

**Nuclear**

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US Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Three Mile Island Nuclear Station Unit 2 (TMI-2)  
Operating License No. DPR-73  
Docket No. 50-320  
Addition of Borosilicate Glass to the  
TMI-2 Reactor Vessel

Dear Sir:

On December 24, 1991, approximately 1700 lbs. of borosilicate glass shards were introduced into the drained TMI-2 Reactor Vessel (RV). A 1/2 liter sample of these glass shards was sent to the GPU Nuclear Chemistry Lab for analysis. Shards were randomly selected, pulverized, dissolved in acid, and analyzed. The boron content of the borosilicate glass sample was determined to be approximately 6.2 wt. % boron. For your information, the 1700 lbs. of borosilicate glass provide a neutron absorption capability that is equivalent to over 2200 kg of fuel (i.e.,  $UO_2$ ), which far exceeds the total quantity of residual fuel in the TMI-2 RV.

It is noteworthy that this stable and insoluble neutron poison is not required to assure long-term subcriticality of the residual fuel in the TMI-2 RV. The borosilicate glass was added as an additional conservative measure by GPU Nuclear; its location and form do not require verification during Post-Defueling Monitored Storage (PDMS). Please contact me if you have any questions.

Sincerely,

*R. L. Long*

R. L. Long  
Director, Corporate Services/TMI-2

eds/dlb

cc: T. T. Martin - Regional Administrator, Region I  
M. T. Masnik - Project Manager, PDNP Directorate  
L. H. Thonus - Project Manager, TMI  
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