to designated areas for bus pickup for those individuals who are without transportation.

The York County Plan in Section VI, Subsection (c) provides that posting of evacuation maps and semi-annual distribution of evacuation routes in local newspapers will be accomplished. It is submitted that there is no set designation of the responsibility for the effecting of this part of the Plan and it is Intervenor's contention that unless the Plan directs and places responsibility upon someone to effect this part of the Plan, the Plan is defective. Moreover, Section VI, Subsection (c)(4) provides that there will be an exercise and training of emergency service forces to include at least one annual exercise conducted in connection with PEMA. It is submitted that this part of the Plan is deficient because it does not require mandatory participation of all of the local emergency service forces. A most recent test conducted by PEMA in July of 1980 did not include the participation of a majority of the local townships and boroughs because the persons who would have been involved in that training exercise are volunteers and would not or could not obtain leave from their employers to participate in such a training exercise. It is contended that the Plan is still deficient in this area unless and until the Commonwealth of Pennsylvania through its police powers provides that those who are considered to be emergency service forces within the local boroughs and townships are given nonprejudicial paid leave time by their employers in order to participate in such an exercise.

- 14(D) Section VI, Subsection (d)(1) provides that, upon notification from PEMA, the County Director will assemble and consult with appropriate members of the county staff and elected officials. There does not seem to be included in the Plan any means in which to contact the local elected officials unless it is the assumption that these officials would be contacted by telephone. It is Intervenor's contention that, in the event of an emergency situation at Three Mile Island, once the public has any notice or indication that something has occurred at TMI, that the telephone lines will become overloaded and that incoming calls to local officials will not be able to be effected. Moreover, the Plan does not indicate where local officials will assemble, how they will know where to assemble and when to assemble and thus the Plan is still deemed to be deficient.
- 14(E) Annex A of the York County Plan provides that the alternate EOC site will be the new Hanover Borough Building in Hanover, Pennsylvania. Intervenor again raise the contention that there still is no indication at this time that trunk lines have been laid for the transfer of the Emergency Operations Center to the Hanover location, and, as such, it renders the Plan inadequate.
- 14(F) Appendix 2, Section I, Subsection B of the York County Plan provides that the Emergency Management Coordinator will insure that briefings are presented to the Commis-

sioner and he will interpret displays and technical reports for the Commissioners. There is no statement in the Plan that the person occupying the position of Emergency Management Coordinator will have educational requirements sufficient to insure that he will be able to interpret any displays of technical reports for the Commissioners. It is Intervenor's contention that unless the Emergency Management Coordinator is required to have an expertise in the area of nuclear science, he will be unable to sufficiently and accurately interpret the displays and technical reports for the Commissioners and thus may leave the Commissioners who ultimately are responsible for the safety and welfare of the people of York County uninformed or misinformed of actual events taking place at TMI.

14(G) Appendix 2, Section II, of the York County Plan provides that the Situation Analysis Group will receive reports of plant safety degradation, potential/actual radioactive release and radiation intensity. Again, there are no job requirements for persons who sit on a Situation Analysis Group to qualify them to make such reviews and, therefore, again, without qualified people to sit on such a group, their advice to the county's commissioners may be misinformed and unenlightened which could again then lead to chaos and confusion.

14(H) Appendix 2, Section III, of the York County Plan provides that the Assistant Director of Police Operations is re-

sponsible for the overall management of law and order, traffic control and security. In the event the National Guard is ordered to assist local communities, it is questionable whether the Assistant Director of Police Operations would be in a position to direct orders to a military organization as is assumed he would be in the York County Plan. There seems to be no coordination between the National Guard chain of command and the chain of command in the operations group in Annex 2, Section III, and therefore, it is Intervenor's position that the Plan is deficient in that there is no stated area of responsibility concerning police operations, vis-a-vis the National Guard.

- 14(I) Appendix 2, Section III, Subsection (g) of the York County Plan indicates that the Area Agency on Aging should develop a system to identify the homebound and invalid personnel that require special transportation needs and coordinate a consolidated listing with the transportation group. Until and unless the Area Agency on Aging is directed to effect such a system, it is Intervenor's position that the York County Plan is deficient because, without such listing, there would be no way in which local communities could be assured that all invalids and homebound persons would be removed from an evacuation area.
- 14(J) Appendix 2, Section III, Subsection (i) provides that it will be anticipated that the Pennsylvania State Police would be prepared to support York County disaster

operations in the event of an incident at the TMI nuclear facility. Moreover, it indicates that the Pennsylvania State Police would coordinate with the Pennsylvania Department of Transportation for the placement of temporary signs in support of evacuation area security. It is important to note that there is no formulated and stated plan for the involvement of the Pennsylvania State Police in the event of an incident at TMI. It is also anticipated in the Plan that there would be the placement of some sort of temporary signs to support the evacuation of the area; however, there is no statement that such temporary signs presently exist or that they would be existing at a time of need. It is therefore contended that the York County Plan is deficient because it does not state the exact assignment of the Pennsylvania State Police in connection with all other support groups in York County.

- 14(K) Appendix 3, Annex A, Situation Analysis Group, of the York County Plan provides that it will support the State Bureau of Rad. Health with available personnel and equipment and that in the event of a general evacuation on request it will support fire and mass care operations with monitors for decontaminations. Nowhere in the Plan does it state that the Situation Analysis Group will have the necessary equipment required in order to support the various bureaus and fire and mass care operations with the necessary equipment monitors for decontamination operations.

