

APR 13 1989

Docket No. 50-289

GPU Nuclear Corporation
ATTN: Mr. H. D. Hukill
Vice President and Director of TMI-1
P. O. Box 480
Middletown, Pennsylvania 17057

Gentlemen:

Subject: FEMA Report On the February 1, 1989 Three Mile Island
Nuclear Generating State Remedial Exercise

Enclosed is a memorandum from Dennis H. Kwiatkowski, dated March 17, 1989, which transmits the Federal Emergency Management Agency report of the February 1, 1989 Three Mile Island remedial exercise.

The Report indicates the remedial exercise corrected a deficiency identified during the October 22, 1987 full participation exercise of your facility when Lower Paxton Township did not participate and Dauphin County failed to take action to protect the health and safety of the Lower Paxton Township residents.

If you have any questions concerning this matter, please contact Craig Gordon of my staff at (215) 337-5372.

Sincerely,

Original Signed By:

Ronald R. Bellamy, Chief
Facilities Radiological Safety
and Safeguards Branch

cc w/encl:

T. G. Broughton, Operations and Maintenance Director, TMI-1
C. W. Smyth, Manager, TMI-1 Licensing
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APR 13 1989

bcc w/encl:
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Federal Emergency Management Agency

Washington, D.C. 20472

MAR 17 1989

MEMORANDUM FOR: Frank J. Cangel
Director
Division of Radiation Protection and
Emergency Preparedness
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission

FROM: *Dennis H. Kwiatkowski*
Dennis H. Kwiatkowski
Assistant Associate Director
Office of Natural and Technological Hazards

SUBJECT: Remedial Exercise Report on the February 1, 1989,
Remedial Exercises for the Three Mile Island
Nuclear Power Station

Attached is a copy of the remedial exercise report on the February 1, 1989, remedial exercises conducted to correct a deficiency identified during the October 22, 1987, full-participation exercise for the Three Mile Island Nuclear Power Station.

The deficiency was the result of the non-participation of Lower Paxton Township and the failure of Dauphin County to take action to protect the health and safety of Lower Paxton Township residents. The Dauphin County remedial exercise indicated that Dauphin County has the capability to implement contingency procedures to address the failure of municipal officials to respond to an emergency. The Lower Paxton Township remedial exercise demonstrated that Township officials can take protective measures to protect the health and safety of its residents.

Based on the results of the October 22, 1987, full-participation exercise and the February 1, 1989, remedial exercises, the offsite radiological emergency preparedness for Three Mile Island is adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of an accident at the Three Mile Island Nuclear Power Station.

If you should have additional questions, please contact Craig S. Wingo, Chief, Technological Hazards Division, at 646-3026.

Attachment

8903300068 1P

ENCLOSURE

RADIOLOGICAL EMERGENCY PREPAREDNESS
REMEDIAL EXERCISE EVALUATION REPORT

FACILITY: THREE MILE ISLAND NUCLEAR POWER STATION
OPERATOR: THE GPU NUCLEAR CORPORATION
LOCATION: MIDDLETOWN, PENNSYLVANIA

REPORT DATE: FEBRUARY 15, 1989

EXERCISE DATE: FEBRUARY 1, 1989

PARTICIPATING JURISDICTIONS: DAUPHIN COUNTY
LOWER PAXTON TOWNSHIP

NON-PARTICIPATING JURISDICTIONS: NONE

REPORT PREPARED BY: FEDERAL EMERGENCY MANAGEMENT AGENCY
AND REGIONAL ASSISTANCE COMMITTEE
REGION III
PHILADELPHIA, PENNSYLVANIA

Prepared in accordance with 44 CFR 350;
and NUREG-0654/FEMA-REP-1, Revision 1, of November 1980.

8903-00070 1500

EXECUTIVE SUMMARY

The following is a report on two remedial Radiological Emergency Preparedness Exercises conducted on February 1, 1989 for the Three Mile Island Nuclear Power Station, involving the participation of Dauphin County and Lower Paxton Township. This report has been prepared in accordance with 44 CFR 350 and NUREG-0654, REP-1, REV-1.

