

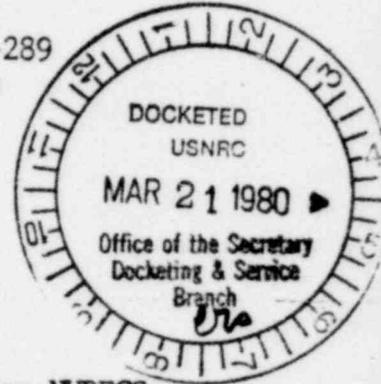
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

RELATED CORRESPONDENCE

Docket No. 50-289
(Restart)



COMMONWEALTH'S RESPONSE TO INTERROGATORIES
(SECOND SET) OF ANGRY

15. (2(a)). Do "NRC guidelines" include anything other than NUREGS 75/111 and 0654? If yes, please identify.

RESPONSE

Previous NRC guidelines have been incorporated into the new NUREG-0654, as indicated in the Foreword to that document, which states, "This document supersedes previous guidance and criteria published by FEMA and NRC."

16. (4). Has the Commonwealth conducted an independent assessment of the adequacy of the 10-mile EPZ apart from NUREG 0396? If yes, attach associated documentation.

RESPONSE

No.

17. (5). Identify each individual "response option," "protective action," and "emergency response" that the Commonwealth considers to be "available" to it in the event of a nuclear accident.

RESPONSE

The response options are identified as alert, shelter, evacuation and administering potassium iodide. The protective actions or emergency responses available are shelter, evacuation and the administration of potassium iodide.

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- a. For each such "response" identify the minimum "lead time" that the Commonwealth considers to be "adequate" for the implementation thereof.

RESPONSE

Minimum adequate lead time is a very ambiguous term and not conducive to a specific period of time because the degree of completeness of the effort and the degree of risk changes with lead time available in any particular situation. The object is to use the time available to the best possible advantage, understanding the less time available, the more "risks" that may have to be taken.

- b. What does the Commonwealth mean by "variables in the situation?" Identify precisely how each such "variable" may influence the times set forth in response to question #17(a).

RESPONSE

Variables have to do with such things as weather, time of day, day of the week; all of which impart degrees of influence.

18. (6(a)). Identify the NRC official who communicated the "advisory" which recommended the extension of emergency response capability to 20-miles from TMI.

RESPONSE

Harold Denton is the NRC official who gave the Commonwealth the "advisory."

- a. What reason did NRC give the Commonwealth, either at the time of the accident or subsequently, for such recommendation?

RESPONSE

The reason given the Commonwealth was NRC's judgment at the time.

- b. When and under what circumstances (by whom and for what reason(s)) was this recommendation withdrawn?

RESPONSE

The recommendation has not been officially withdrawn; however, the guidance in NUREG-0654 effectively supersedes the NRC "advisory."

19. (8(b)). Identify the FDAA official who made this agreement.

RESPONSE

Mr. Robert Adamcik was the FDAA official.

- a. Was this agreement limited in duration to the TMI accident? Is it in effect at the present time?

RESPONSE

The agreement was specifically limited to the TMI accident -- and has not been specifically abrogated.

- b. Where are these ambulances stored when not in use in response to a nuclear accident?

RESPONSE

The ambulances are stored at various Federal agency activities.

20. (9). When and by what NRC official was the minimum "30-hour warning time" advisory communicated to the Commonwealth?

RESPONSE

The "30-hour warning time" advisory was communicated to the Commonwealth by Harold Denton early in the week of April 1, 1979.

- a. Does the Commonwealth believe that at the time it was issued such an advisory had a reasonable basis in either logic or fact?

RESPONSE

The advisory appeared to have a reasonable basis in logic and fact.

- b. What is the basis for the Commonwealth's belief in the reasonableness of the use of a 5-hour time frame as a basis for emergency planning in light of the information in Table 2 of NUREG 0396?

RESPONSE

The information in Table 2 of NUREG-0396 is an academic evaluation and provides for a broad range of possibilities, time-wise. The specific situation at TMI following the March 28 incident provided a basis for certain judgments by technically qualified personnel concerning initiation and duration of any unprogrammed radiological releases. Such judgments are not within the purview of PEMA, but must be utilized in implementing the most appropriate response actions.

- c. Attach copies of all NRC-to-Commonwealth and Commonwealth-to-County communications which discuss nuclear accident warning times.

RESPONSE

NUREG-0654 is the most recent NRC-to Commonwealth communication discussing nuclear accident warning times. This document is being used in refining county plans associated with TMI. There are no written Commonwealth-to-County communications on the subject of warning times.

