UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
METROPOLITAN EDISON COMPANY, ET AL.
(Three Mile Island, Unit 1)

Docket No. 50-289

NRC STAFF REPLY PROPOSED FINDINGS OF FACT REGARDING EMERGENCY PLANNING

> Joseph R. Gray Counsel for NRC Staff

Dated at Bethesda, Maryland this 4th day of September, 1981.

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INTRODUCTION

On August 13, 1981, the NRC Staff, the Licensee, the Aamodt Family, the Environmental Coalition on Nuclear Power (ECNP), Intervenors ANGRY and Newberry Township, and the Commonwealth of Pennsylvania simultaneously filed proposed findings of fact and conclusions of law on emergency planning issues in the captioned proceeding. The Licensing Board directed the parties to file reply findings, if they so desired, by August 28, 1981. An extension of time for reply findings, requested orally by ANGRY, was granted by the Licensing Board, pursuant to which reply findings are to be in the Board's hands on or before September 9, 1981.

^{1/} Memorandum and Order, July 24, 1981, at 1.

Memorandum and Order Extending Time for Filing Reply Findings on Emergency Planning Issues, August 19, 1981, at 1.

In accordance with that directive, the NRC Staff's reply proposed findings of fact are set forth below. The Staff's reply findings are directed to certain proposed findings of Intervenors ANGRY/Newberry Township, the Commonwealth and, to a very limited degree, the Aamodt Family. The Staff will submit no reply findings directed to the findings of Licensee or ECNP. The Staff has chosen to reply only to specific proposed findings which it believes warrant particular reply. The Staff's determination not to reply to each and every finding on emergency planning filed by other parties should not be taken to imply that the Staff agrees with or adopts those findings of other parties to which the Staff has not replied.

In its proposed findings, at paragraph 11, ECNP suggested that the record on emergency planning be reopened to admit testimony on EPA Protective Action Guides and a document identified as "NRC Staff Memorandum dated September 28, 1979, from the Deputy Director of NRC Region 1 Office to Mr. James H. [Sniezek], NRC Office of Inspection and Enforcement" with an attached "IMI Radiological Investigation Team Recommendation for Long-Term TMI Improvements and/or Other Power Reactor Sites." The Staff views this suggestion as a motion to reopen the record on emergency planning and has responded separately to such motion in "NRC Staff Response to Motion to Reopen the Record Contained in ECNP's Proposed Findings on Emergency Planning," dated August 25, 1981.

REPLY PROPOSED FINDINGS OF FACT

- I. Intervenors ANGRY/Newberry Township and Commonwealth
 of Pennsylvania
 - A. Status of FEMA's Interim Findings and Determinations
- In findings 35 and 522, Intervenors ANGRY/Newberry Township argue 1. that the interim findings and determinations provided by FEMA in : instant proceeding (Staff Ex. 18) are not entitled to presumptive weight and that, as a matter of law, this Board should rule that there are no FEMA findings entitled to a rebuttable presumption on the question of adequacy of offsite emergency preparedness. The basis for Intervenors' views in this regard is that, according to Intervenors, 10 CFR § 50.47(a)(2), which establishes presumptive status for FEMA findings and determinations in NRC licensing proceedings, allegedly applies only to new operating license proceedings and allegedly refers only to final FEMA findings and determinations issued pursuant to a formal and effective FEMA regulation. ANGRY/Newberry finding 44. Since FEMA has not yet formally adopted its proposed rules in 44 CFR 350 as final, effective regulations, Intervenors argue that FEMA could not possibly have issued the type of findings and determinations entitled to presumptive weight under 10 CFR § 50.47(a)(2). ANGRY/Newberry finding 44.

Section 50.47 of 10 CFR, on its face, appears to apply directly 2. to proceedings involving the issuance of new operating licenses. Section 50.54(s), applicable to licensees already authorized to possess and/or operate a nuclear power reactor, does not allude to the presumptive status of FEMA findings and determination in any hearings involving previously licensed facilities. As we noted in our March 23, 1981 "Memorandum and Order on Effect of New Emergency Planning Regulations" (March 23 Order), this appears to be an anomaly in the new emergency planning rules March 23 Order at 10, n.4. The Commonwealth, in its proposed findings, has suggested that the most logical explanation for this anomaly is simply that the framers of the new rule did not consider a situation involving hearings for facilities with existing operating licenses. Commonwealth finding 12. We believe that that indeed may be the case for there is no reference in 10 CFR § 50.54 to the conduct of hearings for facilities with existing operating licenses. $\frac{4}{}$ Beyond this, § 50.47(a)(2) by its terms does not limit the applicability of the rebuttable presumption rule to proceedings involving new operating licenses. Rather, it provides that:

In discussions of this matter during the hearing, the Staff expressed its view that the absence of reference in Section 50.54 to a rebuttable presemption for FEMA findings and determinations in proceedings for facilities with existing operating licenses may have been purposeful. March 23 Order, at 10, n. 4. The Staff, however, has been unable to uncover anything which would indicate that the omission of the rebuttable presumption from Section 50.54 was purposeful and, accordingly, now agrees with the Commonwealth that the most reasonable explanation for the omission is that hearings involving facilities with operating licenses simply were not considered when Section 50.54 was promulgated.

"[i]n any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on a question of adequacy." (emphasis added).5/ Consequently, we find that the absence of rebuttable

In order to continue operations or to receive an operating license an applicant/licensee will be required to submit its emergency plans, as well as State and local governmental emergency response plans, to NRC. The NRC will then make a finding as to whether the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented and on the NRC assessment as to whether the licensee's/applicant's emergency plans are adequate and capable of being implemented. These issues may be raised in NRC operating license hearings, but a FEMA finding will constitute a rebuttable presumption on the question of adequacy. 45 FED. REG. 55402, August 19, 1980. (emphasis added).

The Commission further stated that:

[i]n any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on the question of adequacy. Specifically:

- a. An operating license will not be issued unless a favorable overall NRC finding can be made.
- b. After April 1, 1981, an operating plant may be required to shut down if it is determined that there are deficiencies such that a favorable NRC finding cannot be made or is no longer warranted.... 45 FED.REG. 55403.

