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5211-83-023

Office of Nuclear Reactor Regulation
Attn: J. F. Stolz, Chief
Operating Reactor Branch No. 4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Engineered-Safety-Feature (ESF) Filter System

The ASLB Partial Initial Decision (PID) on Plant Design and Procedures dated December 14, 1981 states at Paragraphs 1265 and 1326(a) that GPUN shall upgrade the Fuel Handling Building Ventilation System to include a new engineered safety feature (ESF) filter system prior to the first refueling outage. The PID also states that this system will meet the guidelines of Regulatory Guide 1.52 (Rev. 2, March 1978) and must be in operation whenever Unit 1 fuel movements are in progress. We request that TMI-1 be relieved of the obligation of meeting this requirement.

Analyses for the radiological consequences of a postulated TMI-1 fuel handling accident (FHA) have been performed using the assumptions outlined in Attachment 1. These assumptions have incorporated the guidance of SRP. 15.7.2 and of Regulatory Guide 1.52, Rev. 2 (March 1978) with the exception of the item noted below. The results of these analyses are given below:

	Exclusion Boundary	LPZ	SRP 15.7.4 Limit	10 CFR 100 Limit
Thyroid (rem)	75	14.3	75	300
Whole Body Dose (rem)	0.15	0.03	6.25	25

As can be seen from the assumptions in Attachment 1, an elapsed time period of twelve (12) days (288 hours) has been used to provide additional decay time for radioactive gases, and thus, reduced integrated doses (thyroid/whole body) at both the exclusion boundary and low population zone. The time period mentioned

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Mr. J. F. Stolz

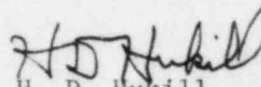
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above represents the time elapsed between reactor shutdown (beginning of hot shutdown) and when the first spent fuel assembly is to be transferred into the Fuel Handling Building. Current defueling procedures will be amended to preclude moving irradiated fuel into the Fuel Handling Building before 12 days after shutdown.

The above analysis confirms the adequacy of the TMI-1 design with respect to off-site impacts. The ventilation separation modifications in place at restart assures no adverse impacts inplant from a fuel handling accident in the FHB. The commitment allows an alternative to the conditions imposed by the ASLB in Paragraph 1265.

Sincerely,


H. D. Hukill
Director, TMI-1

HDH:LWH:vjf

Attachment

cc: J. Van Vliet

R. C. Haynes

ATTACHMENT 1

Assumption and Key Parameters

1. Power level of 2535 MWt
2. 288 hour decay period
3. Peaking factor of 1.68
4. 10% of noble gases and iodines from a damaged fuel assembly (208 fuel pins)
5. All the filtrations systems in the fuel handling building are inoperable.
6. Iodine partition factor of 100.
7. Breathing rate of $3.47 \times 10^{-4} \text{ m}^3/\text{sec}$.
8. Atmospheric diffusion factors were based on Pasquill stability condition F, wind speed of 1.75 mph:

$$\left[\begin{array}{c} X \\ / \\ Q \end{array} \right] \text{ at site boundary} = 6.8 \times 10^{-4} \text{ sec/m}^3$$

$$\left[\begin{array}{c} X \\ / \\ Q \end{array} \right] \text{ at LPZ} = 1.3 \times 10^{-4} \text{ sec/m}^3$$