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October 24, 1983  
5211-83-309

Office of Nuclear Reactor Regulation  
Attn: D. G. Eisenhut, Director  
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  
Pressurized Thermal Shock (PTS) Flux  
Reduction Fuel Management

In response to your letter of September 12, 1983 where you requested GPUN "...to commit to a fuel management plan for the next refueling cycle (Cycle 6) following restart; and (your) estimated schedules for fuel management plans to be used in subsequent cycles to meet flux reduction objectives..." GPUN offers the following:

REF: GPUN Letter - H. D. Hukill to J. F. Stolz dated 3/7/83  
#5211-83-063

- o The above reference on page 1 states: "Current fuel management planning is for conversion to an in-out-in fuel loading strategy beginning with Cycle 6"
- o The above reference on page 3, Item 3.1a also states: "Present planning includes conversion from the current annual out-in-in fuel management strategy to an extended-cycle in-out-in loading scheme which will reduce the neutron fluence to the reactor vessel. This change will be implemented with Cycle 6".
- o Item 3.1.C states: "The earliest practicable implementation of the in-out-in fuel management scheme is Cycle 6, presently scheduled to start in October, 1984."
- o Implementation of the in-out-in fuel management scheme, using current conservative fluence estimates and weld metal characteristics will result in axial weld SA 1526 reaching the screening criteria in 2004 (2008-EOL).

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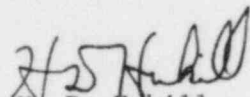
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- o Concerning the planned implementation of the above referenced in-out-in fuel management scheme, item 3.1.b (p.3) and item 3.3 (p. 5) state: "Fluence reduction factors will be known more accurately when analysis of the final design of Cycle 6 is completed..."; "The criteria may also be met with the currently planned in-out-in fuel loading scheme, when detailed core design analyses are performed for TMI-1."
- o Reference item 3.3 (p. 5), item 4.4 (p. 6) and Item 4.5 (p. 7) state: "GPUN is also participating in the 'Fluence Analysis and Dosimetry' tasks of the (B&WOG) RV Materials Evaluation Program. These tasks are expected to provide more accurate RV fluence determinations..."; "The results of this effort would enable the B&W Owners to more precisely define the inner vessel wall fluence...a more precise definition of the fluence... would reduce the uncertainty associated with current RT<sub>ndt</sub> calculations"; "To further improve the accuracy of RV fluence determinations GPUN is participating in Phase XA (Fluence Calculation Benchmarking)... Expected benefits are a reduction of fluence error bands due to uncertainty and a corresponding reduction in predicted material degradation."

It is evident from the above items contained in past correspondence that GPUN is committed to flux reduction and meeting the proposed screening criteria under existing fuel management planning. However, to assure there is no misunderstanding on this point and to respond specifically to your September 12 request, we hereby commit to an in-out-in fuel management plan for Cycle 6. As present B&WOG activities in improving fluence determinations move toward completion, concurrent with the anticipated restart schedule, GPUN has determined it meets NRC flux reduction objectives.

Furthermore, although no PTS rule exists at this time, GPUN is studying more refined flux reduction fuel management schemes (as applicable). These positions are detailed in items 3.2, 3.3 and 4 in the above reference. GPUN has and continues to be committed to maintaining and assuring the integrity of the TMI-1 reactor vessel to EOL.

Sincerely,

  
H. D. Hukill  
Director, TMI-1

HDH:PGD:vjf

cc: J. Van Vliet  
R. Conte