- d. (9(a)). In the course of assisting York County in the preparation of its plan or of reviewing it did the Commonwealth ever inquire into the basis for the quoted conclusion? If yes, what information was elicited by such inquiry? What judgment did the Commonwealth make on the effect of this conclusion on the plan's adequacy?

RESPONSE

The Commonwealth did not inquire into the basis for the quoted conclusion. No judgment was made on the effect of the conclusion or the plan's adequacy.

21. (10). Explain the reason(s) for the difference between York County's heavy dependence on spontaneous evacuation in its plan and Dauphin County's decision to seek mass care space sufficient to house the entire population of the 20-mile risk zone.

RESPONSE

Each of the counties concerned with preparing response plans for TMI made numerous independent decisions concerning plan development and mass care arrangements.

- a. To what extent is the reliance in the York County plan on the self-evacuation of over half of the 20-mile at risk population a consequence of the unavailability of sufficient mass care capacity within the county combined with a desire to avoid the logistical and financial difficulties of an interstate evacuation into Maryland?

RESPONSE

The Commonwealth does not have this information.

- b. What is the Commonwealth's source(s) of information regarding the cited "recent Canadian evacuation" and the "other disaster experiences?"

RESPONSE

The Commonwealth's source of information regarding the "recent Canadian evacuation" is a responsible FEMA official, plus news reports and various other commentaries. The Pennsylvania Emergency Management Agency is responsible for implementing appropriate response actions concerning both man-made and natural disasters. Staff members of PEMA have participated in such actions over the years. Additionally, various studies, seminars, and professional publications addressing such matters have been utilized by PEMA staff personnel in augmenting their experience base.

- c. Does the Commonwealth agree or disagree with the judgment of the FEMA report, Evacuation Planning in the TMI Accident, that York County's use of informal polling of local officials and businesses as a guide to evacuation behavior was "questionable in its precision and risky to use"? (p. 91) Explain.

RESPONSE

FEMA has not made an over-all judgment on the adequacy of FEMA's report; however, the informal polling of local officials by York County authorities provided useful information for both York County and state officials at the time of the incident. That the information was not precisely accurate, can be attributed to the urgency of the developing situation around TMI.

- d. (10(a)). Does the Commonwealth agree or disagree with the FEMA report's figure of 31,000 for York County's total mass care capacity? Explain any disagreement.

RESPONSE

FEMA has made no over-all judgment on the adequacy of the FEMA report, and has no opinion on the accuracy of the quoted figure.

- e. Specify the section in the York County plan which provides for use of "additional mass care facilities in adjacent counties."

RESPONSE

Planning for mass care facilities in adjacent counties was and is an on-going project for various counties within the Commonwealth.

- f. In the course of assisting in the preparation of the York County plan or of a review thereof has any Commonwealth official confirmed the agreements of Frederick, Harford, Baltimore, and Carroll counties in Maryland to furnish overflow mass care space to York County? If not, what evidence is there that such agreements exist?

RESPONSE

PENA was prepared to assist the counties in obtaining additional

mass care facilities if required. That this matter is not addressed in the York County plan is not a matter of concern, since oral advisories of the situation were provided directly to the county by PEMA. PEMA is working with appropriate Maryland authorities concerning joint matters of concern at TMI and Peach Bottom. Written and oral agreements between the states concern a variety of matters, and are part of the ongoing coordination efforts between the states -- to include mass care arrangements in Maryland counties.

22. (12). Does the Commonwealth agree or disagree with the following evaluation of the warning capacity of sirens from NUREG 0553, p. II-64:

Major disadvantages include: 1) the difficulty of hearing in residences during the winter because of sound absorbtion and well-insulated houses and during the summer in homes sealed up and air-conditioned...

Explain any disagreement.

RESPONSE

The Commonwealth agrees with the quoted evaluation from NUREG-0553.

- a. (12(b)). At the present is there a notification system in place in the TMI EPZ capable of satisfying the "design objectives" of Appendix 3 of NUREG 0654?

RESPONSE

No.

- b. Does the Commonwealth have the means, financial or otherwise, for putting such a system in place?

RESPONSE

No.

- c. Describe in detail any efforts currently underway to satisfy the notification requirements of NUREG-0654.

RESPONSE

The matter is being addressed by the nuclear fixed facility management in accordance with the provisions of NUREG-0654 which states on page 39: "It shall be the operators responsibility to insure that such means exist, regardless of who implements this requirement."

- d. (12(c)). How many Old Order Amish reside within 15 miles of TMI. 20 miles?

RESPONSE

Unknown. This information may be obtained from the Mennonite Disaster Relief Association.

- e. Has the Commonwealth made a determination as to whether the presence of such concentrations of Old Order Amish constitutes a demographic characteristic warranting departure from a uniformly circular 10-mile EPZ for TMI? If yes, specify in detail the bases for such a determination. If no, does the Commonwealth intend to make such a determination?