In these explanations, the Commission makes no distinction between proceedings on new operating licenses and those involving facilities with existing operating licenses. Had there been a conscious intent to make the rebuttable presumption rule applicable only to new operating license proceedings, the Commission, we believe, would have stated such an intent clearly rather than impliedly, as it did in the portions of the Statements of Considerations quoted above, that the rebuttable presumption is to obtain in all operating license proceedings.

In the Statements of Consideration accompanying the new emergency planning rules, the Commission stated, in describing the elements of the new rules:

presumption provisions from 10 CFR § 50.54 does not preclude assignment of rebuttable presumption status to FEMA findings and determinations in hearings involving previously licensed facilities such as TMI-1.

We find Intervenors' claim that only those FEMA findings and 3. determinations issued pursuant to final, effective FEMA regulations are entitled to presumptive weight to be absurd and wholly unsupportable. The NRC's emergency planning regulations impose no such requirement or limitation on the type of FEMA findings and determinations that are to be given presumptive weight in NRC hearings. While the Statements of Consideration accompanying the NRC's emergency planning regulations acknowledge the existence of FEMA's proposed rule and state that findings and determinations issued in accordance with FEMA's proposed rule will be provided to NRC for use in its licensing proceedings (45 FED REG. 55406), there is no indication in either the Statements of Consideration or the NRC's emergency planning rules that only those findings and determinations issued pursuant to a final, effective FEMA regulation are entitled to presumptive weight in NRC operating license hearings. Indeed, were there such a requirement, it is possible that no FEMA findings and determinations would ever be entitled to presumptive weight since there is no guarantee that FEMA's proposed rules will ever be made final and effective regulations. We cannot accord to the Commission any intent to make the effectiveness of its rules or the presumptive weight to be given FEMA findings and determinations dependent upon FEMA's actions in finalizing its own administrative regulations. While

Intervenors' arguments to the contrary are novel, absolutely no basis has been provided in support of those arguments. The Commission's emergency planning regulations clearly do not contemplate that presumptive weight be given only to those FEMA findings and determinations issued pursuant to a final, effective FEMA regulation.

4. FEMA's interim findings and determinations for TMI-1 issued pursuant to the NRC-FEMA Memorandum of Understanding of November 4, 1980 (45 FED. REG. 827'7) were prepared based on substantial and detailed reviews and evaluations of offsite emergency plans and of the performance of offsite emergency response agencies in the June 2, 1981 exercise for TMI-1. Staff Ex. 18, at 1. 6/ Those interim findings and determinations were prepared by the agency with the responsibility and expertise for the evaluation of offsite emergency preparedness capability and were submitted for use in the instant proceeding as contemplated by the NRC's emergency planning regulations. We find, in accordance with those regulations, that they are entitled to presumptive weight in this proceeding and we

We reject the arguments in ANGRY/Newberry Township's finding 61 6/ that no presumptive weight should be accorded to FEMA's findings and determinations because those determinations allegedly are arbitrary and without basis. As previously indicated, those findings and determinations were based on detailed and objective evaluations of offsite plans and of the performance of offsite agencies in a full-scale exercise. Staff Ex. 18, at 1. From those evaluations, FEMA identified planning deficiencies that are relatively minor in nature, are correctable, and are in the process of being corrected. Tr. 22537, 22663-64, 22666, 22691-92 (Dickey). Despite the deficiencies, FEMA determined, on balance, that, with the exception of York County, adequate offsite preparedness capability has been demonstrated. Staff Ex. 18, at 2. We find that FEMA's findings and determinations are not arbitrary, that the process by which they were produced has been set forth fully on the record, and that Intervenors' arguments to the contrary are without merit.

reject the arguments to the contrary in Intervenors ANGRY/Newberry Township's proposed findings 35, 44 and 522.

- B. NRC Staff's Evaluation of Overall Adequacy of Emergency Preparedness
- that the NRC Staff has not performed an assessment of the compliance of offsite plans with the NRC's emergency planning rules. Intervenors further assert, in finding 525, that the Staff has failed to review FEMA findings and has thereby abrogated its responsibility to determine the overall adequacy of emergency planning for the TMI area. In this regard, the evidence indicates that the Staff did not perform an item-by-item evaluation of offsite emergency plans and that, while it participated with FEMA in the review of the offsite plans, the Staff has basically relied on FEMA's review and evaluation of those plans. Tr. 22923-24 (Chesnut). We find no inadequacies or abrogation of responsibilities on the part of the Staff in this regard.
- 6. The NRC's emergency planning regulations explicitly provide that the NRC will base its findings as to whether the state of emergency preparedness provides reasonable assurance that appropriate protective measures can and will be taken in the event of a radiological emergency on a review of the FEMA findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented and on an NRC assessment as to whether the licensee's emergency plans are adequate and capable of being implemented. 10 CFR §§ 50.54(s)(2), (s)(3),

50.47(a)(2). In this vein, the Staff itself conducted a detailed evaluation of the adequacy and implementability of the Licensee's Emergency Plan (Staff Ex. 6; Staff Ex. 23; Donaldson and Chesnut, ff. Tr. 22236; NRC Staff Position on Emergency Preparedness for TMI-1, ff. Tr. 22881) and arrived at a finding on the overall adequacy of emergency preparedness for iMI based on that and a review of FEMA's findings and determinations on the adequacy of offsite planning. NRC Staff Position on Emergency Preparedness for TMI-1. ff. Tr. 22881. There is no need for, and no requirement that, the Staff redo or duplicate what FEMA has already done. Such duplication would be wasteful of agency resources and contrary to the contemplation of the NRC's emergency planning rules that the NRC look to FEMA for the evaluation of offsite planning. The Staff's approach to the emergency planning evaluation in this proceeding has been wholly consistent with the new emergency planning rules and does not constitute an abrogation of responsibilities by the Staff or a deficiency in the emergency planning evaluation for TMI-1. We reject ANGRY/Newberrry Township's assertions to the contrary in their findings 20 and 525.

