



METROPOLITAN EDISON COMPANY SUBSIDIARY OF GENERAL PUBLIC UTILITIES CORPORATION

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December 21, 1978

GQL 2031

Director of Nuclear Reactor Regulation
Attention: Mr. R. W. Reid, Chief
Operating Reactors Branch No. 4
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

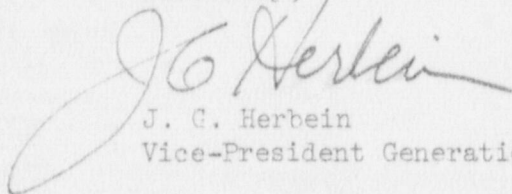
Re: Three Mile Island Nuclear Station Unit 1 (TMI-1)
License No. DPR-50
Docket No. 50-289
Small Break LOCA Long Term Solution

Dear Sir:

Your letter of December 8, 1978 acknowledged our submittal of November 21, 1978 concerning our proposed Long Term Solution to the Small Break LOCA Problem, and indicated that our proposed solution has been reviewed by the appropriate NRC Technical Branches, and found acceptable.

Your letter of December 8, 1978 also indicated that additional information is required in order to justify installing the proposed solution for TMI-1 during the TMI-1 1980 refueling outage (as proposed in our letter of November 21, 1978). In order to obtain the justification necessary to allow installation of our proposed long-term solution, you requested that we address five (5) specific questions. These questions and our responses are attached.

Sincerely,



J. G. Herbein
Vice-President Generation

JGH:RAL:dlk

Attachment: Responses to NRC Question Concerning Installation
of Long-Term Solution to Small Break LOCA Problem

cc: G. Swetzig (NRC)

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Although a minimum of 30 days is required to perform the system modifications, if enough materials have been received on site prior to the 1979 TMI-1 refueling outage, some of the work may be done during that outage. Therefore, it may be possible to accomplish as much as nine days of work on the system modification during the 1979 TMI-1 refueling outage. If this can be done, the minimum outage needed to install the modification could be reduced to 21 days.

QUESTION #5 Provide the net increase in operating costs of the outage defined in 4, above.

RESPONSE: The cost of the capital improvement is \$247,000. If this improvement can be installed during the 1980 TMI-1 refueling outage, there will be no additional increase in operating costs. If, however, a special outage is required to install this modification, the net additional increase in operating costs will lie between \$8,674,600 and \$12,364,600 as follows:

	<u>30 Day Outage</u>	<u>21 Day Outage</u>
-Replacement energy costs = \$410,000 day (Includes Reduced Capacity Penalty)	\$12,300,000	\$8,610,000
-Costs of expedited schedule (as identified in #3 above)	<u>\$ 64,600</u>	<u>\$ 64,600</u>
TOTAL	\$12,364,600	\$8,674,600

Based on the information presented above, we feel that using all available expediting methods, it is not possible to install the proposed modification prior to August 13, 1979.

Because of the substantial financial penalty associated with performing the modifications at some time other than a refueling outage, the (prudent) time for installing the modification is during the 1980 TMI-1 refueling outage.

As indicated in our response to question #4 it is our intention to make every effort to install a portion of the required modification during the TMI-1 1979 refueling outage.

Responses to NRC Questions Concerning Installation
of Long-Term Solution to Small Breaks LOCA Problem

Question #1 Provide earliest date by which you could be prepared to initiate implementation of the approved modifications at TMI-1 assuming a routine schedule for design and procurement.

Response: We have already taken steps which go beyond those taken for a "routine schedule for design and procurement." For example, we have pre-ordered the valves, piping and pipe fittings which will be used in performing the modification. The long-lead time item for our schedule is the procurement of the Containment Penetration needed for moving the normal make-up injection point to a location inside containment. In order to expedite procurement of this penetration, we have gone beyond the "routine methods" by obtaining verbal quotations from several manufacturers. In spite of these efforts we cannot be prepared to initiate implementation of the approved modification at TMI-1 assuming a "routine" schedule for design and procurement prior to October 8, 1979.

Question #2 Provide as in 1 above assuming use of "special orders," and other measures as available to expedite preparations to the maximum extent possible.

Response: In addition to the unusual methods already taken (as described in our response to #1 above), the other "special methods" which could be employed to expedite preparations would be to justify one of the penetration manufacturers as a "sole-source supplier," and to delete the bid evaluation period. Taking these methods into consideration, the earliest possible date by which we are prepared to initiate implementation of the approved modification at TMI-1 is August 13, 1979.

Question #3 Provide the extra cost of the expedited schedule as compared to the routine schedule.

Response: The additional cost of the expedited schedule as compared to the routine schedule is \$64,600. This cost includes such things as material charges, expediting, and additional manhour costs (overtime).

Question #4 Provide the minimum duration outage necessary to implement the approved modification and perform the necessary testing.

Response: The minimum duration outage necessary to implement the modification and perform the necessary testing is 30 days. Included in this 30 day time frame are the cool-down and heat-up times. Also, this 30 day period includes time allocated for testing in the following areas:

- A) Hydrostatic testing
- B) Flow verification testing (4 separate tests)
- C) Leak Rate testing
- D) Penetration Pressurization testing