RESPONSE

The Commonwealth has determined that notification procedures for Old Order Amish is a special problem which must be addressed in the on-going study mentioned in paragraph 22 c.

- (f) What is the time required for the selection of an appropriate protective action after notification by the utility of a nuclear emergency? How was this time estimate derived?

RESPONSE

The time required for protective action selection shortens with more severe accidents. Evacuation for core melt accidents would be recommended in less than 15 minutes. That decision time of less than 15

minutes also applies to events with dose projection in the range of the EPA-PAG's. Less severe accidents would require more time, as long as hours, for decision making. These times apply only to the technical decision time requirement.

23. (13) Did the Commonwealth decline to quantify the criteria in factor #2 of its response because 1) such quantified criteria do not exist, 2) the Commonwealth does not believe quantification of emergency response criteria is necessary, or 3) some other reason?

RESPONSE

We did not quantify "time required for relocation" because the Agency did not have the final value of 13 hours for 10-mile evacuation at the time of the response.

- a. What does the Commonwealth mean by the phrase "well underway prior to expected plume arrival"? 25% of the population evacuated? 50%? 75%?

RESPONSE

"Well under way" in this context means that the population to be evacuated has begun to move.

- b. Assuming average travel conditions, a 4 miles per hour plume travel speed, and the notification and travel times stated in response to interrogatory #16, state the most probably emergency response choice for each hourly increase in warning time from 0.5 hours to one day.

RESPONSE

For the accidents expected to lead to containment failure due to core melt, evacuation would probably be indicated to 10 miles all around regardless of windspeed and warning time.

For puff release having associated dose projections in the range of PAG's and lead times less than about 10 hours, shelter to 10 miles would

probably be recommended. With lead times over 10 hours, evacuation to 10 miles would probably be recommended.

For continuous releases expected to have dose projections in the PAG range, evacuation to 10 miles would probably be recommended.

These strategies are offered as examples only and would not necessarily be selected in a real crisis.

24. (14). To what extent does the perception of an "expected but not yet realized hazard" capable of triggering a precautionary evacuation depend great upon the assessment of such nuclear powerplant status parameters as temperature and pressure?

RESPONSE

The perception of an "expected but not yet realized hazard" depends basically on the understanding that the core is uncovered and that there is every reason to expect containment failure since means are not available to cover the core before the loss of a coolable geometry. For lesser accidents the phrase means events are underway but the associated discharge has not yet begun. The perception depends exclusively on in-plant instrumentation of many kinds, and the interpretation of data from those instruments by individuals intimately familiar with the facility, namely its staff.

- b. Does the Commonwealth assess the expertise required for making such assessments? If yes, state name(s) and agency affiliation.

RESPONSE

Yes, William P. Dornsife, Nuclear Engineer, DER, Bureau of Radiation Protection.

- c. What action would the Commonwealth have taken at 8AM on March 28 if it had known or been informed that saturation conditions in the reactor had caused core uncover and substantial fuel cladding damage? At 2PM on March 28?

RESPONSE

Had we known the core was uncovered, we would have had to have been so advised by the licensee, who would have had to have known that the core was uncovered. Had they known, the licensee would have restarted the high pressure injection system.

- d. In light of the findings of the NRC/TMI Special Inquiry Group that TMI personnel "failed to properly diagnose basic plant information that was known to them" (Vol. 2, pt. 3, p. 64) and provided information to off-site authorities that was "often colored by individual interpretations of plant status" (pt. 3, p. 126) "when the mere provision of instrument readings would likely have been more definitive and could have led to an earlier realization of the true plant status" (pt. 3, p. 153), What is the opinion of the Commonwealth as to the necessity or desirability of instrumentation providing remote readouts directly to the Commonwealth of effluent concentrations and essential plant parameters?

RESPONSE

Telemetered source term information directed to the Commonwealth would be interesting, though not necessary or desirable. Heavy dependence on the system output could cause the analyst to ignore the fact that atmospheric effluents were escaping by way of an unmonitored pathway, for instance. They would also cause the analyst to ignore the fact that a fulminating sequence is underway but, since the monitor displays an innocuous condition, the verbal information and advice could be ignored.

Telemetered plant status information would be much more worthwhile. This proposition would, however, require the maintenance of a stable of nuclear engineers, for round the clock duty to service as many as 10 reactors. The assigned NE would need to have intimate knowledge of the

assigned plant, commensurate with that of the shift supervisor. Each position requires 5 people (NE's) behind it for full coverage.

25. (16(a)). ANGRY repeats its request for specification of egress routes, road capacities, and anticipated traffic volumes.