7. Intervenors ANGRY/Newberry Township also argue that the Staff advocates authorizing restart of TMI-1 without requiring that offsite emergency plans comply with the requirements of the new emergency planning rules as a condition precedent (ANGRY/Newberry Township findings 20, 21,23-25). We do not believe the Staff to be advocating any such thing.

As noted by the Commonwealth in its proposed findings (Commonwealth 8. finding 4). The basic standard for compliance with the emergency planning rule is a finding by the NRC that the state of emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. 10 CFR §§ 50.47(a)(1), 50.54(s)(2). The new emergency planning rules provide planning standards which are to be met by licensee and offsite emergency plans (10 CFR § 50.47(b)) but also provide that deficiencies preventing full compliance with the planning standards might nevertheless not preclude issuance of an operating license or continued operation of an operating plant if it is shown that such deficiencies are not significant or that adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons to permit plant operation. 10 CFR §§ 50.47(c)(1), 50.54(s)(2). FEMA has identified a number of planning deficiencies that prevent full compliance of all offsite emergency plans with certain of the planning standards in the emergency planning rule. 8/ At the same time, FEMA has found and determined that the identified deficiencies are administrative and relatively minor in nature, are correctable, and are being corrected

^{7/} See also NRC Staff's proposed finding 19.

^{8/} See NRC Staff's proposed finding 371 and footnote 100 at p. 285 of the Staff's proposed findings of August 12, 1981.

by the Commonwealth and the counties. Tr. 22537, 22663-64, 22666, 22691-92 (Dickey). The point being made by the Staff in its citation to 10 CFR § 50.47(c)(1) (Tr. 22588 (Tourtellotte)) was not that Licensee should be authorized to operate TMI-1 with major unresolved deficiencies and major deviations from planning standards in offsite planning but only that deficiencies of a minor or insignificant nature should not preclude restart when viewed in the context of § 50.47(c)(1) and § 50.54(s)(2). The major deficiencies we have found -- the absence of a completed prompt alerting system in accordance with the provisions of § 50.47(b)(5) and the failure of York County to demonstrate its preparedness capabilities by participation in the June 2, 1981 exercise -- will be corrected prior to restart by means of the conditions we would impose on restart. 10/ FEMA has found and determined that the state of offsite planning, other than that for York County, has been demonstrated to be adequate, despite the existence of identified minor deficiencies. Staff Ex. 18, at 2. In these circumstances, we find the Staff's reliance on 10 CFR §§ 50.47(c)(1) and 50.54(s)(2) and its position favoring restart despite the existence of minor planning deficiencies to be appropriate.

^{9/} The Commonwealth's commitments to correct certain identified deficiencies prior to restart are addressed <u>infra</u>.

^{10/} See NRC Staff's proposed conclusions of law 5 and 6.

C. Alleged Planning Deficiencies

1. Formal Submission of Offsite Plans for FEMA Approval

9. In their proposed finding 69, Intervenors ANGRY/Newberry Township cite a number of offsite planning deficiencies allegedly identified by FEMA. Among those is a claim that the fact that the Commonwealth has not formally submitted its plans to FEMA for approval pursuant to 44 CFR 350 is a deficiency. While it is true that FEMA noted, in its interim findings and determinations, that the State and county plans had not yet been submitted for formal FEMA approval (Staff Ex. 18, at 1), this was not identified as a planning deficiency. We know of no requirement in the NRC's emergency planning regulations (and Intervenors have cited none) that offsite plans must have been submitted for formal FEMA approval to be adequate. Thus, we find that the current lack of submission of State and county plans for formal FEMA approval is not a planning inadequacy. 11/

2. Coordination in Plan Implementation

10. ANGRY/Newberry Township findings 69 and 71 cite uneven coordination among offsite emergency response agencies as a deficiency, claiming coordination to be the weak link in the June 2, 1981 exercise. $\frac{12}{}$

^{11/} The Commonwealth has indicated in its proposed findings that it hopes to formally submit State and county plans for FEMA approval by November 1, 1981. Commonwealth of Pennsyvlania's Proposed Findings of Fact and Conclusions of Law on Emergency Planning Issues, August 13, 1981 (Commonwealth findings) at p. 3.

FEMA, in its exercise report, indicated that coordination was the weak link in the exercise for Lancaster County. Staff Ex. 20, at 10-11. There is no evidentiary support for the claim that coordination was generally weak, as implied in ANGRY/Newberry Township finding 71(D).

FEMA basically concluded from the exercise that there was uneven coordination among offsite emergency response agencies. FEMA did find that the State response agencies possess an adequate capability to coordinate their own programs. Staff Ex. 18, at 2. Although FEMA concluded that coordination was uneven, deficiencies in coordination were not found to be of sufficient significance to result in inadequate preparedness capability. 13/ Id.

3. Familiarity with Plans

11. ANGRY/Newberry Township finding 69 cites the fact that local government response personnel were not completely familiar with their management roles in the June 2, 1981 exercise as a deficiency. Intervenors' finding 73(A) cites the centralization of knowledge of responsibilities in county and municipal emergency management coordinators as a major problem. As FEMA has noted, however, the county emergency plans were completely rewritten in the six months prior to the June 2 exercise. The lack of complete familiarity of

^{13/} The primary areas of uneven coordination involved notification and alerting, public information, and emergency communications. Staff Ex. 18, at 2. The Commonwealth has indicated in its finding 114 that it is developing further procedures for coordination of public information among the Governor's office, PEMA's Public Information Officer, County Public Information Officers, municipal emergency management coordinators, municipal officials, the media and the Licensee, all designed to improve coordination in this area. The Commonwealth expects that revised public information coordination provisions will be reflected in the State and county Emergency Plans to be submitted for formal FEMA approval in November 1981. Commonwealth Findings, p. 3 and finding 114. These efforts at additional coordination appropriately address deficiencies in coordination with regard to the timing and content of EBS messages and State and county news releases cited in ANGRY/Newberry Townships's proposed finding 71(M) and (N). As to coordination of emergency communications, the Commonwealth has committed to improve such coordination by conducting at least one comprehensive communications drill prior to restart. Commonwealth finding 118.

local government personnel with management roles and the centralization of knowledge of plans in local coordinators were due simply to the newness of the revised county plans and the need for further exercises and drills on implementation of those plans. Staff Ex. 18, at 2; Staff Ex. 21, at 1, Section A. Again, FEMA did not find this deficiency to be of such significance as to obstantially affect emergency preparedness capabilities. Staff Ex. 18, at 2.

