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February 13, 1981
LL2-81-0031

TMI Program Office
Attn: Mr. Bernard J. Snyder
Program Director
TMI Program Office
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Three Mile Island Nuclea Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Mini Decay Heat Removal System Surveillance Requirements

Our letter of December 9, 1980 (TLL 645) detailed our proposed surveillance for the Mini Decay Heat Removal (MDHR) System. In your response of January 7, 1981, you requested that we perform additional surveillance on the MDHR System, which you believe to be more consistent with the intent of 10CFR 50.55 a (g) (6) (i) and with existing conditions.

After reviewing your letter and evaluating the existing plant conditions we are of the opinion that your reasons for requesting these additional surveillances are not consistent with current intentions for the use for the MDHR system. Our original intent in building the MDHR system was to have a small disposable system for removal of the relatively high levels of decay heat (approximately 900 KW) existing in the reactor core in the months immediately following the accident, hence avoiding the need to operate the installed Decay Heat Removal System, and eliminating the potential for radiation exposure to personnel and leakage of highly contaminated reactor coolant into the Auxiliary Building. In the time it has taken to build and license the MDHR system, the decay heat generated by the core has decayed to approximately 45 KW. Loss-to-ambient cooling has been demonstrated to be fully capable to maintain core cooling. Thus, MDHR is not presently needed for core cooling and is simply one of several modes available to provide core cooling if desired.

Another potential use of the MDHR system is to provide a back-up means of Reactor Coolant System pressure control in the event of failure of the SPC system, but in this application, MDHR is again simply one of several back-up modes available, (including the Decay Heat System) and has been included in plant procedures for our convenience.

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For these reasons, we have concluded that the MDHR system is not required in order to protect the public and health and safety. We presume that NRC concurs in the judgement, by vertue of the fact that NRC considered public health and safety to be adequately protected prior to the time MDHR became operational. Furthermore, we have performed an accident analysis on the MDHR system which was presented in Technical Specification Change Request No. 24b and which was approved by the NRC. This analysis assumed isolation of this system by the system isolation valves, MDH-V1, V2, V18, and V19, and a complete draining of the fluid in the MDHR system onto the floor of the Auxiliary Building. This analysis determined the off-site effects of the accident, and confirmed that the health and safety of the public was not jeapordized.

In light of the above discussion, we have reevaluated our original submittal with respect to your letter of January 7, 1981. We agree that some form of periodic testing of the MDHR pumps prior to system operation is appropriate, as a matter of good engineering practice. However, we believe such testing, although referenced in Section 4.7.3.3 of the Recovery Operations Plan, is not required in order to conform with any specific article pertaining to safety code component test requirements, as the MDHR system was not designed to be a safety-related system. On this basis, the inservice testing requirements of Article IWP-3000 of Section XI of the ASME Code is not applicable. We can and will test each MDHR Pump in a recirculation mode with the recirculation valve in a specified position. This test will allow us to monitor Inlet Pressure, Differential Pressure, Vibration Amplitude, and Lubricant Level in the manner specified in TLL 645. MDHR flow rate cannot be measured in this test due to the location of the flow rate instrument. This test will be performed, using uncontaminated, unborated water (to prevent premature seal degradation), on a staggered basis so that each pump will be tested every six months, and a pump will be tested every three months.

With respect to valve operability, we feel that additional valve testing is neither necessary nor appropriate, since such testing can promote valve degradation. Again, this is not a matter of public health and safety, but rather one of good engineering practice. In our judgement, repeated unnecessary operation of valves will have a net detrimental effect on the readiness of MDHR for operation, should we choose to use the system, and therefore we do not intend to perform the additional valve operability testing you proposed.

In summary, we will add the MDHR pump testing (as described above) to the surveillances discussed in TLL 645. In our opinion, additional testing beyond that point would be an unreasonable burden on our limited resources, and could provide no benefit to the health and safety of the public. We wish to reiterate that our incentive for performing such surveillances is not to comply with any procedural requirements applicable to safety related system (which MDHR is not), but simply to provide us with reasonable assurance of system availability.

Sincerely,

GK Hovey

G. K. Hovey
Vice-President and
Director, TMI-2

GKH:JJB:djb
cc: L. Barrett, Deputy Director-TMI Program Office