RESPONSE

Attached is a copy of the PEMA transportation map developed following the March TMI incident.

- a. What is the "1970 census tract population"?

RESPONSE

The 1970 census tract population is official U.S. Government data based on the 1970 census.

- b. How does the increase in population over the ensuing ten years affect the time estimates given in response to interrogatory No. 16?

RESPONSE

For the purpose of time estimations given in response to interrogatory No. 16, there is no appreciable adjustment based on changes in population.

- c. (16(b)). Specify the sections fo the Commonwealth and/or County plans which provide for the stationing of "wreckers and other devices" along evacuation egress routes.

RESPONSE

Arrangements by PEMA and PennDOT -- along with county programs -- provide for wreckers and other devises at critical points on evacuation routes.

26. (17). What does the Commonwealth understand the term "scenario" to mean in the context of the quoted section from the final report of the Kemeny Commission?

RESPONSE

"Scenario" means the conditions which define an incident to be one of the four incident levels (unusual event, alert, site emergency and general emergency).

- b. Identify specifically sections of either Commonwealth or County emergency response plans where any such scenarios may be found.

RESPONSE

Appendix 8, September 1979, Annex E, paragraph II, identifies Incident Classification which will be changed in accordance with the new guidance in NUREG-0610.

27. What determinations, if any, has the Commonwealth made as to the existence in the environs surrounding TMI of conditions such as demography, topography, land characteristics, access routes, and local jurisdictional boundaries that warrant departure from a circular EPZ defined uniformly by a 10-mile radius from the plant? If none, does the Commonwealth intend to address this question?

RESPONSE

The Commonwealth is planning to retain a 20-mile evacuation capability around TMI--because this option has been requested by elected officials of affected counties. Adjustments to the 20-mile radius are being re-analyzed, though there are no present adjustments to the 10-mile radius.

- a. Does the Commonwealth agree or disagree with the following conclusion reached by the NRC/TMI Special Inquiry Group (Vol. 1, p. 133):

Therefore, at the very least, significant centers of population beyond 10 miles from the plant must be considered in the planning as well.

Explain the reasons for any disagreement. If there is agreement, explain with reference to specific sections of Commonwealth or County plans how this conclusion has been incorporated into emergency planning around TMI.

RESPONSE

Significant centers of population beyond 10-miles of the plant have been considered in the planning process, in that any municipality which is partially within the 10-mile radius is treated as if it were entirely within that radius for purposes of emergency response. FEMA has not made a judgment on the adequacy of the NRC/TMI Special Inquiry Group report and neither agrees nor disagrees with the conclusion.

28. Identify the FEMA official(s) who assisted York County in extending its emergency response capability to 20 miles during the TMI accident.

RESPONSE

Mr. Robert Stimmel assisted York County in its emergency response planning.

- a. Did such officials concur in the routing provisions of the York County plan which, according to the FEMA report (p. 100) would have resulted in the case of a 20-mile evacuation in "a major traffic problem" and in "people from one part of the county moving toward the hazard before moving away from it"?

RESPONSE

Yes.

29. What is the Commonwealth's position with regard to the need for prior arrangements for special deliveries of gasoline to service stations along evacuation routes?

RESPONSE

Commonwealth believes that special arrangements for delivery of gasoline to service stations along evacuation routes are appropriate.

- a. If such arrangements presently exist provide details with reference to specific portions of Commonwealth or County plans which make provision therefor.

RESPONSE

Arrangements are being formalized with the Governor's Energy Council, PennDOT and Department of Military Affairs for this matter.

30. Identify the steps, if any, the Commonwealth has taken to resolve each of the eight "recommendations" listed at pp. 14 and 15 of the "After Action Report" of the Pennsylvania National Guard, dated June 7, 1979.

RESPONSE

RECOMMENDATION: That units and individuals located within five miles radius of a nuclear incident not be considered as part of the initial forces available for the emergency.

ACTION TAKEN: Provisions are now in effect which exempt personnel who reside and units located within the five mile radius of a fixed nuclear facility from being called as part of the initial force during an emergency. These provisions will be incorporated formally in the updating of the Pennsylvania National Guard - Emergency Operational Plan scheduled for July 1980.

RECOMMENDATION: That a study is needed to determine map requirements for all logical eventualities. Map sets should be obtained and distributed in limited quantities for planning purpose with a stock maintained at this headquarters.

ACTION TAKEN: The study has been completed and maps are currently being procured by the Department of Military Affairs. Distribution of maps will be made to those PAARNG organizations tasked with responding to emergencies at the various fixed nuclear facilities within the State. In addition, the Pennsylvania Emergency Management Agency has advised that the Pennsylvania Department of Transportation is currently developing maps, depicting evacuation routes and other information concerning evacuation of the population within a 20 mile radius of the various fixed nuclear facilities within the State. These maps will be issued to the Pennsylvania National Guard for planning and operational purposes.