4. Prompt Notification of the Public

12. ANGRY/Newberry Township finding 69 cites the lack of a prompt alerting system complying with the criteria of NUREG-0654 as a significant deficiency. Similarly, in their finding 71(A), Intervenors note the occurrence of significant problems in notification and alerting the public in Lancaster County during the June 2, 1981 exercise. The evidence indicates that the problem noted in Lancaster County was the announcement over the EBS of recommended protective act ons prior to the time that route alerting was undertaken. 14/ The Board itself has found that the absence of a completed prompt alerting system is, indeed, significant and the Board would impose, as a condition of restart, a requirement that Licensee's siren alerting system for the TMI plume EPZ be installed and made operable. 15/ This condition, once fulfilled, will resolve

However, as FEMA has noted, this would not be a major problem since the EBS message on protective actions would be repeated every five minutes. Staff Ex. 20, at 5. With such repetition of the EBS message, members of the public should be able to get the message by turning to the appropriate EBS station once they have been alerted to the existence of a radiological emergency.

^{15/} See NRC Staff's proposed conclusions of law 5 and 6.

the significant deficiency with regard to the current lack of a prompt alerting system and should also drastically reduce the need for route alerting. $\frac{16}{}$

13. With regard to the Licensee's siren alerting system, the

Commonwealth, in its finding 110, expresses its view that

confirmation of essentially 100% coverage of the TMI plume EPZ can

be based upon a review of the Licensee's consultant's sampling of

siren coverage to be performed after installation of the sirens.

The Licensee's accoustical consultant will selectively sound test

sirens and use the data from such testing to check the validity of

^{15/} Also with regard to route alerting, ANGRY/Newberry Township finding 71(B) asserts that the lack of pre-prepared messages containing protective action recommendations to be broadcast by route alerting teams is a significant deficiency. This assertion is based on a recommendation by FEMA that such pre-prepared messages should be developed and distributed to all route alerting organizations. Staff Ex. 20, at 7, item 9. First, we note that this was simply a recommendation by FEMA and that the lack of such prepared messages was not identified as a significant deficiency. Beyond this, the Board has difficulty in understanding why such pre-prepared messages are needed. The need for route alerting itself should be drastically reduced by the completion of the Licensee's prompt alerting system. Moreover, under the concept of operations for the State and county emergency plans, protective action recommendations are to be given to the public primarily by means of EBS messages. Consequently, the need for providing protective action recommendations through route alerting teams should be minimal. In these circumstances, we see no reason why protective action recommendations cannot be given by route alerting teams (if that is necessary at all) on an ad hoc basis. Pre-prepared route alerting messages in this regard simply seem unnecessary.

the theoretical siren coverage analysis provided by the Licensee.

From this, an addendum to the Licensee's theoretical sound coverage study will be issued. Tr. 22904-05 (Rogan). We agree with the Commonwealth that an evaluation of this siren coverage sampling report should be sufficient to confirm the adequacy of coverage of the Licensee's siren system. Siren systems do not involve a new and emerging technology. The Licensee's theoretical study on siren coverage is reasonable and was performed in accord with accepted technical standards. Tr. 22889 (Chesnut). Siren sound coverage sampling should ade ately serve to confirm the validity of the theoretical analysis and the overall sound coverage of the Licensee's siren system without the need for a full scale sound test of the entire system.

5. York County Exercise

ANGRY/Newberry Township finding 69 also cites the failure of York County to participate in the June 2, 1981 exercise as a significant deficiency. From the evidence of record, the Board, in essence, agrees that York County has not yet satisfactorily <u>demonstrated</u> its emergency preparedness capability. Accordingly, we would require, as a condition of restart, that York County demonstrate its capabilities through participation in an exercise prior to restart. 17/

^{17/} See NRC Staff's proposed conclusions of law 5 and 6.

6. Emergency Worker Exposure Control

- 15. ANGRY/Newberry Township finding 71 cites an alleged lack of exposure control for emergency workers as a significant deficiency. FEMA has recommended that emergency worker exposure control be improved so as to allow emergency workers to remain in the field for a longer period of time. Staff Ex. 20, at 20, item 41. As to emergency worker exposure control, the Commonwealth has committed, in its proposed finding 76, to predistribute all necessary selfreading dosimetry to risk counties prior to restart and to predistribute permanent record dosimetry (TLDs) requested from FEMA as soon as it is available. The Commonwealth has, however, indicated its view that emergency organizations to which such dosimetry predistribution is made should have plans for distribution of the dosimetry to individual emergency workers. Commonwealth finding 73. We have examined the risk county Emergency Plans in this regard. Based on that examination, we have determined that the Emergency Plans of Cumberland, Dauphin, Lancaster, Lebanon and York Counties do, in fact, contain provisions for the distribution of dosimetry to emergency workers. Board Ex. 7 at N-17; Board Ex. 6 at N-16, N-17; Board Ex. 8 at R-17; Board Ex. 9 at Q-16, Q-17; Board Ex. 5 at R-18.
- The Commonwealth has also committed to provide an instructor's course to State agency, county and municipal level personnel on the use of dosimetry and personnel decontamination monitoring equipment once or twice prior to January 1, 1982. Commonwealth finding 80.

 Thus, training in the use of all available dosimetry and personnel decontamination monitoring equipment will be available to individual emergency workers.

- 17. Finally, the Commonwealth is attempting to procure potassium iodide (KI) with a reasonable shelf life beyond December 31, 1981 for distribution to emergency workers (and institutionalized persons).