- 14 (L) Appendix 3, Annex A, providing for police operations in a selective evacuation and a general evacuation provides that the police would support and assist in notification and, on request, that police operations provide fire and police support for traffic control and security. It is submitted that support and assist in notification and support for traffic control and security are mutually exclusive operations. It is Intervenor's contention that police in local communities cannot be asked to both support traffic control and security and, at the same time, support and assist in the notification of area residents of the impending dangers and evacuation notification in the event of an incident at TMI.
- 14 (M) Appendix 3, Annex A, Health Medical Operations, provides that that group would be prepared to assist the State Department of Health in the distribution of thyroid blocking and other radiological health materials. Nowhere in the Plan is it stated that these materials are readily available and until and unless the Plan specifically designates that these materials are located within the York County area, it is Intervenor's contention that the Plan is deficient.
- 14 (N) Annex B of the York County Plan indicates that the order of notification from York County is to executive group members and then to local coordinators within the risk area with priority to those nearest the facility, then to school superintendents and then to Emergency Operations Center staff. Nowhere in the Plan is it indicated

how these people would be notified of the impending emergency. Intervenors again raise the issue that in the event of an incident at TMI, members of these organizations should be able to be reached without dependence upon telephone communications. Until and unless it is indicated that these individuals can be contacted without dependence upon telephone communications, the plan is deficient.

14(O) Annex C of the York County Plan is deficient in that its total concept of operations is based upon tone-coded siren control and that nowhere in the Plan is it stated that all individuals are within hearing distance of the sirens located within a 20-mile radius of the TMI nuclear plant. Moreover, the Plan provides as a backup or supplementary system to the siren system that police and fire vehicles would travel throughout the communities and again it is raised that the townships, boroughs and municipalities located within the 20-mile radius of the TMI nuclear facility do not have the necessary commitments of manpower to effect such a plan. Therefore, it is Intervenor's position that the York County Plan remains deficient.

14(P) Annex D, Section V, provides that the concept of operation will be effected by the regular communications staff augmented by "qualified volunteers" as required. The Plan also indicated that amateur radio will be relied upon in the event of an incident at TMI nuclear

facility. There is no assurance that any amateur radio operators have agreed to participate in such an operation or that each school district has had an operator assigned to it to coordinate the utilization of school buses. Moreover, there is no definition of who is a qualified volunteer in the event that volunteers are required to be used by the communications staff.

Finally, the concept of operations in this section provides that RACES would provide interim communications at the Hanover site until full communications capability could be restored. It is Intervenor's position that the Hanover site must be placed in an immediate ready condition in order to effectively serve as an alternate site for emergency operations control. It is Intervenor's position that until and unless the Hanover site is placed in a ready condition, that the Plan remains deficient. Furthermore, Subsection VI of this particular section provides that the common carrier system within the Emergency Operations Center is the 911 system, of which 49 out of 79 emergency telephone trunk lines are committed. Furthermore, 6 of the lines are standby rumor-control lines, leaving 24 emergency telephone trunk lines for those areas not contained within the 911 system. The Newberry Township, Fairview Township, Goldsborough and Lewisberry areas are without 911 service. It is Intervenor's contention that, in the event of an incident at the TMI nuclear facility, the telephone

grid system would become so overloaded during such an incident that the making of a phone call to the remaining 24 committed lines at the Emergency Operations Center would be difficult if not impossible. Therefore, it is claimed that this part of the Plan also is deficient in that there are not enough emergency trunk lines available for all residents within the 20-mile radius zone of TMI with a special emphasis on those areas in York County which are closest to the nuclear power facility.

14(Q) Annex E of the York County Plan, Subsection III, provides that the local Emergency Management Directors are responsible for the distribution of printed handout material to the populace within their respective municipalities. The Plan is defective in this area in that there is no set timetable for the distribution of said materials to the local Emergency Management Directors, and, likewise, there are no provisions within the Plan as to how local Emergency Management Directors are going to distribute the information to the local populace. Again, it is submitted that, in the event of an incident at the TMI nuclear facility, local volunteers will not be able to be counted upon to effect such distribution and that without some other means of distributing the materials, local Emergency Management Directors will be impotent to effect such a Plan. The same problem arises in Section K of this area in that the Public Information Officer is responsible for the posting in all public areas, parks, etc., of public information and evacuation instructions for transient populations.

- 14(R) Annex F, Section II, of the Plan is inconsistent with Appendix 2, Subsection III, Subsection A in that the Assistant Director of Police Operations is stated to be responsible for all management of law and order, traffic control and security, whereas Annex F provides that the Pennsylvania State Police is responsible for coordinating law enforcement and traffic control and the Pennsylvania National Guard is responsible for providing security for the evacuated areas. Intervenor is of the position that until and unless the order of command is sufficiently, adequately and clearly stated, there lies the possibility in the Plan for mass chaos and confusion with regard to who is responsible for police services. The Plan is deficient until it states in a succinct and clear manner who will be responsible for giving direct orders to the Pennsylvania State Police, the sheriff in local police departments, and the Pennsylvania National Guard in the event there is an incident at the Three Mile Island nuclear facility.
- 14(S) Annex G of the York County Plan is deficient in that it assumes that local fire companies will have sufficient manpower to effect emergency operations procedures as outlined in the Plan. As is previously been pointed out by the Intervenor, there is usually insufficient staffing of the individual fire companies to assure that all residents in rural areas would be notified of an incident at the TMI nuclear facility because of the

number of miles of road located in each township. The Plan also contains a concept that the county would distribute radiological monitoring equipment to individual fire companies to be monitored by the fire company personnel. There is no indication in the Plan that volunteer firemen have been trained to operate such equipment and there is no assurance that such equipment is presently located within the county for distribution. Until these deficiencies are resolved, it is Intervenor's position that the Plan is deficient.