RECOMMENDATION: That NG armories not be considered for use as mass care centers when such use would interfere with the mission of committed NG units.

ACTION TAKEN: The Department of Military Affairs has adopted the following policy regarding the use of National Guard armories during domestic emergencies within the State. "National Guard armories normally will be used for the purposes of housing and feeding National Guard troops ordered to State Active Duty and/or for the establishment of command and control headquarters within the vicinity of the emergency area of operations." This Department has advised the Pennsylvania Emergency Management Agency of this policy.

RECOMMENDATION: That radiation detection equipment such as Dosimeter INDA-93 CD4-138 (Low Range) be obtained through PEMA in sufficient quantities to provide adequate coverage to committed troops.

ACTION TAKEN: The Department of Military Affairs has been advised that personnel dosimetry equipment will be provided National Guard personnel by the Bureau of Radiation Protection in accordance with RAD Protection Appendix to Annex E, PA Disaster Operation Plan. Supplemental Dosimetry equipment will be provided from National Guard Federal Assets.

RECOMMENDATION: That sufficient protective clothing and equipment be obtained to provide adequate protection to designated members of decontamination teams in the PNG.

ACTION TAKEN: Inquiries regarding the availability of special protective clothing and equipment have been made to the National Guard Bureau and the Nuclear Regulatory Commission. Both agencies do not recommend special anti-contamination clothing for National Guard. Protective clothing which protects an individual from penetrating radiation has not

been developed as yet. Military clothing will prevent particles of radioactive material from contacting the skin. The protective clothing and equipment designated for TMI, i.e. fatigue uniform, field jacket, poncho, helmet liner, combat boots, gloves, wind resistant trousers and M17 protective mask provided a higher degree of protection than required for the situation.

RECOMMENDATION: That the feasibility of preparing DD Form 1141, Record of Occupational Exposure to ionizing radiation for individuals assigned duties in the area of operations be studied.

ACTION TAKEN: Feasibility study has been conducted. DD Form 1141 will be used as prescribed by Army Regulation 40-14. Personnel monitoring data will be compiled by the Bureau of Radiation Protection and provided the worker and responsible agency.

RECOMMENDATION: That in order to supplement overcrowded commercial communication facilities, military communications nets be placed in service immediately, to assist in alert and command and control of units.

ACTION TAKEN: Communications plans have been developed which include the positioning of high frequency single sideband radios at each command control headquarters committed to an emergency situation. Planning is underway to establish voice radio links between State, area and county emergency management operations centers and National Guard Emergency Operations Centers at State, task force and battalion levels. These radio links will be utilized to supplement and/or replace existing commercial telephone systems should they become overcrowded or inoperative. It has been determined that military communications nets would be impractical for alerting personnel. Therefore it is planned to utilize local radio and television stations to make public announcements should

the primary means, television notification, prove ineffective.

RECOMMENDATION: That the Nuclear-Biological-Chemical (NBC) Defense Course being conducted by the PAARNG in August-September 1979 be continued in future fiscal years to insure that NBC qualifications are maintained in all units.

ACTION TAKEN: Program is being continued. The course for fiscal year 1980 was initiated on 23-24 February with subsequent classes being held on 22-23 March and 26-27 April. There are currently 137 students enrolled in the course.

31. Has the "guidance for the agricultural community in dealing with emergency nuclear accidents" called for in Section IX (A) (4) (g) of Annex E of the Commonwealth DOP been "developed"? If so, where is it to be found? Identify the methods of communication of such "guidance" that, 1) have been effectively implemented, 2) have been developed but not implemented, and 3) remain to be developed.

RESPONSE

The guidance has been developed.

The guidance is included in the Agriculture Plan, an appendix of Annex E to the "Commonwealth of Pennsylvania Disaster Operation Plan" (copy attached).

1. Method of communication is that the guidance is in the form of fact sheets for implementation by local, State and Federal officials and the media.

2. The guidance developed has been implemented as outlined above.

3. We understand that the "Disaster Handbook for Extension Agents" is being reviewed by the Pennsylvania State University Cooperative Extension Service and that Extension Service television educational releases may be used. We cannot vouch for or provide target dates for the Extension Service review.

32. In light of the provision of the Pennsylvania Emergency Management Services Code (35 Pa. C.S. §7101 et seq.) (EMSC) stating that "direction of disaster emergency management services is the responsibility of the lowest level of government affected" (EMSC §7504(a)), is it the Commonwealth's position that effective emergency response capability for TMI depends upon the existence of local governmental emergency response organizations and plans which satisfy the standards therefor in the EMSC? Discuss any respects as to which the Commonwealth does not subscribe to this position.

