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FEB 04 1985

Docket No. 50-289

Mr. Henry D. Hukill, Vice President  
and Director - TMI-1  
GPU Nuclear Corporation  
P. O. Box 480  
Middletown, Pennsylvania 17057

Dear Mr. Hukill:

For your information, enclosed is the staff position on TMI-1 purge limitations: justification for the summary report of purge activities. The staff position and your letter of January 11, 1985 will form the agenda for the backfit Appeal Meeting on Tuesday February 5, 1985, at Air Rights Building room 5033, 4550 Montgomery Avenue, Bethesda, at 10:00 am.

Sincerely,

"ORIGINAL SIGNED BY  
JOHN F. STOLZ"

John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Enclosure:  
As Stated

cc w/enclosure:  
See next page

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STAFF POSITION ON TMI-1 PURGE LIMITATIONS: JUSTIFICATION  
FOR THE SUMMARY REPORT OF PURGE ACTIVITIES

The staff requested, in a letter dated December 5, 1984, from J. Stolz, NRC, to H. Hukill, GPU, that the TMI-1 licensee, GPU Nuclear Corporation, commit to providing a summary report of the purging activities for the first fuel cycle after restart. In a letter dated January 11, 1985, from H. Hukill, GPU, to J. Stolz, NRC, GPU stated that it was their position that the request for a summary report was a backfit issue, and should therefore be subjected to the review procedures set forth by the NRC for backfit issues, prior to implementation.

It is the staff's position that the summary report is necessary to provide justification for extensive purge operations in lieu of the previously established staff requirement of restricting the use of the purge system, which the staff has been implementing at all the other operating plants as part of the MPA B-24 program. The bases for the staff's position are provided below.

One of the principal objectives of MPA B-24 was to establish restrictions on use of the purge/vent system during operating modes above cold shutdown to the minimum possible, especially through the large purge and vent lines. The TMI-1 plant does not have a mini-purge system and uses the 48" purge lines for all purge/vent activities.

In the staff's generic letter on containment purging during normal plant operation, which was issued to the licensees of all operating plants in November 1978, each licensee was requested to consider limiting purge operations to no more than 90 hours per year, or to provide bases acceptable to the staff for unlimited purging. In a letter dated August 7, 1979, from J. Herbein, Metropolitan Edison Company, to R. Reid, NRC, the TMI-1 licensee committed to limit purging during normal operations to not greater than 90 hours per year, pending completion of the NRC review of their justification for continuous purging.

The B-24 review for operating plants was interrupted by the TMI-2 accident in March 1979. TMI-1 was down for refueling at that time and has not been above cold shutdown since. When the B-24 review for TMI-1 was resumed, the staff continued its dialogue with GPU Nuclear Corporation on limiting the amount of purging during normal operation.

In a letter dated April 30, 1982, from J. Stolz, NRC, to H. Hukill, GPU, the staff recommended that the licensee commit to limiting the use of the purge system to a specified annual time that is commensurate with identified plant operational safety needs. In a followup letter dated July 8, 1983, between the same parties, the staff requested that the licensee commit to close the purge/vent valves during modes 1, 2, 3 and 4 and open the vent isolation valves for brief periods of time as is necessary for the purpose of controlling pressure in the containment building. This commitment was to stay in effect until closure of several open B-24 issues and acceptable changes to the Technical Specification were completed.



Detailed discussions of the proposed purge/vent activities have been held with the licensee during the staff's review of Technical Specification Change Request (TSCR) 116, Rev. 2, dated July 8, 1984. This proposed TSCR included an unusually large number of activities for which purging would be permitted and the licensee estimated that these activities will result in around 1200 hours per year of purging, which is significantly greater than the amount of purging that occurs at the average operating plant. In addition, TMI-1 differs from those plants that purge or vent a significant fraction of the normal operating time in that all purge/vent activities at TMI-1 must be done through the 48" purge and vent lines. Other plants that have significant purge activities rely, for the most part, on mini-purge systems (less than 8" diameter lines) during normal operating conditions. Oconee, Units 1, 2, and 3 and Davis Besse 1, for example, are B&W plants that purge less than 90 hours per year through their large purge and vent lines, while the Rancho Seco large purge and vent lines are locked closed during operations above cold shutdown.

Based on the unique purge and vent features at TMI-1, as described above, the staff finds it necessary to confirm the appropriateness of the authorized purge/vent activities by reviewing the actual operating experience, as is being done for the comparable BWR Mark III containment plants. Accordingly, the staff recommends that the licensee be required to provide a summary report, after the first cycle of operation after restart, that contains the following:

- 1) The actual number of hours of purge/vent operations for each of the activities or combination of activities listed in T.S. 3.6.9 of TSCR 116, Rev. 2;
- 2) An analysis of the benefits of purging in terms of reduction in radiation exposure to plant personnel; and
- 3) The actions taken to minimize personnel entries.

Alternatively, if the licensee does not wish to provide the summary report discussed above, the staff would find acceptable the previous commitment made by the licensee to limit purge/vent activities to no more than 90 hours per year.