14(T) Appendix I of the York County Plan regarding warning is deficient in that it assumes that local fire companies will be able to alert all members of a rural community by direct notification such as knocking on doors. There is absolutely no conceivable way in which individual direct notification can be made in Newberry Township because of the number of residents versus the number of volunteer firemen and it is submitted that the same conditions exist in all local municipalities located within the 20-mile radius of the TMI nuclear facility. Therefore, until and unless a system is designed that can adequately insure that a substantial majority of the population can be notified of an incident at TMI, the Plan is deficient.

14(U) Annex H of the York County Plan provides in its general concept of operations that evacuation routings would be inherently dependent upon climatic conditions, time

factors involved, etc. The Plan also provides that residents would be evacuated on major interstates and state highways. There is no mention as to the condition of the access roads to these major arteries and it is submitted that evacuation generally is dependent upon climatic conditions and the conditions of the access roads within the individual townships and local communities. Access roads within Newberry Township vary from a 20 to a 26 foot width and it is Intervenor's contention that in the event of an evacuation, traffic flow on these access roads could quickly become terminated as a result of the vehicles running out of gas or being involved in auto accidents for which there would be no way in which to remedy the situation. Moreover, in ice and snow conditions, it is submitted that these access roads which are located in generally hilly areas would be generally impassable and, therefore, there would be no access to the evacuation routes. Until and unless the evacuation Plan provides for a means to assure that access roads will be passable during a general evacuation, it is submitted that the Plan is deficient.

- 14 (V) Annex K of the York County Plan provides for the transportation of various individuals out of the evacuation area. Intervenor's contention in this area is that there is no direct stated coordination of plans between YATA, local school districts, the Baltimore Transit System, and the Pennsylvania and Maryland Railroad Com-

pany. The Plan as set forth in the concept of operation indicates that total coordination of the system will be left to the county Transportation Coordinator who will establish a system, but it doesn't identify when he will establish a system to identify priority use of transportation resources. Moreover, it states that any buses without missions would report to the Vo-Tech school located in York and be dispatched from that point. There is no provision for the refueling for any of the buses in any particular area and there is no guarantee that school buses driven by volunteer drivers would be willing to return to a risk area. Furthermore, the transportation area of the York County Plan has totally disregarded the initial five hour plan which had been included in the initial evacuation plan. Nowhere in this Plan does it appear that transportation could be effected in any set time period and, therefore, this section again, by implication, contains the realistic admission that, regardless of whether school was in session, the evacuation plan would be inoperable and unrealistic. Until and unless the Plan shows exact designation of buses, commitment by bus companies to react within set stated times and letters of agreement between the surrounding school districts and the York County Commissioners with regard to assurances of delivery of local school buses, the Plan will remain deficient.

- 14(W) Annex L of the York County Plan provides for resource requirements which, it is assumed, would set forth what would be required to set the whole evacuation plan of York County into operation with regard to manpower, equipment and other resources. The Plan as of this date remains under development in this area and until and unless the Plan is completely finalized, it is Intervenor's contention that the Plan is deficient.
- 14(X) Annex M of the York County Plan providing for military support states that the Pennsylvania National Guard will enter into active duty upon an order of the Governor. Moreover, they will respond to any individual local political subdivision's needs upon request of the local political subdivision for aid. The Plan does not state with any specificity whether the Guardsmen will be protected by radiation-proof equipment, under whose orders and directions they will remain during their encampment in a local political subdivision, and when they will arrive in the local political subdivision after requested to do so. Until and unless these deficiencies are rectified, it is Intervenor's contention that the Emergency Plan is deficient.
- 14(Y) Annex N, Subsection VII, Subsection G provides for certain duties and responsibilities for a County Director and these duties and responsibilities conflict directly with those of the Emergency Management Coordinator.

Specifically, this section provides that the County Director shall provide appropriate notice of information received and emergency actions taken and proposed to the York County Police and Fire Departments, other echelons and emergency operational chains, and local news media for emergency public information and news announcements, whereas, Appendix II provides that the Public Information Officer is responsible for the issuance of official information, advice and instructions from the county to the public. This conflict renders the Plan deficient.

- 14(2) The York County Plan provides for the decontamination of personnel and vehicles and Subsection C of that Plan provides that all vehicles passing through a designated reception center will be decontaminated and also that all vehicles that will be on major routes leaving the county will be decontaminated. The inclusion of this in the Emergency Plan of York County renders the Plan deficient and inoperable. It is Intervenor's position that, by decontaminating vehicles and personnel at the designated locations as set forth in the Plan will only cause the projected traffic flows to be severely diminished as a result of the decontamination. The Plan is deficient also because there is no projection as to the number of cars that would be able to travel on the evacuation routes after the initial jam-up occurs at

the decontamination routes. In other words, the decontamination areas will provide a bottleneck for the evacuation of area residents out of risk areas that will effectively render the evacuation plan inoperable. Unless the decontamination points are removed to some other point besides the major evacuation arteries, it is submitted that the Plan is deficient.

14(AA) Annex O of the Emergency Plan is deficient in that the concept of operations division does not require mandatory preparation of local plans for emergency notification of bus drivers and the organization of mobilization of transportation necessary to meet the needs of evacuating their student populations. Moreover, the Plan does not include any direction or plan to the local school superintendents as to rerouting their buses for general evacuation of local residents. For example, in an emergency, is a principal of Fishing Creek Elementary School to send a bus to the Vo-Tech School for rerouting while area residents wait for transportation? Until and unless there is some type of generalized plan for each school district as to the rerouting of school vehicles not in use for removal of school population, the Plan will remain deficient.