RESPONSE

The Commonwealth subscribes to the position outlined in the EMSC Section 7504 (a)-(b). Effective emergency response is further dependent upon an effective county organization and plans for emergency management and response.

33. For each local governmental unit (township, borough, city, etc.) within a 10-mile radius of TMI provide the following information:
- a. Whether or not a "local emergency management organization" (EMSC §7501 (a)) which satisfies the Commonwealth's criteria therefor presently exists.
 - (1) Specify in detail the standards and criteria the Commonwealth employs in evaluating the adequacy of local emergency management organizations.

RESPONSE

The Commonwealth has no criteria or standards for evaluating the adequacy of local emergency management organizations.

- b. The identity of the "local coordinator" (EMSC §7502 (a)).

RESPONSE

Attached is a list of local coordinators for the five risk counties.

- c. The qualifications of each "local coordinator" (EMSC §7502 (d)).
 - (1) Specify in detail the Commonwealth's standards and criteria for local coordinator qualifications.

RESPONSE

The Commonwealth has no such standards or criteria, nor does it maintain lists of coordinator qualifications.

- d. Whether the local coordinator has completed in-service training in accordance with EMSC §7502 (e)).

RESPONSE

Public Law 1332 prescribes that the individual counties are responsible for the training of local coordinators, and for the maintenance of the training records for said individuals. Therefore, ANGRY must look to the various county organizations in order to ascertain the training status of local coordinators. The Commonwealth does not maintain such records.

- (1) Describe in detail the Commonwealth's career development program.

RESPONSE

The Commonwealth's "career development program" has four (4) phases as described below.

1. Phase I - 40 hours (one week) in length. Transportation, food and lodging expenses paid by the Commonwealth using federal funds. One course held per fiscal year (October 22-26, 1979, in Lewistown for current fiscal year). Subject: "The Job of the Coordinator".

2. Phase II - 40 hours (one week) in length. Transportation, food and lodging expenses paid by the Commonwealth using federal funds. One course held per fiscal year (March 31 - April 4, 1980, in Clearfield for current fiscal year). Subject: "The Work Environment of the Coordinator".

3. Phase III - 80 hours (two weeks) in length. Fifty percent of the food and transportation expenses paid by the federal government; 50% to be

paid either by the student or by the municipality he represents. Lodging is provided by the federal government free of charge. All of these courses are currently being offered at the FEMA Staff College in Battle Creek, Michigan. Subject: "The Personal Effectiveness of the Coordinator".

4. Phase IV - 80 hours (two weeks) in length. Fifty percent of the food and transportation expenses paid by the federal government; 50% to be paid either by the student or by the municipality he represents.

Lodging is provided by the federal government free of charge. All of these courses are currently being offered at the FEMA Staff College in Battle Creek, Michigan. Subject: "Civil Preparedness in National Security".

e. Whether or not a "disaster emergency management plan" (EMSC §7503 (1)) which satisfies the Commonwealth's criteria therefor presently exists.

(1) Describe in detail the Commonwealth's standards and criteria for the adequacy of local disaster emergency management plans.

RESPONSE

The Commonwealth has no enforceable standards or criteria governing the adequacy of local plans, and does not have the information requested.

f. Whether or not an "emergency operations center" (EMSC §7503 (2)) which satisfies the Commonwealth's standards and criteria therefor presently exists.

(1) State the location of each such local "EOC".

(2) Describe in detail the Commonwealth's standards and criteria for assessing the adequacy of local EOC's.

RESPONSE

The Commonwealth does not have this information and has no enforceable standards or criteria governing the adequacy of local EOC's.

- g. Whether or not "organizational and individual training programs" (EMSC §7503(3)) which satisfy the Commonwealth's criteria therefor presently exist.

RESPONSE

The Commonwealth presently has individual and organizational training programs available in accordance with P.L. 1332. A schedule of these courses is published each fiscal year.

- (1) Describe in detail the Commonwealth's standards and criteria for assessing the adequacy of local training programs.

RESPONSE

The Commonwealth determines the adequacy of local training programs from annual reports only if the local organization is a party to the Personnel and Administrative (P. and A.) Program. In all situations, however, the county organizations are responsible for making such a determination.

- h. Whether sufficient efforts have been undertaken to procure "all locally available manpower, materials, supplies, equipment, facilities and services necessary for...emergency...response..." (EMSC §7503 (4)).

RESPONSE

The Commonwealth does not have this information.

34. For each of the five "at risk" counties describe the communications system presently in effect between the county emergency operations center and local EOC's.