These remedial exercises were necessitated by a deficiency observed in the October 22, 1987 joint, biennial Radiological Emergency Preparedness Exercise at Three Mile Island, wherein Lower Paxton Township failed to participate, and Dauphin County failed to take action assuring the protection of the health and safety of township residents. Both remedial exercises were conducted in a tabletop format, and were designed and controlled by the Pennsylvania Emergency Management Agency.

The performances by the exercise participants adequately addressed the deficiency from the October 22, 1987 exercise. During its tabletop discussions at the County EOC, the Dauphin County Emergency Management Agency clearly demonstrated the ability to implement contingency procedures addressing the failure of municipal officials to respond to an actual radiological emergency incident or a joint, biennial Radiological Emergency Preparedness Exercise at the Three Mile Island Nuclear Power Station.

In the second tabletop exercise, Lower Paxton Township fully staffed its EOC with plan designated personnel who proved themselves committed to, and capable of, the provision of protective measures for the residents of the township. Although their tabletop discussions revealed some need for continued training and plan familiarization, and resulted in the identification of one Area Requiring Corrective Action, the township EOC staff, nonetheless, adequately demonstrated the majority of exercise objectives.

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I. INTRODUCTION

A. BACKGROUND

As required by the provisions of 44 CFR 350.9 (c) (5), State and local governments will participate in remedial exercises when their performances in joint, biennial Radiological Emergency Preparedness (REP) exercises result in findings that offsite emergency preparedness is not adequate to provide reasonable assurance that protective measures can be taken to protect the health and safety of the public living in the vicinity of a nuclear power facility in the event of a radiological emergency (see also FEMA Guidance Memorandum EX-1, July 15, 1985). The two remedial exercises conducted on February 1, 1989, involving the participation of Dauphin County and Lower Paxton Township -- that are the subjects of this report -- are the result of a deficiency identified during the October 22, 1987 Three Mile Island joint, biennial REP exercise. This deficiency (Problem ID TMIX87-1D) has been described as follows:

"Lower Paxton Township did not participate in the exercise. When Dauphin County was informed of this, neither Dauphin County officials nor the State liaison officer took any action to protect the health and safety of the residents of this township. State and County emergency management officials must develop procedures to ensure the protection of the population in the event this problem occurs." (See page 29 of the November 4, 1988 FEMA and Regional Assistance Committee Exercise Report on the Three Mile Island joint, biennial REP exercise of October 22, 1987.)

The Pennsylvania Emergency Management Agency (PEMA) responded to this finding, in part, with the following statement:

"The township manager hired subsequent to the exercise and the new Emergency Management Coordinator have restructured the emergency organization. Coordination of necessary training is on-going with Dauphin County in preparation for a remedial exercise." (See page 29 of the November 4, 1988 FEMA report on the October 22, 1987 Three Mile Island REP exercise.)

In responding to the deficiency, PEMA also stated that the Commonwealth's draft Annex E, Radiological Emergency Response to Nuclear Power Plant Incidents, (revised in December of 1988) would include specific instructions for the contingent provision of emergency protective measures in the event that a risk county or municipality is unable or fails to respond to a radiological emergency incident or participate in a required REP exercise. These instructions

are pursuant to the provisions of the Commonwealth Emergency Management Services Code (35 Pa. C.S.A. Sections 7101-7707) and can be found in the "Direction, Coordination and Support" subsection of the Annex E Basic Document (page E-11).

B. EVALUATION CRITERIA USED

The performances by Dauphin County and Lower Paxton Township during the remedial exercises were evaluated according to the criterion of their ability to respond to a radiological emergency incident in the manner prescribed by their plans: respectively, the Dauphin County Emergency Response Plan for Incidents at the Three Mile Island Nuclear Station (revised August 1987) and the Lower Paxton Township Emergency Operations Plan (revised April 1987).

These plans were prepared in accordance with NUREG-0654/FEMA REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

Both exercises were conducted in a tabletop format, designed and controlled by PEMA.