14(BB) Annex R of the York County Plan does not provide for any evacuation of domestic farm animals and until and unless the Plan does provide for a plan of evacuation, the Plan remains deficient. Domestic farm animals cannot be left

for any period of time without human care and attention and, therefore, it is assumed that farmers who have such large investments in livestock will not leave their investment unattended and, thus, they are left at risk. Moreover, the agricultural part of the York County Plan provides that the County Emergency Management Agency Director will charge and distribute dosimeters for agricultural personnel who are required to enter the designated risk area but does not state who will provide the dosimeters and who will interpret the dosimeter readings. Until and unless these two facets of the York County Plan are remedied, it is Intervenor's contention that the Plan remains deficient.

- 14(CC) Nowhere in the York County Plan does there exist a catalog of the tow trucks available for use in York County. Until and unless a catalog of the tow trucks available for use is attached to the Plan, the Plan remains deficient.
- 14(DD) The Evacuation Plan contained in the York County Plan does not contain any sensitivity analysis or differentiation between the time of day, the seasons of the year or weather conditions at the time of the evacuation. In light of these deficiencies, it is Intervenor's contention that the Plan is deficient.
- 14(EE) The mass evacuation centers contained in the York County Plan do not state that the centers have auxiliary backup electrical power and heating plants in the event

that they are placed into use. It is Intervenor's contention that, without such auxiliary power and heating systems, that the Plan is deficient in that evacuees would arrive either at a darkened or cold evacuation center.

14(F) The York County Plan contains only one EBS station, that being WSBA in York, Pennsylvania, and lists no other secondary station in the event that WSBA loses power or in some other way is placed out of operation. It is Intervenor's contention that the Plan is deficient in that a secondary EBS station is not included in the Plan.

14(G) The York County Plan does not contain any treasury or source financing in the event that an emergency is declared and payment to be made. It is a general assumption, apparently on behalf of the Plan, that the county treasury can be invaded by the Commissioners for use during an emergency; however, it is Intervenor's position that a set emergency fund should be in place and stated within the Plan so that there would have to be no indecision as to the legality of withdrawing funds in the event of an emergency situation for ad hoc expenses.

14(H) The York County Plan has no provision in its population calculations for periods of time during the day when most people are working and outside of the area, during the day when there may be an increase in population

because of industries located within the areas, or during summer periods when many individuals may be on vacation or there would be an influx of individuals coming into the area to vacation. Without that type of population differential tables, it is Intervenor's contention that the Plan is deficient.

14(II) The York County Plan provides that the American Red Cross would provide for distribution of certain foodstuffs, clothing, and other personal articles. There is no mention in the Plan whether the Red Cross would have at its disposal the estimated foodstuffs required to feed the evacuated population, the cots needed for the sheltered area and the evacuation centers. Until and unless the Plan contains the statement that these items are in storage and available for distribution, it is Intervenor's position that the Plan remains deficient.

14(JJ) The York County Plan provides that there would be care provided for victims of radiation exposure; however, there is no statement that there are supplies on hand for radiation care or that there are sufficient numbers of supplies on hand to take care of a large mass evacuation in the event that there was a radiation leak. It is Intervenor's contention that, in order to provide sufficient medical care for the populace at risk, it is necessary that the Plan contain statements that inventories are available and are presently in

place. Without such statement, the Plan remains defective.

- 14(KK) The York County Plan contains no time sequence for the removal of the exposed at-risk population. There is only assumption that there would be adequate time in which to remove all individuals; however, there is no estimate as to the number of hours that would be required to effect a selective evacuation or a general evacuation. Moreover, there is attached to the York County Plan an estimate of the number of vehicles per hour that could be handled by various major arteries and access roads; however, there appears to be a conflict in the estimates in that urban roads with parking are estimated to handle at least 1,700 cars per hour whereas major arteries could only handle 1,300 per hour and it is submitted that such a gross distortion renders the Plan deficient. Furthermore, there is absolutely no hard-core statistical data to back up the calculations relied upon in the York County Plan.
- 14(LL) The York County Plan contains a thin staffing of all emergency coordinators and does not list any substitutes in the event that an emergency coordinator is ill, on vacation or otherwise indisposed. Without substitutes or standby emergency coordinators, the Plan is defective.
- 14(MM) The York County Plan does not state how many businesses are located in risk areas and what the population of those businesses are during working hours. Without this

information, it would be impossible to determine the number of hours that would be required to effect a general evacuation in the event one was ordered. Therefore, it is Intervenor's position that the Plan remains defective.

- 14(NN) As a general overall comment, evacuation routes as set forth are not wind-dependent, and, therefore, in the event of an evacuation, wind direction is a factor that would be required to be taken into consideration in order to formulate an effective evacuation plan. The Plan as set forth does not provide for this factor and, as such, persons evacuating the evacuation areas may be directed into a potentially more hazardous situation in the manner in which they are routed.
- 14(OO) Because of the experiences of the past, even the limited evacuation of pregnant women and children under five years of age left many of the areas surrounding the Three Mile Island Nuclear Power Station deserted and open to looting without proper security. The assumption that the National Guard would, in the event of an evacuation, be called up by the Governor, is one that is a void in the evacuation plan and the National Guard is not called up or does not respond to the Governor's request because its members are busily evacuating their own families.

