

June 28, 1978

Docket No. 50-289

POOR ORIGINAL

Metropolitan Edison Company  
ATTN: Mr. J. G. Herbein  
Vice President  
P. O. Box 542  
Reading, Pennsylvania 19603

Gentlemen:

By letters dated May 16, 1977 and June 12, 1978, you submitted information concerning the Fire Protection Program at Three Mile Island Nuclear Station, Unit No. 1 (TMI-1). Based on our review of these submittals we have determined that we need additional information and your commitment to certain staff positions in order to continue our review. The specific information and commitments needed are listed in the enclosure.

In order that we may proceed expeditiously with our review, you are requested to provide the needed additional information and indicate your commitment to conform to the enclosed staff positions by telephone by July 11, 1978, with written follow-up by July 18, 1978. To assist you in meeting these dates, a copy of the enclosure was transmitted to you by facsimile on June 26, 1978.

Sincerely,

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosure:  
Request for Additional  
Information

cc w/enclosure:  
See next page

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OFFICE	ORB#4:DOR	ORB#1:DOR	C-ORB#4:DOR			
SURNAME	GZwetzig:dn	TWambach	RWReid			
DATE	6/27/78	6/27/78	6/27/78			

Metropolitan Edison Company

cc: G. F. Trowbridge, Esquire  
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Miss Mary V. Southard, Chairman  
Citizens for a Safe Environment  
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Harrisburg, Pennsylvania 17108

Government Publications Section  
State Library of Pennsylvania  
Box 1601 (Education Building)  
Harrisburg, Pennsylvania 17126

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THREE MILE ISLAND UNIT NO. 1  
FIRE PROTECTION PROGRAM REVIEW  
REQUEST FOR ADDITIONAL INFORMATION

1. In your letter of June 12, 1978, your response to Question 8 identifies areas where fire detectors and/or suppression systems will be installed, but does not explicitly address the question as asked. Assuming the fire detection and/or suppression systems are installed as proposed in your response, will there then remain any areas which contain safety related equipment and/or cables in open cable trays that are not provided with either fire detection or automatic fire suppression. If there are such areas, identify them and justify the lack of fire detection means or automatic fire suppression.
2. Supplement your response to Question 17 (Met Ed letter of June 12, 1978) as follows:
  - a. Indicate whether the "combination fire-stat and smoke detector" units are UL or FM approved for the indicated application, and briefly describe their principle of operation, sensitivity and speed of response.
  - b. Indicate whether the operators for the fire dampers which are actuated by detection of high temperature, smoke, combustible vapor, etc., are UL or FM approved for the indicated application and briefly describe their principle of operation, and speed of response.
  - c. Describe how the ionization detectors are "self monitoring against circuit faults" and indicate whether the fault is alarmed in the Control Room.
3. Supplement the response to Question 30 (Met Ed letter of June 12, 1978) by providing the specific information requested regarding the type and quantity of transient combustibles likely to be found in each fire zone. In addition, discuss the effects of transporting transient combustibles, especially combustible liquids, through other zones which were not analyzed for their presence. Provide the bases for your conclusions regarding the effects of transport of transient combustibles and proposed corrective measures, if any.

4. Supplement the response to Question 51 (Met Ed letter of June 12, 1978) to identify any areas where loss of function was not assumed for cables contained in metallic conduit or metallic interlock armor when the enclosure was exposed to a postulated fire. Provide justification for any exceptions.
5. Supplement the response to Question 29 (Met Ed letter of June 12, 1978) as follows:
  - a. Indicate the source of power for activation of the carbon dioxide extinguishing system in the relay room.
  - b. Indicate whether discharge of the automatic carbon dioxide and Halon systems is annunciated in the Control Room.
6. Supplement the response to Question 2 (Met Ed letter of June 12, 1978) to verify that in the event of a failure which would disable both a fixed water suppression system and the backup manual hose station, a second hose station capable of serving all of the affected area would remain operable. If the present design of the fire water suppression system does not provide this capability (within NFPA requirements), indicate your commitment to provide this capability.
7. Describe the analysis that was performed for the Turbine Building to support the conclusions given in Section 4.8.3 of the TMI-1 Fire Hazards Analysis Report.
8. Indicate your commitment to conform to the following Staff Positions regarding Fire Protection at TMI-1:
  - a. (P5a) Fire door release mechanisms should be fast-acting to prevent adjoining areas (particularly stair wells) from filling with smoke. A fusible link based mechanism is not acceptable for this application.
  - b. (P13) All unlabelled fire doors and frames should be replaced by fire door assemblies having an appropriate rating or the adequacy of the fire resistance of the door assemblies should be established through tests, or other acceptable means.
  - c. (P14) (1) An alternate shutdown capability independent of the cables and equipment in the relay room should be provided, and
    - (2) A manually operated fixed water suppression system should be provided in the relay room as a backup to the automatic CO<sub>2</sub> system.

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- d. (P17) A smoke seal should be provided to seal each of the electrical bus ducts penetrating the barriers enclosing the switchgear rooms.
- e. (P21)
  - a. Training classes should be scheduled at least quarterly and organized such that the fire brigade training program is repeated within each two year period, and
  - b. A detailed review of the fire fighting procedures, pre-fire strategies; procedure changes, and plant modifications relating to manual fire fighting should be included in the fire brigade training program.
- f. (P27/Q4) Met Ed should provide by December 31, 1978, an analysis of the effect of water sprays to determine whether both divisions of safety related equipment could be incapacitated by rupture or inadvertent operation of fire water systems, or the application of fire hoses in each fire area. If the analysis indicates that both divisions could be disabled, Met Ed should commit to provide corrective modifications, and describe the modification that will be provided.
- g. (P28/Q25) Met Ed should provide by December 31, 1978, an analysis to determine whether a single fire at any location could cause loss of both local control and control from the Control Room of any systems needed for safe shutdown. If the analysis indicates such loss could occur, Met Ed should commit to provide corrective modifications and describe the modifications that will be provided.
- h. (P29/Q28) Signal initiating and alarm circuits for all fire detection and suppression systems should be supervised to detect and annunciate in the Control Room, circuit and ground faults and power supply failure.
- i. (P30/Q41) An effective fire barrier should be installed between a non-safety related cable tray located below the redundant communication cable penetrations inside containment to protect these penetrations from a possible fire in the tray.