11. OBJECTIVES

A. LIST OF OBJECTIVES

The following objective was attempted by Dauphin County during its tabletop, remedial exercise.

To demonstrate that risk counties have contingency procedures to be implemented in the event that any of the risk municipalities fail to respond to an actual incident or to participate in a federally required exercise.

The following objectives were attempted by Lower Paxton Township during its tabletop, remedial exercise. The objectives are numbered so as to correspond to their standard counterparts identified in FEMA Guidance Memorandum EX-3 (February 1988). The objectives are followed by references to NUREG-0654/FEMA-REP-1, REV. 1, Evaluation Criteria, and, where appropriate, specific limits of play.

1. Demonstrate the ability to monitor, understand, and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECL's as required by the scenario. The four ECL's are: notification of an unusual event, alert, site area emergency, and general emergency. (D.3, D.4)
2. Demonstrate the ability to fully alert, mobilize, and activate personnel for both facility and field-based emergency functions. (E.1, E.4)

Lower Paxton Township will fully alert and mobilize personnel to activate their EOC.
3. Demonstrate the ability to direct, coordinate and control emergency activities. (A.1.d, A.2.a)
5. Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations. (G.3.a, H.2, 3)
13. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred. (E.5, G.4.b)
16. Following the decision to recommend the use of KI to emergency workers and institutionalized persons,

- a. be prepared to explain to the evaluator when KI would be issued, when taken, and based on whose direction.
 - b. be prepared to point out to the evaluator the dosimetry/KI storage facilities.
 - c. explain the use of dosimetry to include the procedures to zero; how the dosimeters are worn and read; and how the record-keeping forms are prepared. (J.10.e,- f, K.3)
18. Demonstrate the ability and resources necessary to implement appropriate protective action for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons, and institutionalized persons). (J.9, J.10.d, g)

The risk municipality will be prepared to discuss with the FEMA evaluator procedures for developing and maintaining a list of individuals with impaired hearing, non-English speaking, and homebound; their notification by route alert teams, and display the list for review.

20. Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas. (J.10.j, k)

One municipal TCP will be demonstrated. This demonstration may consist of briefing personnel manning the post on their duties and assigning them to a post. Deployment to the post may be simulated.

B. OBJECTIVES NOT ADEQUATELY DEMONSTRATED

All of the above listed objectives were adequately demonstrated with the exception of Objective 18. (See Section III, Exercise Results, Objective 18, for specific details.)

III. EXERCISE RESULTS

A. DAUPHIN COUNTY

The core objective for Dauphin County in the remedial exercise, the demonstration of contingency procedures to be implemented in the event that any risk municipality fails to respond to an actual incident or to participate in a required joint, biennial REP exercise, was adequately achieved.

The executive staff of the Dauphin County EMA effectively responded to the tabletop challenges provided by the PEMA controller. Discussion and responses on part of the County EMA staff centered on the spontaneous assignment of personnel and resources to provide those emergency measures for the residents of Lower Paxton Township that are formally identified as municipal responsibilities in the County and Township plans. The staff qualified any assimilation of prescribed municipal emergency management duties with thorough attempts to contact Township officials (via a roster maintained in the County EOC) and obtain their proper response. In the event that such contact was not achievable, the County would immediately dispatch liaison officers to the Township EOC (the Lower Paxton Police Headquarters) to maintain a local presence and enhance coordination of protective measures from the County EOC. By use of the media and the dedication of a separate phone line for the Township in the County EOC, the County EMA would advise Lower Paxton residents that all necessary local protective measures were being provided.

Discussion on specific protective measures included the manning of municipal ACP's and TCP's, coordination of Township route alerting, alerting of hearing impaired residents, and the provision of transportation of special needs (including non-ambulatory) individuals and other transit-dependent residents of the Township.

The ability of the County EMA to provide for the manning of the 5 ACP's and 7 TCP's identified as Lower Paxton Township responsibilities was effectively demonstrated. Acquisition of supplemental personnel for this end is enhanced by a county-wide mutual aid agreement that would render as available, an adequate number of special police and fire police to man these posts and also conduct route alerting if necessary. Fire police personnel can be contacted directly from the County EOC via tone alert radios. The briefing of substitute personnel would be conducted by the County

liaison officers stationed at the Township police department. The Township police have access to the predistributed dosimetry and KI maintained at the Township EOC, which would be distributed to emergency workers by the County liaison officers.