 To the extent the Commonwealth is able to procure such KI, it has committed to predistribute it to the target groups identified in the Commonwealth's Emergency Plan when available. Commonwealth finding 86.
- 18. We note that while FEMA recommended improvement in emergency worker exposure control provisions (Staff Ex. 20, at 20, item 41), it did not find emergency worker exposure control in the absence of the recommended improvements to involve a significant deficiency which would render offsite emergency preparedness capabilities inadequate. See Staff Ex. 18, at 2. As noted above, the Commonwealth has committed to undertake improvements in the area of emergency worker exposure control. These commitments should serve to resolve any FEMA concerns over the need for improvement in this area. 18/

The Commonwealth, in its proposed findings, recommends that we direct the Staff to certify to the Commission that the Commonwealth's commitments with regard to dosimetry predistribution (Commonwealth finding 77) dosimetry and personnel monitoring training availability (Commonwealth finding 81), and KI predistribution (Commonwealth finding 87) have been carried out once these commitments have, in fact, been carried out. While the planning areas as to which these Commonwealth commitments are directed have been identified by FEMA as areas where improvement is needed, there is no indication that significant planning deficiencies exist in these areas or that emergency preparedness capabilities are inadequate without the recommended improvements. See Staff Ex. 18, at 2. In these circumstances, we do not see a need for a formal Staff certification to the Commission on the completion of these Commonwealth commitments as a condition of restart.

7. Access Control

19. In ANGRY/Newberry Township proposed finding 71(G), Intervenors cite the need for improved access control for the TMI piume EPZ. FEMA itself identified access control as an area needing improvement, particularly with regard to assigning responsibilities for activating, manning and equipping access control points. Staff Ex. 20, at 25, item 46. In its proposed findings, the Commonwealth committed to develop detailed access control procedures prior to restart. These procedures, which will be incorporated into the State Emergency Plan prior to its submission to FEMA for formal approval, will identify the number of access control points required, their locations, the number of persons required to man them and the source of such access control personnel. Commonwealth finding 105. We find that this commitment will enhance the access control provisions of the Commonwealth and will resolve the deficiency in access control identified by FEMA. 19/

The Commonwealth, in its proposed finding 105, recommends that we direct the Staff to certify to the Commission that the Commonwealth's access control plan has been completed and the personnel resource to implement the plan have been identified prior to restart. While access control planning has been identified by FEMA as an area where improvement is needed, FEMA did not indicate that the deficiency in this area is so significant as to render emergency preparedness capabilities inadequate without the recommended improvements. See Staff Ex. 18, at 2. In these circumstances, we do not see a need for a formal Staff certification to the Commission on the completion of these Commonwealth commitments as a condition of restart.

8. Mass Care Support

- 20. In their proposed findings 71(I), (J) and (K), Intervenors ANGRY/ Newberry Township claim that FEMA has identified significant planning deficiencies with regard to mass care support subsequent to an evacuation. Specifically, Intervenors assert that there is a need for an alternate to Red Cross staffing of mass care centers in most counties, that the Red Cross had only 10% of the cots needed for adequate sheltering. 20/ and that there is a need for PEMA to develop implementing instructions for procuring mass care food and other supplies. At the outset we note that the NRC's emergency planning regulations and criteria do not even call for the establishment of mass care services in an emergency. Adler and Bath (3/16 Testimony), ff. Tr. 18975, at 64; Adler and Bath (2/23 Testimony), ff. Tr. 18975, at 51. That being the case, we cannot find that the recommended improvements in mass care services cited as being necessary by Intervenors are essential to an adequate emergency preparedness capability or must be accomplished prior to restart.
- 21. FEMA itself did not indicate that the areas of mass care services that ought to be improved were of major significance. FEMA's comment that an alternate to Red Cross staffing of mass care centers "should be considered" (Staff Ex. 20, at 27), is far short of a finding that mass care centers will not be adequately staffed. Although FEMA noted that the Red Cross had available only 10% of the cots that might be needed for Dauphin County mass care,

^{20/} FEMA's comment in this regard was that, for Dauphin County, the Red Cross has available only 10% of the cots that might be needed. Staff Ex. 20, at 28.

supply of additional cots. Staff Ex. 20, at 28. Finally, while it may be true that pre-prepared instructions for obtaining food and other mass care supplies would tend to facilitate the procurement of such supplies in an emergency, the evidence indicates that the Red Cross and county emergency management agencies together have consistently provided adequately for mass care facilities in actual emergencies through resources that were on hand or borrowed at the time of an emergency. Adler and Bath (3/16 Testimony), ff. Tr. 18975, at 38-39. In short, we find no significant deficiencies in mass care provisions despite Intervenors' assertions to the contrary.

9. Communications

22. In ANGRY/Newberry Township finding 71(L), Intervenors assert that, because of the lack of participation of volunteer emergency workers in the June 21, 1981 exercise, communications at the county level could not be tested. This assertion mischaracterizes the evidence. In point of fact, FEMA has indicated that, for purposes of the exercise, communications were adequate although the full capabilities of communications in several counties were not tested. Staff Ex. 20, at 33. Without exception, the counties demonstrated the equipment capability for 24-hour notification to, and activation of, the emergency response network. The counties have provisions for communications with the State EOC and with contiguous governments through a number of different communications systems. Id.

23. A similar misstatement with regard to communications is set forth in ANGRY/Newberry Township finding 73(D) wherein Intervenors assert that, as a result of the June 2, 1981 exercise, FEMA was unable to determine whether the various communications systems were adequate to support a radiological emergency incident response. In fact, the "exercise of June 2 demonstrated that the communications systems at the state and county level were adequate." Staff Ex. 21, at 1, Section F. Thus, we find Intervenors assertions of significant deficiencies in emergency communications, as alleged in their findings 71(L) and 73(D), to be unsupported and without merit.

10. Rumor Control

24. ANGRY/Newberry Township finding 71(0) alleges as a significant deficiency the fact that an operating system for rumor control was not demonstrated in the June 2, 1981 exercise. It is true that FEMA noted that the exercise did not show an operating system for rumor control. FEMA did not, however, characterize this as a deficiency. Staff Ex. 20, at 35. FEMA did note that separate rumor control telephone lines were designated and merely recommended that rumor control telephone numbers be prominently broadcast to the public in the future. Id. This would appear to be a fairly simple recommendation to follow. We find that the lack of demonstration of an operating rumor control system in the June 2, 1981 exercise was not a significant deficiency.