RESPONSE

The Commonwealth does not have this information.

- a. Describe the extent to which any such system is not operable (i.e., local contact not available) on a 24-hour basis.

RESPONSE

The Commonwealth does not have this information.

- b.. What is the Commonwealth's position as to the adequacy of these systems?

RESPONSE

The Commonwealth has no position as to the adequacy of these systems at the present time.

35. Provide copies of any "unmet needs" listing furnished to the Commonwealth by any "at risk" county since the TMI accident pursuant to Annex E §IX(B)(1)(x).

RESPONSE

A review of unmet needs of both counties and municipalities affected by TMI is presently in process. No such listing currently exists.

36. The NRC/TMI Special Inquiry Group concluded that:

Only an offsite, real-time-detector system could have provided the confirmation of offsite exposure rates at a relatively inaccessible location such as Goldsboro within the 10-15 minutes that the Board considered (Vol. 2, pt. 2, p. 173).

It further recommended that "real-time online radiation monitoring equipment should be installed around all nuclear powerplants" (pt. 2, p. 95). Does the Commonwealth agree or disagree with this recommendation? Explain fully the reasons for any disagreement.

RESPONSE

"Real time on line radiation monitors" is assumed to mean gamma sensitive rate meters which communicate electronically with some onsite terminal where the data is recorded and evaluated.

Although the system has merit, it should not be embraced as a sine qua non for the following reasons:

1. The system will detect and record gamma exposure rate at the location of each detector only.
2. The system will not detect and record airborne radioiodines at the location of each detector. Radioiodines may well be the critical set of radioisotopes.

3. The plume may skillfully avoid all the detectors.
4. The treatment of false positives and false negatives must be well developed and understood.
5. Exposure rate output from these devices will not, per se, assist in making the whole body dose projection inherent in applying whole body Protective Action Guides, since it is an after-the-fact parameter rather than a projection which is generated.

The system has some advantages. Measurements from these devices can serve the combined roles of verification/contradiction of the analysis perception of offsite gamma exposure rate consequences, as well as that of input to after-the-fact estimations of population gamma dose.

37. Do the high schools with pick-up routes for areas within 10 miles of TMI in York County own their own bus fleets or do they employ bus fleets owned by outside contractors?

RESPONSE

The Commonwealth does not have this information.

- a. Identify each such outside contractor.

RESPONSE

The Commonwealth does not have this information.

- b. What assurance is there from each contractor that its fleet with drivers will be available to fulfill the requirements of Annex VII of the York County Plan?

RESPONSE

The Commonwealth does not have this information.

38. What method does PEMA employ to notify its off-duty officials of a nuclear emergency?

RESPONSE

PEMA employs commercial telephone to notify officials. This activity is accomplished by the duty person at the direction of senior officials upon their notification or directly by personal contact during duty hours.

a. Should similar methods be adopted by county and local governmental units?

RESPONSE

Not necessarily. As long as the method selected is reactive and has a 24-hour capability, the method need not be similar to that of the Commonwealth.

39. What is the time required for the removal of seats from the 30 buses Annex IV of the York County plan indicates will be used to evacuate nursing home wheelchair patients?

RESPONSE

The Commonwealth does not have this information.

Respectfully submitted,

Karin W. Carter

KARIN W. CARTER
Assistant Attorney General

Attorney for
Commonwealth of Pennsylvania

March 17, 1980

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

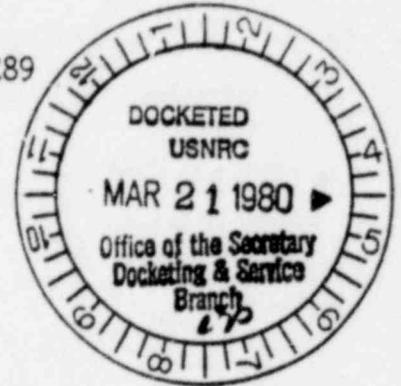
In the Matter of)
)
METROPOLITAN EDISON COMPANY,)
)
(Three Mile Island Nuclear)
Station, Unit No. 1))

Docket No. 50-289
(Restart)

AFFIDAVIT OF ORAN K. HENDERSON

Commonwealth of Pennsylvania)
)
County of Dauphin)

SS



ORAN K. HENDERSON, being duly sworn according to law, deposes and says that he is Director of the Pennsylvania Emergency Management Agency; that the information contained in Commonwealth's response to Interrogatories (Second Set) of ANGRY numbered 15, 16, 17, 18, 19, 20, 21, 22(a-e), 25, 26, 27, 28, 29, 32, 33, 34, 35, 37, 38, 39 is true and correct to the best of his knowledge, information and belief.