EP-15 (Newberry)

Evacuation planning being done by the Metropolitan Edison Company is inadequate to insure the safety of the public, particularly those persons who live within a five (5) mile radius of the nuclear power plant located at Three Mile Island, Pennsylvania. Operation of TMI Unit No. 1 should not be resumed until a plan is in place for the evacuation of the public in the maximum area which could be affected by an accident or incident and the plans submitted by the Metropolitan Edison Company to that end are deficient as follows:

- 15(A) Section 4.5.2 provides that off-site authorities would provide certain services in the event of an emergency situation. The Plan does indicate that there are agreements between the various personnel, organizations and agencies listed in this section; however, the agreements of most local fire companies only indicate that certain manpower is available and certain pieces of equipment are available. Moreover, it appears as though somebody produced documents for the local fire companies to sign, which would indicate the amount of manpower and resources available to each one of the fire companies who signed such an agreement. The agreements with the fire companies do not state that they know exactly what will be expected of them in an emergency situation. Without a sound contractual understanding in place, it is questionable that during a crisis situation off-site authorities will know exactly what is expected of them.

Detailed understandings should be drawn between the local police, firefighting authorities and the State Police and other off-site authorities and agencies in order to ensure orderly support in the event of an emergency. The absence of such documentation and understanding between Metropolitan Edison Company and off-site authorities creates a deficiency in the Emergency Plan.

- 15(B) Section 4.5.1.3(1)(c)(d) states that the Emergency Director shall provide liaison communication with county, state and federal governments to ensure that notification and reports to these agencies are made in a timely manner and that he will communicate with off-site emergency support organizations. It is Intervenor's contention that this part of the Plan which is critical to the coordination of all emergency activities does not state with specificity the exact timeframe in which notification and communication is to be made with off-site emergency support organizations and agencies. It is Intervenor's position that this is critical in order to ensure that licensee reports and communicates any abnormal and emergency condition to the respective organizations in a truly timely fashion. The Emergency Plan as now drafted leaves too much discretion with the Emergency Director with regard to the contacting of these off-site agencies.

15(C) Section 4.5.3.2 of the Emergency Plan indicates that with respect to the 10-mile EPZ, the five counties identified in this section have prepared emergency plans that are coordinated with the State Disaster Operations Plan and with the TMI Emergency Plan as well. It is Intervenor's contention that this obviously cannot be the case, since revision #2 of this Plan is dated June, 1980 and that the county plans still are not adopted as final drafts. Moreover, a review of the Dauphin County and York County Plans indicate there is absolutely no referencing to the TMI Emergency Plan and that, in fact, it appears as though the county plans were written independently of the TMI Emergency Plan. All plans must inter-coordinate in order to ensure that all parties participating in the emergency will know what is expected of them. There is no provision in the Emergency Plan for the distribution and updates of the TMI Emergency Plan and, based upon these deficiencies, the Emergency Plan as now written is inadequate.

15(D) Section 4.5.4 of the Emergency Plan anticipates that the Pennsylvania Emergency Management Agency will conduct and participate in annual training exercises that involve state, county and local government agencies and that the testing of communications, radiological monitoring instrumentation and warning systems will be conducted. It is Intervenor's contention that at the present time, such communications, radiological

monitoring instrumentation and warning systems are either not in place within the surrounding communities or are not being maintained by operators within surrounding local communities. The Plan does not indicate who is responsible for the purchasing of communication, radiological monitoring instrumentation and warning systems and, furthermore, who is responsible for the maintaining of this equipment. The Commonwealth of Pennsylvania did begin a radiological monitoring effort; however, since local monitoring readers were instructed as to how to read the monitors, the Commonwealth of Pennsylvania has not been soliciting their readings and/or following up to determine whether the readings are being made by the readers. Is this burden to be shouldered by the local community, the county, the state government or the licensee? It is Intervenor's contention that while emergency plans may, in theory, set forth a plan of training, it cannot realistically be put in action because the Plan assumes placement of communications systems, radiological monitoring instruments and warning systems. It is Intervenor's position that until such systems are in place, it is determined who is responsible for the equipment's maintenance and who is to burden the cost of the placement and maintenance of such systems, the Plan is inadequate and unacceptable.

15 (E) Section 4.6.5.1(2) of the Emergency Plan provides that

the responsibility for actions to protect persons in the off-site areas rests with the Commonwealth of Pennsylvania and that the Pennsylvania Emergency Management Agency shall be the agency with which the responsibility rests for the placing, in effect, of protective options such as evacuation, sheltering and thyroid prophylaxis. The same section indicates that in the event of a general emergency, precautionary measures may be taken such as sheltering, evacuation and evacuation of certain sectors based upon wind speed and direction. It is again Intervenor's contention that this particular section of the Emergency Plan providing for the precautionary measures cited have not been coordinated with local county plans to any measurable extent. For example, in the county plans, there is no indication of how the counties would instruct its local Civil Defense Directors to evacuate only certain sectors within a community instead of within radial distances of the Three Mile Island nuclear facility. This is again only but one example of a lack of coordination between the Emergency Plan and the various county plans and it is Intervenor's position that this lack of coordination is symptomatic of the entire Emergency Plan as it is now written. The Emergency Plan submitted by the licensee should encompass a total coordination of all Emergency Plans formulated by federal, state and county agencies. This lack of coordination creates a deficiency which has to be remedied.