11. Municipal Plans

- 25. In ANGRY/Newberry Township finding 81, Intervenors assert that all 38 municipalities in the TMI plume EPZ must have written municipal emergency plans prior to restart of TMI-1. The Commonwealth also expressed its view that municipal plans should be finalized and should identify pick-up points for persons without transportation and unmet transportation needs in this regard (Commonwealth findings 55, 59), identify homebounds and invalids and assess transportation needs in this regard (Commonwealth findings 56, 59), identify routes for route alerting and resources required for route alerting (Commonwealth findings 57, 59), and identify unmet municipal resource needs (Commonwealth findings 58, 59).
- 26. Twenty-five of the 38 municipalities in the TMI plume EPZ have completed emergency plans. Board Ex. 13. The completed plans do, in fact, identify pick-up points for persons without transportation, identify homebounds and invalids needing special transportation, identify routes for route alerting, and identify unmet municipal resource needs. Id. The uncompleted municipal plans involve municipalities in Dauphin and York Counties. Board Ex. 5 and 6, Annex V. Six municipalities in York County have completed plans and, of the remaining eight municipalities in the York County portion of the plume EPZ for TMI, some have plans that are nearly completed whereas others are still under development. Tr. 20797-98 (Curry). Eleven of the 16 risk municipalities in Dauphin County have completed municipal plans and three of the incomplete plans are nearly completed. Tr. 20947 (Wertz).

- 27. During 1980, the Licensee provided consulting services to all municipalities within the TMI plume EPZ for development of municipal plans. Knopf, et al., ff. Tr. 21816, at 2-3. Licensee's consultants met with municipal planners and worked toward developing municipal plans that would document a clear method to be used to implement the concept of operations of the State and county emergency plans. Id. at 12-13. Starting in May of 1981, Licensee provided a continuing plan maintenance consulting service whereby consultants will review municipal plans and offer continuous planning assistance and periodic workshop sessions for planners in the 38 municipalities in the TMI plume EPZ. Id. at 14.
- From the evidence of record, we cannot now determine that all 38 28. municipalities in the TMI plume EPZ have completed municipal plans at this time. The Board would expect, based on the fact that the Licensee has provided municipal planning consultants to assist the municipalities in getting their plans in order and on the Commonwealth's expressed objective of working with the counties to get all municipal plans completed (Commonwealth finding 59), that the incomplete plans will be completed in short order. The evidence indicates, however, that the absence of fully completed municipal plans does not mean that prompt and effective emergency response will not take place. Knopf, et al., ff. Tr. 21816, at 12-13; Tr. 22468 (Bath). Resources that would be brought to bear at the municipal level are the same ones that are used routinely to respond to a broad range of community emergencies. Knopf, et al., ff. Tr. 21816, at 13; Tr. 20908 (Curry). Many functions served by

municipal emergency plans are already provided for at the municipal level by other means. $\frac{21}{}$ In these circumstances, we do not find that completion of emergency plans for all municipalities in the TMI plume EPZ is required as a condition of restart of TMI-1. $\frac{22}{}$

12. School District Plans

29. In ANGRY/Newberry Township finding 86, Intervenors assert that all school districts with students within the plume EPZ for TMI should have plans which are coordinated with the State Department of Education, the counties and municipalities. The Commonwealth also expressed its view that school districts 23/ should have written plans or implementing procedures, prepared in accordance with appropriate county school "master plans," pre-identifying the entities responsible for determining whether to close schools (Commonealth findings 65, 66), identifying the schools to be

For example, while municipal plans are to list homebounds and invalids who are nor-ambulatory or have special health problems, local ambulance services and fire departments, in York County at least, currently maintain such lists for virtually all affected municipalities. Tr. 20806 (Curry).

Although FEMA recommends that written municipal plans be completed, FEMA would not categorize a lack of municipal plans as a major deficiency rendering planning inadequate under the NRC's planning standards. Tr. 22468-69 (Bath); Staff Ex. 18, at 2.

^{23/} Of the 16 school districts within, or partially within, the TMI plume EPZ, ten are in Dauphin County (Tr. 20968-69 (Wertz)) and three are in York County (Tr. 20851 (Curry)).

- evacuated 24/ (Commonwealth findings 62, 66), and assessing the resources available for school evacuation (Commonwealth findings 64, 66).
- 30. The Commonwealth has committed to resolving the problem related to the responsibility for determining whether to close and evacuate schools in a radiological emergency. That decision will be made by PEMA in consultation with the State Department of Education.

 The recommendation will be passed to the counties who will contact the appropriate school districts which, in turn, will communicate with the affected schools. Commonwealth finding 65. The revised State and County emergency response plans will reflect provisions for this process. Id.
- 31. During 1980, Licensee provided emergency planning consultants who assisted the Lower Dauphin School District in the development of a school district emergency plan which was ultimately approved by the school board for that school district. That plan has now been adopted and serves as the model school emergency plan for all school districts in Pennsylvania. Knopf, et al., ff. Tr. 21816, at 8-9. School district plans are now in the process of being developed with the Lower Dauphin School District Plan serving as a model. In

The Cumberland, Lancaster, Lebanon and York County Emergency Plans identify the individual schools within each county that would be evacuated in the event of a radiological emergency at TMI. Board Ex. 7, at L-4; Board Ex. 8, at G-4; Board Ex. 9, at G-4; Board Ex. 5, at O-4.

this regard, the three school districts within the York County portion of the plume EPZ have been given planning guidance developed by PEMA and the York County Emergency Management Agency. Tr. 20843 (Curry). Dauphin County has completed plans for two school districts (Tr. 20855 (Wertz)) and all the school districts within the Dauphin County portion of the plume EPZ have completed development of information on their evacuation transportation resource needs (Tr. 20856 (Wertz)). Thus, the evidence indicates that substantial planning is underway in this regard.

held meetings with the school district superintendents within their counties to encourage expeditious completion of the school district plans. Tr. 20842 (Curry); Tr. 20848 (Wertz). The Commonwealth also has urged prompt completion of the school district plans through a joint letter from PEMA and the Department of Education, and has committed to provide guidance to the school districts for plan completion. Commonwealth finding 66. In view of these efforts by the Commonwealth and the counties, the Board expects that school district planning schould be completed in short order.