ORAN K. HENDERSON
Director
Pennsylvania Emergency Management
Agency

Sworn to and subscribed
before me this day
of March, 1980.

NOTARY PUBLIC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

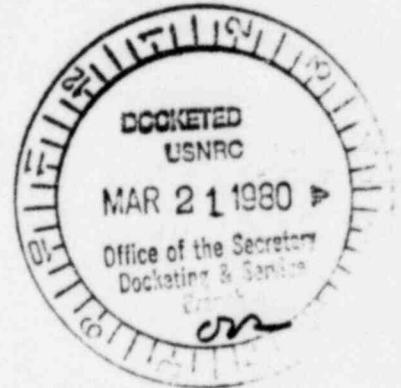
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

Docket No. 50-289
(Restart)

AFFIDAVIT OF MARGARET A. REILLY

COMMONWEALTH OF PENNSYLVANIA)
) SS
COUNTY OF DAUPHIN)



MARGARET A. REILLY, being duly sworn according to law, deposes and says that she is Chief of the Environmental Radiation Division, Bureau of Radiation Protection, Department of Environmental Resources; and that the information contained in Commonwealth's Response to Interrogatories of ANGRY numbered 22(f), 23, 24 and 36 is true and correct to the best of her knowledge, information and belief.

Margaret A. Reilly
MARGARET A. REILLY
Chief, Environmental Radiation Division
Bureau of Radiation Protection

Sworn to and subscribed
before me this 17th day
of March, 1980.

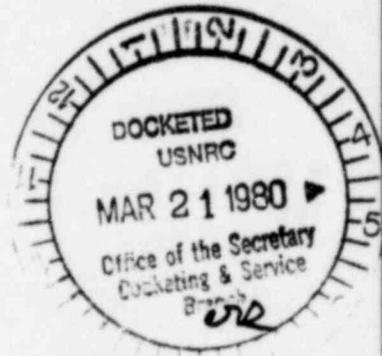
Lucy M. Cunko
NOTARY PUBLIC

Lucy M. Cunko, Notary Public
My Commission Expires May 2, 1983
Harrisburg, PA Dauphin County

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
METROPOLITAN EDISON COMPANY,)	
)	Docket No. 50-289
(Three Mile Island Nuclear)	(Restart)
Station, Unit No. 1))	



AFFIDAVIT OF ROBERT C. FURRER

Commonwealth of Pennsylvania)	
)	SS
County of Dauphin .)	

ROBERT C. FURRER, being duly sworn according to law, deposes and says that he is Management Analyst, Bureau of Administrative Services, Pennsylvania Department of Agriculture; and that the information contained in Commonwealth's response to Interrogatories of ANGRY (Second Set) numbered 31 is true and correct to the best of his knowledge, information and belief.

Robert C Furrer
 ROBERT C. FURRER
 Management Analyst
 Bureau of Administrative Services
 Pennsylvania Department of
 Agriculture

Sworn to and subscribed
before me this 18th day
of March 1980.

[Signature]
 NOTARY PUBLIC

Genove S. Newman, Notary Public
 My Commission Expires March 29, 1982
 Harrisburg, PA Dauphin County

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. 50-289
(Restart)

RELATED CORRESPONDENCE

AFFIDAVIT OF MAJOR GENERAL RICHARD M. SCOTT

Commonwealth of Pennsylvania)
County of Dauphin)

SS

MAJOR GENERAL RICHARD M. SCOTT, being duly sworn according to law, deposes and says that he is Adjutant General, Pennsylvania Department of Military Affairs; and that the information contained in Commonwealth's response to Interrogatory No. 30 is true and correct to the best of his knowledge, information and belief.

MAJOR GENERAL RICHARD M. SCOTT
Adjutant General
Pennsylvania Department of
Military Affairs

Sworn to and subscribed
before me this 17 day
of March, 1980.

NOTARY PUBLIC

CLINTON A. ...
SINGLER ...
MY COM. ...
Member 2...

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))

RELATED CORRESPONDENCE

) Docket No. 50-289
) (Restart)
)

CERTIFICATE OF SERVICE

I hereby certify that copies of the Commonwealth of Pennsylvania's Response to Interrogatories of ANGRY (Second Set) were served upon those persons on the attached Service List by deposit in the United States mail, postage prepaid, this 18th day of March, 1980, and that a copy of said document was served upon Ms. Holly S. Keck by deposit in the United States mail, postage prepaid, on March 17, 1980.

Karin W. Carter

KARIN W. CARTER
Assistant Attorney General

Dated: March 18, 1980



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
METROPOLITAN EDISON COMPANY,)
) Docket No. 50-289
(Three Mile Island Nuclear) (Restart)
Station, Unit No. 1))

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