

April 8, 1977

Docket No.: 50-289

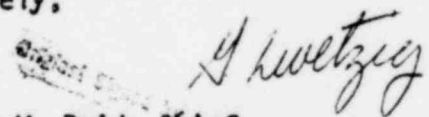
Metropolitan Edison Company
ATTN: Mr. R. C. Arnold
Vice President - Generation
P. O. Box 542
Reading, Pennsylvania 19603

Gentlemen:

By letter dated February 3, 1977, you requested amendment of Operating License No. DPF-50 for Three Mile Island Unit No. 1 (TMI-1) to permit an increase in the storage capacity of the spent fuel pool. Based on our review of your request to date, we have determined that additional information is needed in order to complete our review. The specific information needed is listed in the enclosure.

Since you have asked for an early determination of the acceptability of your proposal, you are requested to submit the information listed in the enclosure as soon as possible.

Sincerely,



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

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

OFFICE →	ORB#4:DOR	C-ORB#4:DOR				
SURNAME →	GZwetzig:dn	RWReid				
DATE →	4/8/77	4/8/77				

Metropolitan Edison Company

cc: G. F. Trowbridge, Esq.
Shaw, Pittman, Potts, & Trowbridge
1800 M Street, N. W.
Washington, D. C. 20036

GPU Service Corporation
Richard W. Heward, Project Manager
Thomas M. Crimmins, Jr., Safety
and Licensing Manager
260 Cherry Hill Road
Parsippany, New Jersey 07054

Pennsylvania Electric Company
Mr. R. W. Conrad
Vice President, Generation
1001 Broad Street
Johnstown, Pennsylvania 15907

Mr. Weldon B. Arehart, Chairman
Board of Supervisors of Londonderry
Township
RFD #1, Geyers Church Road
Middletown, Pennsylvania 17057

Miss Mary V. Southard, Chairman
Citizens for a Safe Environment
P. O. Box 405
Harrisburg, Pennsylvania 17108

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

1479 317

THREE MILE ISLAND NUCLEAR STATION UNIT 1

SPENT FUEL POOL MODIFICATION

REQUEST FOR ADDITIONAL INFORMATION

1. Provide a detailed summary of the stress margins due to the increased loading of the fuel pool walls and floor for the critical load combinations. Include a discussion of the possibility of shear failures in the areas of contact of the rack supports with the floor and walls. Compare numerically these results to those for the previous rack structure.
2. Provide the components of the stress value given in Table 5-2 for load combination "d" (as defined in Section 5.1.2) at grid beam location.
3. Provide justification for neglecting any amplification of the seismic loads, transferred to the rack analyzed, due to the flexibility of the fuel cans in the adjacent racks.
4. What has been the amount of solid wastes shipped from the plant in the last year?
5. On page 3-4 of your submittal of February 3, 1977, you state that it is "impossible" to predict the amount of waste generated from the precoat filter. If the volume cannot be "upperbounded", there is no basis for you or us to reach a conclusion that the volume is negligible. It is requested that you reevaluate the first paragraph of p. 3-4, discussing the projected frequency of operation of the filters, the basis for their replacement, the cubic feet of powdered resin used to precoat the filters and an estimate of the volume of solid waste presently attributable to the SFP operations.
6. What has been the release of radioactive noble gases and tritium from the SFP building in the last three years? What is the expected increase in the release of radioactive noble gases and tritium from the facility due to the SFP modification?
7. What is the weight of any material (e.g., racks) that will be removed from the SFP due to the modification? What will be done with this material?

1479 318

8. Provide a discussion of increase in occupational man-rem exposure to personnel in the spent fuel pool area from radionuclide concentration in the Spent Fuel Pool due to the expansion of the capacity of the pool including the following:
 - (a) Identify the principal radionuclide and their respective concentrations in the spent fuel pool found by gamma isotopic analysis during all operations. Identify the sample with respect to a specific operation (i.e., refueling, fuel handling, etc.).
 - (b) Provide an estimate of the man-rem exposure that will be received during removal of the old racks and installation of new ones.
 - (c) Provide an estimate of the dose rates above the spent fuel pool from the concentrations of the radionuclides identified in (a) and the concomitant occupational exposure, in annual man-rem, due to all operations associated with fuel handling in the spent fuel pool area. Describe the impact of the proposed modifications on these estimates. Include in your analysis the expected exposure from more frequent changing of the demineralizer resin and filter cartridges.
9. During the first refueling, 56 fuel assemblies were transferred into the SFP. The submittal stated that during the current refueling, 48 fuel assemblies will be replaced. The submittal infers on p. 5-3 that on the average, you plan to replace 52 fuel assemblies per year. Based on your current fuel management plans, discuss the projected refueling schedules, including the number of fuel assemblies that will be transferred into the SFP at each refueling.
10. The submittal (p. 5-3) states that the replacement cost of energy and capacity would be approximately \$159 million per year. Discuss whether reserves are such that replacement power for TMI-1 would likely be available within the General Public Utilities Corporation System or from other utility systems after 1980. If TMI-1 were forced to shut down due to lack of storage space for spent fuel, discuss the source and cost of replacement power if system reserves are not expected to be adequate without TMI-1. If TMI-1 were to be shut down, there still would be certain costs associated with the facility such as interest on investment, physical protection, etc. apart from the costs for replacement power. Provide an estimate of the costs associated with maintaining TMI-1 in a "shutdown" condition.
11. Discuss the number of spent fuel assemblies that could be impacted in the proposed compact arrangement by the cask and associated lifting gear if the cask and lifting gear should tip and fall while in or near the spent fuel pool.

1479 319