^{25/} York County maintains sufficient resources to evacuate affected school although specific transportation coordination for school evacuations has not yet been completed. Tr. 20851 (Curry).

33. FEMA has indicated that school district plans should be completed to provide additional assurance that schools may be evacuated as contemplated by the county emergency plans. Tr. 22436 (Bath); Bath (Attachment 3), ff. Tr. 22350, at 5. Nevertheless, FEMA has not identified the lack of school district plans as a deficiency sufficient to render emergency preparedness capabilities inadequate. See Staff Ex. 18, at 2. The evidence, in fact, indicates that the school districts have existing procedures for transporting students in emergencies and that the lack of finalized, written plans will not prevent an appropriate emergency response. Tr. 20908-09 (Curry). In these circumstances, we do not find that completion of radiological emergency plans for all school districts in the TMI plume EPZ is required as a condition of restart of TMI-1.

13. EBS Messages

34. In ANGRY/Newberry Township finding 86, Intervenors assert that pre-prepared EBS material in the County plans are inadequate because they fail to provide information to parents on where and how evacuated shoool children may be picked up. Further allegations of inadequate EBS messages are contained in Intervenors' findings 140 and 141 wherein EBS prepared messages are faulted for not containing information on the specific nature of the problems at the TMI facility. At the outset, we note that, contrary to Intervenors' assertion, the prepared EBS messages for each of the five risk counties do, in fact, identify those places to which school children evacuated from specific school districts

will be relocated. Board Ex. 5, at F-13; Board Ex. 6, at D-12; Board Ex. 7, at D-9; Board Ex. 8, at F-11; Board Ex. 9, at F-9. Beyond this, FEMA's evaluation of the pre-prepared EBS messages indicated that the only area needing improvement involved provisions for informing the public of the nature of problems at the facility and the consequences if recommended protective actions are not followed. Staff Ex. 23, at III-13. We are at a loss to understand how information on problems at the facility could be prepared in advance of an actual radiological emergency since such information is, of course, dependent solely upon the specific incident that has actually occurred. In any event, FEMA has indicated that information on problems at the facility and on consequences from failure to follow protective action recommendations can be provided on an ad hoc basis through EBS messages broadcast at the time of an emergency. Id. In sum, we find no deficiencies in the pre-prepared EBS messages and we reject the assertions to the contrary in ANGRY/Newberry Township's proposed findings.

14. Public Information

35. Intervenors, in ANGRY/Newberry Township finding 173, allude to the fact that the Commonwealth's public information pamphlet (PEMA pamphlet) and the emergency information pamphlets of the five counties in the TMI plume EPZ are to be revised prior to distribution. The Commonwealth, in its proposed findings 92, 93 and 94, has indicated that the PEMA pamphlet will be updated and

has committed to distribute the updated PEMA and county pamphlets prior to restart of TMI-1. Commonwealth finding 94. The Licensee has committed to assume at least financial responsibility for printing and distribution of the pamphlets. Tr. 22878 (Chesnut).

- 36. FEMA has reviewed the existing PEMA and county emergency information pamphlets and has determined that the information in the PEMA pamphlet and that in the individual county pamphlets should be distributed in order to provide the necessary information called for in NUREG-0654, Criteria G.1.a-d. Staff Ex. 23 at III-16. Based on the commitments of the Commonwealth and the Licensee to undate and distribute the public information pamphlets prior to restart of TMI-1, we find that FEMA's recommendations on emergency information distribution to residents of the TMI plume EPZ will be met.
- 37. Moreover, the Commonwealth has committed to distribute the updated county pamphlets to transient locations (such as hotels, motels, parks and employers) in the TMI plume EPZ, to accomplish such distribution prior to restart and to prompt the five risk counties to take actions to assure that those persons in charge of transient areas are aware of their responsibilities to provide the emergency information materials to transients in the event of an emergency at TMI-1. Commonwealth finding 102. This commitment should provide additional assurance that emergency information can be made

- available to transients in time of need as recommended by FEMA. See Bath (Attachment 3), ff. Tr. 22350, at 2, item 3.26/
- 38. In their finding 190, Intervenors ANGRY/Newberry Township allege a number of inadequacies in information to be provided to farmers in the TMI plume EPZ. 27/ While citing no evidentiary bases for their allegations, Intervenors claim that there must be an education program which provides farmers with information on the types of radiation and manner of deposition, information on the effects of radiation on livestock and plants, and information on protective measures for livestock. Intervenors have ignored the evidence which establishes that just this type of information has been, or will be distributed to farmers in the area surrounding TMI. Thus, as residents of the TMI plume EPZ, farmers will receive the Commonwealth and county emergency information pamphlets which the

The Commonwealth has recommended that we direct the Staff to certify to the Commission prior to restart that the public information pamphlets have been updated and distributed, and that steps have been taken to inform key individuals at transient locations of their responsibilities in an emergency. Commonwealth findings 95, 102. Since the Commonwealth and the Licensee have duly committed to accomplishing the updating and distribution prior to restart and the Commonwealth has committed to prompt the risk counties to make transient area managers aware of their emergency information responsibilities, we see no need to require formal certification to the Commission as a condition of restart.

In this same finding, Intervenors note that farmers are not to be provided with dosimetry or radioprotective drugs in event of an emergency at TMI-1. In this regard, we note that the Commonwealth has changed its approach toward farmers and the protection of livestock. Specifically, farmers with livestock will be treated as emergency workers during any fixed nuclear facility incident. Prior to restart, the State and county emergency plans will include provisions for the distribution of dosimetry and radioprotective drugs to farmers as needed during an emergency. Commonwealth finding 120.

