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

Dear Sirs:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Use of Polar Crane Auxiliary Hook for Defueling

For your information, GPU Nuclear intends to use the auxiliary hook of the Reactor Building (RB) polar crane to assist in Reactor defueling. The analysis provided below demonstrates that this activity is within the scope of other defueling activities.

As previously discussed with Dr. W. D. Travers, Director TMI-2 Cleanup Project Directorate, and his staff, GPU Nuclear proposes to use the RB polar crane auxiliary hook as a stationary rigging anchor point above the Reactor Vessel for a chain fall and rigging to be used to handle core debris. Recent defueling experience indicates the need to securely grapple core debris and to apply lift forces greater than those achievable with the RB service crane. The use of the polar crane auxiliary hook will permit the application of increased force (i.e., capacity of polar crane auxiliary hook is 50,000 lbs. as compared to 10,000 lbs. limit for the RB service crane.)

The polar crane auxiliary hook will be positioned at a distance above the Reactor Vessel which ensures that the debris will be handled in accordance with the requirements of the Safety Evaluation Report (SER) for Defueling of the TMI-2 Reactor Vessel. The power supply breaker to the polar crane will be opened to immobilize the polar crane while debris is being handled by the

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chain fall (50,000 lbs. maximum) rigged between the polar crane auxiliary hook and the remaining rigging and equipment. A load indicating device will be included in the rigging to provide continuous indication of the forces applied by the chain fall.

The polar crane auxiliary hook has previously been used as a stationary rigging anchor point. GPU Nuclear Unit Work Instruction (UWI) 4210-3250-86-0472, approved on December 11, 1986, removed solid face drill components from the core debris bed using a chain fall (maximum capacity of 20,000 lbs.) rigged to the polar crane auxiliary hook. For this proposed application, the increase in force (20,000 lbs. to 50,000 lbs.) does not represent a safety concern as an analysis in the SER for Defueling of the TMI-2 Reactor Vessel demonstrated that axial tension loads would cause the incore instrument strings to fail prior to causing other damage to the Reactor Vessel. The only other concern, potential exposure to workers as a result of lifting core debris, is prevented by limiting the lift height.

Based on the above discussion, GPU Nuclear believes that the proposed use of the polar crane auxiliary hook for defueling is within the scope of other defueling activities and may be performed in accordance with detailed approved procedures.

Sincerely,



F. R. Standerfer
Director, TMI-2

FRS/CJD/eml

cc: Regional Administrator - Region 1, Dr. T. E. Murley
Director - TMI-2 Cleanup Project Directorate, Dr. W. D. Travers