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February 7, 1984
5211-84-2028

Office of Nuclear Reactor Regulations
Attn: John F. Stolz, Chief
Operating Reactors Branch No. 4
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
Halon Explosion Suppression Systems -
Air Intake Tunnel
Reference: TMI-1 Tech. Spec. Change Request No. 97, Rev. 1
Section 3.18.5.2

The above referenced Tech. Spec. Change Request, which was submitted to the NRC, deletes the requirement of operability of Air Intake Tunnel Deluge System when the Halon Systems are inoperable.

On January 13, 1984, during a telephone conversation, the rationale for the change was explained to Mr. D. Kubicki of your staff as a response to his inquiry. The following is the summary of that telephone conversation:

The postulated hazard for the air intake tunnel is an explosion of jet fuel-air mix caused by a crash into the air intake tunnel. The Halon Systems used are for explosion suppression. These systems operate on the principle that there is a short but measurable time delay between the ignition of a flame front and the buildup of destructive pressure (shock wave). The Halon Systems are designed to react quickly enough to prevent such an explosion.

There are no fixed combustibles in the Air Intake Tunnel that require protection by these deluge systems. The deluge systems in the air intake tunnel serve to cool the tunnel, wash fuel contaminants from the air, and prevent reignition of jet fuel after the Halon Systems have suppressed the incipient explosion. With the Halon Systems inoperable, the deluge systems are not capable of reacting quickly enough to suppress an explosion, and alone serve no design basis function.

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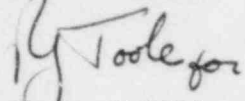
Mr. John F. Stolz

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Therefore, the requirement to keep the air intake tunnel deluge systems operable when Halon Systems are inoperable has been deleted. Additional information supporting this change is contained in the FSAR Section 9.9.7, "Fire Detection and Suppression Following a Hypothetical Aircraft Incident".

Sincerely,



H. D. Hukill
Director, TMI-1

HDH:MI:vjf

cc: J. Van Vliet
R. Conte