The tabletop discussion revealed that attending to the needs of hearing impaired and special needs residents would be more problematic. For purposes of confidentiality, the lists of hearing impaired residents requiring special notification and non-ambulatory individuals requiring special transportation means, are only maintained at the municipal level and not available in the County EOC. During the exercise, the County EMA staff generated alternative methods for identifying these special needs residents in the event that the liaison officers could not obtain the municipal lists. These alternatives involved requests through the media for County area residents to identify any relatives, friends, or neighbors living in Lower Paxton that are hearing impaired or might require special transportation, and also the use of referrals from various County social service agencies that likely serve these residents.

Responses to Controller questions on part of the County EMA staff indicated that the County could readily coordinate the provision of buses for those Lower Paxton residents lacking private means of transportation in the event of an evacuation. The announcing of pickup points would be accomplished through the efforts of the County PIO and the liaison officers working with the municipal police department.

B. LOWER PAXTON TOWNSHIP

Objective 1, to demonstrate the ability to monitor, understand, and use emergency classification levels through the appropriate implementation of emergency functions and activities corresponding to ECL's as required by the scenario, was adequately achieved to the extent applicable to township responsibilities and permitted by the tabletop format of the exercise.

Objective 2, to demonstrate the ability to fully alert, mobilize, and activate personnel for both facility and field-based emergency functions, was adequately achieved as limited by pre-exercise agreements and the tabletop format. No actual alerting of EOC staff members or field personnel was conducted, as all participants were prepositioned pursuant to the facilitation of the tabletop format of the exercise.

With the exception of local elected officials, the EOC was fully and punctually staffed by plan designated personnel. The staff responses to Controller challenges and tabletop discussion indicated that the Lower Paxton EOC personnel are committed to their responsibilities and capable of carrying out their prescribed duties in a radiological emergency. With the exception of the Communications Officer and Deputy Emergency Management Coordinator, however, no EOC staff member has participated in a biennial REP exercise in his or her present role. Some questions raised by the exercise participants and answered by the Controller concerning emergency procedures and terminology indicated that the EOC personnel are in need of further training and familiarization with the Township plan. Such questioning was in compliance, however, with the pre-exercise agreement that the remedial exercise would also serve as an opportunity for training.

Objective 3, to demonstrate the ability to direct, coordinate, and control emergency activities, was adequately achieved to the extent applicable within the limitations of a tabletop exercise. Responses to Controller challenges on part of the EOC staff -- especially the Emergency Management Coordinator (EMC) -- indicated that in an actual emergency or full scale exercise, periodic briefings would be held, internal and external messages would be recorded and logged, and EOC staff personnel would be effectively involved in decision making processes.

Objective 5, concerning the adequacy of EOC facilities, equipment, displays and materials to support emergency operations, was adequately demonstrated.

Objective 13, the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred, was adequately demonstrated as applicable to municipal responsibilities. The EMC and Public Information Officer (PIO) effectively responded to two rumor control messages, and thoroughly explained that all local dissemination of information regarding a radiological emergency would be coordinated with the County PIO.

Objective 16, concerning the use of KI and dosimetry, was adequately demonstrated through a thorough briefing conducted by the Radiological Officer (RO) on behalf of the EOC staff. The briefing accurately described the purpose, proper and authorized use, and recording of KI ingestion. The briefing also included a physical demonstration on the charging and use of pocket dosimetry, and the issuing and

tracking of TLD cards. (The predistributed municipal supply of dosimetry was actually displayed by the RO in the EOC.)

Objective 18, the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons and institutionalized persons), as applicable to municipal responsibilities, was not adequately demonstrated. By oral admissions on part of the EMC and Medical Services Officer, the EOC lists of hearing impaired and special needs residents -- although generated within the last 6 months -- were identified as incomplete and the products of a problematic survey. The EMC stated, however, that the Township intends to ameliorate this problem in the near future with the generation of more complete lists.