15(F) Section 4.6.7.1 of the Emergency Plan deals with early warnings and information for transient areas. It is Intervenor's position that the methods depended upon in the Emergency Plan to warn the population at risk, are, at the present time, not in place. For example, section 2 of this particular section of the Emergency Plan states that a siren alert system could be activated by counties in order to warn the populace of impending danger. As has been indicated earlier in Intervenor's contention with regard to Emergency Planning, there are not enough Civil Defense warning sirens in order to adequately ensure that all members of the community are within hearing distance of the siren. Moreover, section 5 of this subsection of the Emergency Plan indicates that vehicles with loudspeakers could be dispatched to broadcast warning messages. The problem with this approach is that it would take time to get volunteers to man the vehicles and, secondly, there are many miles of road which would have to be traveled in order to ensure that all members of the populace were informed of the impending emergency condition. It is Intervenor's contention that until the Emergency Plan specifically states that a siren alert system is in place and that the warning emitted by the siren alerts could be heard at any point in the county surrounding the plant site, the Emergency Plan as now drafted is unacceptable.

EP-16 (Newberry)

Evacuation planning being done by the Dauphin County Commissioners is inadequate to ensure the safety of the public, particularly those persons who live within a five (5) mile radius of the nuclear power plant located at Three Mile Island, Pennsylvania. Operation of TMI Unit No. 1 should not be resumed until a plan is in place for the evacuation of the public in the maximum area which could be affected by an accident or incident and the plans submitted by the Dauphin County Commissioners to that end are deficient as follows:

- 16(A) The Dauphin County Plan, in Section V, makes the assumption that persons evacuated from a risk area will only have to remain outside of the risk area for a period of three (3) days and that adequate lead time will be available to implement the provisions of the Plan. It is Intervenor's contention that a plan based upon these assumptions is inadequate based upon past experience. In the past it has been recognized that a five (5) day selective evacuation was ordered by the Governor of Pennsylvania and that basing an assumption upon a three (3) day sheltering is a defect within the Plan itself. Moreover, there is no definition as to adequate "lead time" and whether or not a definition of that term would mean a short period of time or a relatively long period of time, and until or unless the term is specifically defined, the Plan is deemed to be inadequate.

- 16(B) Appendix 2 of Annex E of the Dauphin County Plan lists Dauphin County Local Emergency Preparedness Directors and Coordinators; however, those coordinators do not list any substitutes in the event of an emergency. If these individuals cannot be reached at the telephone numbers listed, it would lead to confusion within their particular areas of responsibility. Therefore, until and unless substitutes are listed as local emergency coordinators, it is Intervenor's position that the Plan is deficient.
- 16(C) Appendix 3, Annex E of the Dauphin County Plan indicates that approximately 65 people will be notified in the event of an emergency. It indicates that notification of these people will be by radio whenever possible and then by telephone. Nowhere in the Plan is it indicated that the individuals listed have radios which are compatible with that of the County E.O.C. Moreover, there's no indication that the frequencies to be used for communicating with these individuals would be free of any outside disturbance. Therefore, until and unless it is indicated in the County Plan that these individuals have compatible radio equipment and that frequencies are being used that are relatively free from any other type of traffic, it is Intervenor's position that the Plan remains defective.
- 16(D) Appendix 4 of Annex E of the Dauphin County Plan provides that the alternate E.O.C. office will be located

in the Millersburg Borough Building. Nowhere in the Plan is it indicated that the Millersburg Borough Building is presently in an emergency readiness condition. In short, the Plan does not indicate whether, as a matter of fact, the Millersburg Borough Building can accommodate the requirements of the E.O.C. with regard to telephone trunk lines, radio communications, and other E.O.C. requirements. Until and unless this information can be verified, it is Intervenor's position that the Plan is inadequate and deficient.

16(E) Appendix 5 of the Dauphin County Plan provides that alert warnings will be initiated through siren activation. Again, this part of the Plan makes a broad base assumption that the populace within the county can hear the sirens at all locations and it is Intervenor's position that this is not true. Therefore, until and unless a sufficient number of sirens are placed throughout the county area at locations that will ensure that the total populace of the county is within hearing distance of the sirens, the Plan will remain deficient.

16(F) Appendix 6 of Annex E of the Dauphin County Plan provides that the American Red Cross, military unit assignments, fire and ambulance units, and police units will be assigned various frequencies for radio operations and will have various radio equipment at their disposal. Nowhere in the Plan is it indicated that there is an existence presently of the equipment necessary to

operate on the indicated frequencies or that if the equipment is presently available, that it is being maintained. Moreover, the Plan as written indicated that the police only have two frequencies on which to operate in the event of an emergency. Furthermore, fire, ambulance, Red Cross and military units will all share the same frequency and it is submitted that in the event of an emergency, the traffic on those frequencies will cancel effective communication among all of the groups. Therefore, until and unless it is stated that each of these units has its own frequency for operation and that there are sufficient number of frequencies in order to ensure effective operations, the Plan is deficient. Moreover, until and unless the Plan indicates that there is an existence of compatible equipment in order to effect this part of the Plan and that there is a responsibility for maintenance of the equipment, it is Intervenor's position that the Plan remains inadequate.

16(G) Appendix 8, Attachment 8-1, indicates that there are local pickup points for individuals who are without transportation. There is no indication within the Emergency Plan as now drafted that there will be police protection for people waiting at the pickup points in order to ensure security. Moreover, the pickup points as listed do not ensure that individuals who assemble at these points will be sheltered for their protection under some type of cover. Until or unless it is

assured that there will be police protection provided and that sheltering will be provided, the Plan is deemed inadequate.

