GPU Nuclear

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March 2, 1984
5211-84-2056

Office of Nuclear Reactor Regulation
Attn: John F. Stolz
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
Control Room Habitability (III.D.3.4, NUREG 0737)

Your letter dated December 28, 1983 requested GPUN to reevaluate the response of NUREG 0737 Item III.D.3.4, which was based on Probabilistic Risk Assessment (PRA) technique, for on-site as well as off-site sources. NRC agrees with the PRA approach for off-site sources, however, for on-site sources, design basis event protection is required.

In response to the above referenced letter GPUN is planning to use the services of a contractor to reassess the ammonium hydroxide hazard through recalculations using a limited source dose of ammonium hydroxide. GPUN could limit the source dose by providing spill protection or by limiting the total quantity of ammonium hydroxide stored on-site. In order to eliminate chlorine gas as a hazard, GPUN will evaluate the use of alternative biocides in place of chlorine gas for the circulating water treatment system. Schedule and other considerations may dictate installation of a chlorine detection system as a more viable operation. At the present time, GPUN is also evaluating the need for leak tight dampers for radiation and/or Toxic Gas Protection.

In parrallel with the contractor evaluation, GPUN is funding an effort with an Architect/Engineer to provide an estimate and schedule for the engineering, design and installation of isolation dampers, and Toxic Gas Detection System in the Control Building Ventilation System (CBVS). GPUN will authorize the toxic gas detection systems at a later date if the contractors evaluation concludes that ammonium hydroxide and/or chlorine gas cannot be eliminated as hazards. An accelerated implementation schedule is as follows:

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*Determine Modification scope	April 1984
*Receive NRC Concurrence	June 1984
*Award Contracts for detailed Engineering to an Architect Engineer	July 1984
*Complete Prelim. Eng. Design Review	Oct. 1984
*Order Long Lead Items	Dec. 1984
*Delivery Long Lead Items	Aug. 1985
*Issue Engineering package for installation	July 1985
*Complete Installation	*Dec. 1985
*Complete testing and turnover to Plant	*Feb. 1986

GPUN will revise the above implementation plan depending on the results of contractors' evaluation of toxic gas hazards.

GPUN has already committed in a letter to NRC dated November 9, 1981, to provide an additional self-contained breathing apparatus (SCBA) Unit for every three required SCBA units placed in the Control Room to satisfy the single failure criteria for breathing air supply equipment.

The results of our Fire Hazard Analysis and installation modifications under Appendix R will ensure adequate smoke detection in the Control Room.

Sincerely,

H. D. Hukill
Director, TMI-1

HDH:MI:vjf

cc: R. Conte
J. Van Vliet

*Outage required with schedule dependent on plant availability.