Commonwealth has committed to distribute prior to restart of TMI-1. Van Buskirk and Cable, ff. Tr. 18296, at 4. Such materials will provide information on the nature and types of radiation and on protective measures for humans. Commonwealth Ex. 3. In addition, substantial information on the effects of radiation on livestock and guidance to the farmer on the protection of livestock and poultry is set forth in Annex B to the Commonwealth Department of Agriculture's Plan. Commonwealt! Ex. 2A, App. 7, Annex B. This information, designed in the form of reproducable fact sheets, as well as information on the protection of foodstuffs in the main body of the Department of Agriculture's Plan, was to have been distributed by the State Department of Agriculture to all farmers within the TMI plume EPZ by about mid-July of 1981. Tr. 20421-22 (Furrer). Consequently, we find Intervenors' assertions of inaiequacies with regard to information provided to farmers to be unsupportable and without merit.

15. Evacuation Time Estimates

39. Intervenors ANGRY/Newberry Township allege a number of inadequacies in the Licensee's evacuation time estimate study. Specifically, Intervenors assert in their finding 228 that there is a void in the record as to the reasonableness of the specific planning assumptions used in the study. Contrary to this assertion, however, the evidence indicates that the formmonwealth has evaluated Licensee's study and has determined that it contains basically all of the assumptions that we're present in PEMA's initial evacuation

planning. Tr. 17999-18000 (Lothrop). Although limited conflicts between the Licensee's study assumptions and actual planning were identified (Tr. 18020 (Lothrop, Straube)), planning revisions are underway to establish county evacuation capabilities conforming to the Licensee's study (Tr. 18023 (Lothrop)) and the Commonwealth has determined that it will utilize the Licensee's evacuation time estimates in its protective action decisionmaking (Tr. 22361-63 (Bath)).

- 40. In their findings 232 and 233, Intervenors claim that the Licensee's evacuation time estimate study does not comply with the criteria of NUREG-0654 because all assumptions were not stated in the study. NUREG-0654 specifies that assumptions used on such matters as automobile occupany factors, methods of determining roadway capacities and methods of estimating populations are to be stated in evacuation time estimate studies. Staff Ex. 7, at 4-2. In point of fact, such assumptions are quite clearly stated in rather substantial detail in Licensee's evacuation time estimate study. Licensee Ex. 52, at 1, 2, 4-44, 46-56, 70-72, Appendices B, C, D. We find Intervenors' assertions to the contrary to be without merit.
- 41. Intervenors fault Licensee's evacuation time estimate study for its failure to chose evacuation sectors based on meteorological conditions, citing NUREG-0654 for the proposition that evacuation sectors used in time estimates should be weather dependent.

ANGRY/Newberry Township finding 238. However, the guidance of NUREG-0654 indicates that evacuation sector selection should be weather dependent only in those instances in which meteorological conditions, such as dominant wind directions, warrant special consideration. Staff Ex. 7, at 4-4. Intervenors have cited no evidence indicating that meteorological conditions in the TMI area warrant the use of special weather dependent evacuation sectors in evacuation time estimates for the area and see know of none.

42. Intervenors also allege that the Licensee's evacuation time estimate is inadequate because there was no sensitivity study to determine the most adverse weather conditions (ANGRY/Newberry Township finding 240), citing Staff consultant Urbanik's speculation that rain with a normal daytime population might possibly result in longer evacuation times than the snow scenario used for the adverse weather condition in the Licensee's study. (ANGRY/Newberry Township finding 241). The evidence indicates that the condition of rain with a normal daytime population would not produce longer evacuation times than the snow scenario because rain, while it may reduce vehicle speeds slightly, does not reduce road capacity as does snow. Tr. 17934 (Schaufler). The adverse weather condition to be used in evacuation time estimate analyses is not the total worst case scenario. Tr. 19152-53 (Urbanik). One might easily postulate conditions that would make evacuation impossible for extended periods of time although the likelihood of

such conditions occurring may be very low. Rather, the objective is to postulate and analyze an adverse weather scenario that has some reasonable possibility of occurring. Tr. 19153 (Urbanik). There is no evidence which would indicate that the snow condition chosen for the TMI area is not the proper adverse weather condition to use. $\frac{28}{}$ Accordingly, we reject Intervenors' assertions of inadequacies in the Licensee's evacuation time estimates in this regard.

43. In ANGRY/Newberry Township finding 242, Intervenors fault Licensee's evacuation time estimate study for not accounting for flooding on evacuation routes. The evidence indicates, however, that the primary evacuation routes used in the study are not subject to flooding. Tr. 17622 (Schaufler). The potential for flooding of any of the evacuation routes is low and, in the event there is flooding in localized areas, alternate local routes not utilized in Licensee's study are available and traffic could be diverted to such alternate routes. Id. In these circumstances, we find no deficiencies in Licensee's evacuation time estimate study from the fact that flooding of evacuation routes was not explicitly accounted for.

The Commonwealth concurs in the choice of the snow condition as the appropriate adverse weather scenario. Tr. 18022-23 (Lothrop).

II. Intervenor Aamodts

- 44. Intervenor Aamodts' proposed findings of fact are, to a substantial degree, unsupported by evidence of record. Consequently, we find little need to address those findings in any detail. There is one Aamodt finding that warrants comment, however.
- 45. In finding 19 on page 6 of Intervenor Aamodts' proposed findings,

 Mrs. Aamodt asserts that restrictions would be imposed on the

 relocation of cattle during an emergency. Specifically, it is

 claimed that farmers may not be permitted to relocate livestock

 until radiation doses reach levels which are hazardous to livestock—

 levels which far exceed doses considered tolerable for humans.

 Mrs. Aamodt has provided no evidentiary basis for this assertion

 and we know of none. To the contrary, the evidence indicates that

 farmers will be permitted to evacuate their herds without prior

 authorization provided that the heard has not been quarantined.

 Tr. 18314 (Van Buskirk).

Respectfully submitted,

Counsel for NRC Staff

Dated at Bethesda, Maryland this 4th day of September, 1980

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
METROPOLITAN EDISON COMPANY,
 ET AL.
(Three Mile Island, Unit 1)

Docket No. 50-289

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF REPLY PROPOSED FINDINGS OF FACT REGARDING EMERGENCY PLANNING", dated September 4, 1981, have been served on the following by deposit in the United States mail, or as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, or, as indicated by a double asterisk, by hand-delivery, this 4th day of September, 1981:

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