16(H) Appendix 8, Attachment 8-2 of the Dauphin County Plan provides that local municipalities shall provide one personal lead vehicle to the E.O.C. Reception Area from the Staging Area. The problem with this particular part of the Plan is that there is no designation of who will be the person to lead vehicles to the E.O.C. Reception Area. Moreover, there is a candid admission that there is the chance that municipalities will hijack vehicles intended for other communities. Until and unless there is some type of security provided for incoming and outgoing units, the Plan shall remain deficient. Moreover, there is no provision in this Plan to provide for refueling of the incoming buses and ambulances and until and unless there is some indication of how refueling is going to take place, there is the risk that incoming buses and ambulances would run out of fuel and be rendered useless.

16(I) Appendix 9 of the Dauphin County Plan regarding police policy and procedures during relocation indicates that when evacuation is ordered, units will proceed to pre-designated stations. The Plan does not indicate where the pre-designated stations are located and how the chain of command will operate in the event of relocation of local police departments and their interaction with National Guard units arriving to provide additional

manpower to local departments. Until and unless a definite chain of command is stated and the relationship between civil police departments and the National Guard regarding chain of command is documented, it is Intervenor's position that the Plan is deficient.

- 16(J) Appendix 12 of Annex E of the Dauphin County Plan provides that during school hours, upon receipt of a condition yellow alert, school districts shall begin returning school students to their homes. Moreover, the Plan continues, that in the event parents are not home, children shall be returned to one pickup point as listed in the Appendix. There is an exception to this rule indicated in the Plan. It is Intervenor's contention that the Plan is deficient because it first of all allows the busing of the children during a condition yellow situation. It is Intervenor's contention that a much more sensible approach to this problem would be to bus all the children to a pre-designated area outside of the 20-mile EPZ and allow parents in an orderly fashion to pick their children up if a condition yellow alert does not change. There is a potential, as the Plan is now written, that in the middle of busing children home during a condition yellow situation that the situation could degrade to a condition red situation and there would be no means of notifying the bus drivers of the change in situation and the change in the school policy plan under a condition red emergency situation.

Finally, Section J of this part of the Plan indicates that evacuation plans of the various school districts will be on file with the County Emergency Preparedness Agency. It is Intervenor's contention that the plans of the school districts should mandatorily be on file and reviewed periodically by the County Emergency Preparedness Agency. Until or unless this deficiency is corrected, it is Intervenor's position that the Plan is defective.

16(K) Appendix 13 of Annex E of the Dauphin County Plan indicates that there are approximately 4,000 long-term patients that would require relocation in the event of a general evacuation. The Appendix also includes a listing of hospitals that would be amenable to accepting long-term patients in the event of an emergency. While the Plan indicates the total number of beds available at hospitals, there is no statement as to the number of beds which would be available on an average at any set time. Until and unless the Plan indicates the number of possible available beds that could be afforded to Dauphin County in the event of an emergency, it is submitted that the Plan is deficient.

16(L) Appendix 14 of Annex E indicates that within a 5 mile radius there are 24,426 individuals who would require evacuation from the area and there is an assumption made that 50% of the individuals would require sheltering. The total number of positions available for

sheltering in the Plan equals 6,800. There is an obvious deficiency in the number of sheltering site positions available within the County Plan and until and unless there can be some type of acceptable levels of sheltering, the Plan will remain deficient. Moreover, it is Intervenor's position that there is an error in the addition that appears within this Appendix concerning the total capacity of the shelters and that the figure of 7,625 is in error. Furthermore, it is Intervenor's position that until and unless the Plan of Dauphin County indicates that there are auxiliary emergency power systems located in each one of the sheltering systems and emergency auxiliary heating systems at such sheltering locations, the Plan will remain deficient.

16(M) The Dauphin County Plan does not specifically state a differentiated commonly recognized evacuation signal that could be recognized by the citizenry throughout the county. The Plan does not indicate whether the alarm system that is to be used is to be driven by a regular power system and if the source was terminated, whether the system would still work. The Plan does not indicate whether all areas within the county are within hearing distance of the sirens. Such deficiencies render the Emergency Response Plan inadequate.

16(N) The Dauphin County Plan does not specifically state how the following occurrences would be dealt with in the event of an evacuation:

- (1) Accidents on the highways;
- (2) Cars running out of gas;
- (3) Generally disabled vehicles; and
- (4) Individuals who need ambulance service for removal from accidents.

The Plan does not state whether gas stations will be mandatorily required to be open in order to meet the demands of the evacuating public.

Finally, the Plan seems to assume that the best of all atmospheric and weather conditions would exist at the time of the evacuation. What would take place in the event of a snowstorm and how would that affect the evacuation? What would be done in order to clear the roads? These are all questions that have to be considered and are necessary to be considered in a total evacuation plan and the location and placement of staging areas.

16(O) The Dauphin County Plan indicates that it has a total need of approximately 600 ambulances for the evacuation of all members of the exposed populace and indicates only 45 are available. The Plan also indicates that it could obtain an additional 226 ambulances from outside the county, still leaving a shortfall of approximately 300 ambulances. There is no solution to the problem indicated in the Plan.

16(P) The Dauphin County Plan as set forth does not provide

for differentiation of time of day or seasons or weather conditions at the time of the evacuation. There is no sensitivity analysis as to these factors, and the Plan is based upon an assumption of best-care analysis. Therefore, it is Intervenor's position that without taking these factors into consideration, the Plan remains deficient as concerns the time needed to effect an evacuation.

