



Metropolitan Edison Company
Post Office Box 480
Middletown, Pennsylvania 17057
717 944-4041

Writer's Direct Dial Number

July 9, 1980
TLL 301

Office of Nuclear Reactor Regulation
Attn: Harold Denton, Director
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

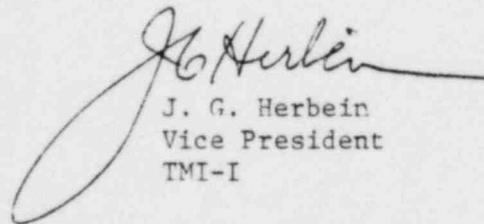
Dear Sir:

Three Mile Island Nuclear Station, Unit I (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Exemption from the Requirements of 10 CFR 50 App. H

This letter is written to formally request relief from the requirements of 10 CFR 50 App. H c3.g4 concerning the Reactor Vessel Material Surveillance Program (RVMSP) in other than a reactor at TMI. On April 11, 1980 Technical Specification Change Request (TSCR) No. 91 concerning this subject was submitted to the NRC. In order for this TSCR to be approved, the NRC requested Met-Ed to formally submit an exemption. The enclosed justification provides the basis for this request.

Additionally, Met-Ed verified that conditions at TMI-I have not appreciably changed since the capsules were removed due to the holders failing. This would prevent the reinstallation of the specimen holders in the reactor vessel due to exposure and technical difficulties.

Sincerely,



J. G. Herbein
Vice President
TMI-I

JGH:lma

Enclosure

cc: J. T. Collins
R. W. Reid
D. DiIanni
B. Grier
H. Silver
V. Stello

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INTEGRATED REACTOR VESSEL SURVEILLANCE PROGRAM

TMI-I does not have holder tubes for housing RVMSP capsules. However, TMI-I is a participant in the B&W 177 FA integrated reactor vessel surveillance program in accordance with Appendix H to 10 CFR 50. TMI-II was the host reactor for the TMI-I capsules. Due to the TMI-II incident it is anticipated that TMI-II will be non-operating for a longer period of time than TMI-I. Provisions must be made for the TMI-I RVMSP in the interim until TMI-II is operating. To date only one of the remaining five TMI-I capsules have been inserted into the TMI-II reactor. Therefore, capsules are available for irradiation at another host reactor. It has been decided to irradiate one TMI-I capsule in the Crystal River Unit Three (CR-3) host reactor. CR-3 was selected as the host for the TMI-I capsule because of an available insertion withdrawal envelope with only minimal impact on the other RVMSP's being conducted at CR-3. It is planned that the TMI-I capsule will be inserted into Crystal River 3 during the CR-3 refueling outage. Therefore, TMI-I will have an ongoing RVMSP. The irradiation in CR-3 will be substantially equivalent to irradiation in TMI-I due to the similarity of the two units. Any differences can be accounted for by appropriate adjustments of the date.

The accumulated neutron fluence of capsule TMI-1C ($8.2 \times 10^{18} \text{ n/cm}^2$) corresponds to a fluence equivalent to 12 EFPY at the reactor vessel inner surface and 22 EFPY at the vessel 1/4T location. Data from this capsule should be available by 1983. Since the TMI-I reactor has operated for approximately 4 EFPY to date, the accumulated operation in 1983 will be approximately 6 EFPY, assuming restart in 1980. Therefore, the capsule accumulated fluence will still lead the reactor vessel accumulated fluence. The method of upgrading the Technical Specification pressure temperature curves beyond the current 5 EFPY applicability period is discussed in BAW 1439. The acceptability and conservative nature of this method was verified by the results of testing capsule TMI-1E also discussed in BAW 1439.

To supplement the data generated by the TMI-I RVMSP, additional irradiation data on weld WF 25 is being generated from several other sources. First, one of two research capsules being irradiated in the CR-3 reactor contain tensile, Charpy V-Notch, and several sizes of compact fracture specimens of WF 25. This capsule is scheduled for pull-out and tests in 1982. The second source of data is the HSST program, Task 3. This program also includes tensile, Charpy V-Notch, and several sizes of compact fracture specimens. The final source of data is the NRC sponsored NRL In-Place Annealing Program. Part 1 of the program contains one inch thick compact fracture specimens and Part 2 contains Charpy V-Notch. Since the above programs will generate data in several irradiation levels, this data will be very complimentary to the data of the TMI-I RVMSP.