Regarding the evacuation of transit-dependent residents, the PIO was not familiar with the process by which information on the location of pickup points is disseminated to the public. Discussion and responses to Controller questions also indicated a lack of familiarity -- on part of several EOC staff members -- with the pre-established evacuation routes to be utilized by Lower Paxton residents. Confusion over this matter was eventually dispelled by the EMC.

Objective 20, the organizational ability and resources to control evacuation traffic flow and to control access to evacuated and sheltered areas, was adequately demonstrated as applicable to the limitations of a tabletop exercise. The Police Director explained how he would brief the personnel assigned to the township TCP's and ACP's -- all of which were visible on a map displayed in the EOC.

C. SUMMARY LIST OF ISSUES

Exercise issues have been summarized and classified according to the following categories:

Deficiencies are demonstrated and observed inadequacies that cause a finding that offsite emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken to protect the health and safety of the public living within the vicinity of the Three Mile Island Nuclear Power Station in the event of a radiological emergency. Because of the potential impact of deficiencies on emergency preparedness, they are required to be promptly corrected through appropriate remedial actions including remedial exercises, drills, or other actions. No deficiencies were identified during these two remedial exercises.

Areas Requiring Corrective Action are demonstrated and observed inadequacies of performance. Although their correction is required during the next scheduled biennial exercise, Areas Requiring Corrective Action are not considered, by themselves, to have adverse impact on public health and safety. One Area Requiring Corrective Action, involving the demonstration of Objective 18 on part of Lower Paxton Township, was identified during its remedial exercise.

Areas Recommended for Improvement are problem areas observed during an exercise that are not considered to have adverse impact on public health and safety. While not required, correction of these issues would enhance an organization's level of emergency preparedness. No specific Areas Recommended for Improvement were identified during these remedial exercises. As stated during the discussion of the demonstration of exercise objectives, however, the inexperience of Lower Paxton Township staff members does indicate a need for their continued training and plan familiarization. All of the objectives attempted during this remedial exercise are also scheduled for Lower Paxton Township during the October 18, 1989 joint, biennial exercise at the Three Mile Island Nuclear Power Station.

AREAS REQUIRING CORRECTIVE ACTION

Problem ID	Location/Activity	NUREG Element	Proposed Correction Date	Confirmed Correction Date
TMIX89R-1R	Lower Paxton TWSP EOC	J.9, J.10.d	10/18/89	

The current Lower Paxton Township EOC lists of hearing impaired individuals and special needs residents are incomplete and inaccurate. More complete lists should be generated as soon as possible. (See the discussion on Objective 18.)

D. STATUS OF PRIOR ISSUES

Three Areas Requiring Corrective Action were identified for the Lower Paxton Township EOC during the November 20, 1985 Three Mile Island joint, biennial REP exercise. The status of each with regard to the February 1, 1989 remedial exercise is discussed below.

16. All individuals with assigned EOC tasks during a radiological emergency at TMI should participate in future exercises.

Corrected. All EOC staff positions with the exception of elected officials, were manned during the remedial exercise. (See the discussion on Objective 2.)

17. The listing of names and telephone numbers for volunteer emergency workers in the Township should be updated.

Corrected. During the remedial exercise the EMC presented an EOC staff roster with work and home phone numbers, current as of January 1989.

18. No message was observed at the township level indicating that sirens had been activated. The EMC should take measures to ensure that route alerting is conducted in coordination with siren and EBS activation in future exercises.

Not Corrected. The tabletop format did not adequately support the demonstration of the coordination of siren activation and the dispatching of route alert teams; no actual county-township communications were conducted.

APPENDICES

APPENDIX ONE
PARTICIPATING JURISDICTIONS

Dauphin County
Lower Paxton Township

APPENDIX TWO
EVALUATOR ASSIGNMENTS

Dauphin County -- Scott Fina (FEMA)
Lower Paxton Township -- Scott Fina (FEMA)