16(Q) The Dauphin County Plan lists only two (2) 911 operators in place in the event of an evacuation. It is submitted that two operators is grossly insufficient when it is taken into consideration that the York County Plan incorporates forty-nine (49) 911 operators in order to deal with an evacuation. Until and unless there is a commitment for more 911 operators to be in place during an emergency, the Dauphin County Plan remains deficient.

16(R) The Dauphin County Plan as presently written envisions mass transportation vehicles to assemble at two staging areas. Upon arriving at the staging areas, the vehicles would then be dispatched to various areas to be led by community leaders. It is submitted that such a plan without the provision of security being placed on the buses and mass transportation vehicles does not ensure that said vehicles will be able to carry out their intended functions. It is submitted that more staging areas would be required in order to effectively deal with mass transportation and until and unless those

local regionalized areas are stated in an emergency plan, all plans will remain deficient.

16(S) The Dauphin County Plan is deficient in that there is no long-term management provision in the event of an evacuation which would last greater than three days. Without such long-term planning, there is a possibility and a probability that confusion would reign after an evacuation of three days and it is submitted that in the March, 1979 incident, the evacuation lasted for five days. Therefore, until and unless there is greater long-term management planning provided for in the emergency plan, the Plan remains deficient.

16(T) Moreover, the plan does not envision the method of notifying school and CAT bus drivers and assumes that all drivers will respond in an emergency situation. Moreover, it doesn't indicate anywhere that the CAT bus drivers will know what is expected of them in an emergency situation and know where they are going and how to get to the appointed emergency staging areas. This is a contingency that can be planned for in advance, should be specifically set out in a plan, and thus, the absence of such specificity in the plan renders the plan inadequate.

EP-17 (Sholly)

Defects in Licensee's Emergency Plan, Revision 2, June 1980:

17(A) Licensee's acceptance, without formal analysis or evaluation, of a circular 10-mile radius for the Plume Exposure Emergency Planning Zone (as designated by the Pennsylvania Emergency Management Agency) does not discharge Licensee's responsibility to ensure that adequate emergency response plans exist to protect the public health and safety in the event of an emergency at TMI-1. Further, acceptance of or designation of a circular 10-mile radius Plume Exposure EPZ for TMI-1 is unjustified because such an EPZ fails to adequately consider local emergency response needs and capabilities as they are affected by demography and jurisdictional boundaries. These considerations, among others, are specified in NUREG-0396, NUREG-0654, and the new emergency planning rule published in the Federal Register on August 19, 1980. The following specific local conditions should be reflected in the Plume Exposure EPZ for TMI-1:

1. The proposed 10-mile radius circular EPZ includes within the EPZ portions of numerous jurisdictions at the township, city, borough, and town levels of government. Calling for an evacuation of only a portion of any political jurisdiction due to a hazard which affects a large geographic area and basing emergency plans and response capabilities on such a limited evacuation will lead to problems

due to spontaneous evacuation of a much larger area, with a concomitant increase in traffic and supply requirements at shelters. Therefore, the Plume Exposure EPZ for TMI-1 should include the entire geographic extent of all governmental jurisdictions at the township, city, borough, and town level which are bisected by the proposed circular 10-mile EPZ.

2. There are heavily populated areas in and near the cities of Harrisburg and York represented by the city proper and adjacent continuation of the urban areas into the suburbs. In the event that the wind is blowing toward either of these areas when a large release of radioactivity occurs, such areas would constitute a large percentage of the total population dose (in the case of the TMI-2 accident, for instance, Harrisburg contributed 25% of the total population dose despite the fact that most of the city is more than 10 miles distant from the plant). The urbanized areas in and around Harrisburg and York are concentrations of population for which preplanning for an evacuation is a necessity for successful implementation (for instance, preplanning would have to include evacuation routes, transportation needs, host area requirements, and problems posed by special populations such as prisons). Therefore, the urbanized areas around and including the cities of Harris-

burg and York should be included within the Plume Exposure EPZ for TMI-1.

3. Numerous members of the Old Order Amish community reside in relatively close proximity (within 10 miles) of the outer boundary of the Licensee's Plume Exposure EPZ in Lancaster County. Because the Old Order Amish eschew the use of electricity, telephones, and automobiles, they present unique problems with respect to warning, communication of protective action advisories, and transportation. These unique problems warrant the special consideration the inclusion of Old Order Amish within the Plume Exposure EPZ would provide.
4. To the extent that the Licensee relies upon the decision of county officials in the Three Mile Island area to develop and maintain a 20-mile emergency response capability as a substitute for making a determination that the 10-mile circular EPZ is adequate, the adequacy of such a 20-mile capability must be established as a condition to the restart of TMI-1.

17(B) Licensee's Emergency Plan fails to adequately provide a mechanism which will assure the effectiveness of the Emergency Plan throughout the operational lifetime of the TMI-1 facility.

EP-18 (Sholly)

It is contended that the Licensee's environmental radiation monitoring program contains an insufficient number of monitoring sites and an inadequate distribution of monitoring sites within twenty miles of the Unit 1 site to provide sufficient protection of the public health and safety. It is further contended that there is in the Licensee's environmental radiation monitoring program an unwarranted reliance on the use of thermoluminescent dosimeters (TLD's) for providing information used to calculate radiation exposure data and that this unwarranted reliance on TLD's seriously underestimates radiation doses to the public. It is also contended that the Licensee does not possess adequate portable radiation monitors to provide additional information in the event of an offsite radiation release, and that the Licensee does not exercise adequate administrative control over the maintenance of these units, nor the training of personnel in their use. It is contended that the radiation monitoring program of the Licensee must be greatly upgraded prior to restart to ensure adequate protection of the public health and safety.