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October 20, 1988  
4410-88-L-0165/0332P

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

GPU Nuclear letter 4410-87-L-0168, dated November 4, 1987, requested NRC approval for use of the Polar Crane Auxiliary Hook for defueling-related activities. This request was approved by the NRC on November 16, 1987, via NRC Letter NRC/TMI-87-082.

The referenced GPU Nuclear letter states, "The raising of all loads in the Reactor Vessel using the auxiliary hook shall be performed in the slow speed (i.e., 4 inches/minute) until the load clears all possible interferences below the Shielded Work Platform (SWP)." This restriction was also noted in the referenced NRC letter. The purpose of this letter is to request NRC approval to use the Polar Crane Auxiliary Hook in the fast speed (i.e., 21 feet/minute) for defueling-related activities conditional upon installation of overload control devices as part of the rigging. Fast speed will be used when raising loads through the SWP only if precautions are taken to prevent catching the loads on edges of the platform structure (i.e., if abrupt transitions are shielded from possible interference). The use of the Auxiliary Hook in fast speed instead of slow speed will reduce the amount of time required to remove loads from the Reactor Vessel thus improving defueling efficiency and reducing radiation exposure to personnel.

This proposal will limit loads on the Polar Crane Auxiliary Hook to 10,000 lbs. by installation of redundant hoist cable tension sensors (i.e., overload control devices) which prevent all crane motions except lowering. This proposal is similar to the system that has been successfully used on the Reactor Building Service Crane.

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The Polar Crane Auxiliary Hoist load limiters will be tested by applying a 10,000 lb. load to the auxiliary hoist and verifying that bridge, trolley, and auxiliary hoist up functions are defeated. In the event the overload control devices are activated by an excessive load, crane operators will be instructed to place the load in a safe condition and the cause of the event will be investigated. Based on the performance of the Reactor Building Service Crane overload sensor, the function of the auxiliary hoist overload sensor will be verified every 12 months as part of the Polar Crane preventive maintenance program. Additionally, an individual, separate from the crane operator, will be stationed in the Reactor Building, as is currently required, to interrupt power to the Polar Crane if load interference occurs.

When lifting capacities of greater than five (5) tons are needed, the overload sensors will be defeated. In this case, the hoist speed will be limited to the slow speed while lifting loads in the Reactor Vessel and until the load clears all possible interferences below the SWP.

The overload control device provides an effective means of reacting to any potential load interference when using the Polar Crane Auxiliary Hook in the fast speed. Therefore, based on the above discussion and the evaluation in the referenced GPU Nuclear letter, GPU Nuclear believes that the proposed use of the Polar Crane Auxiliary Hook in the fast speed for defueling as described above does not increase the probability or consequences of an accident previously evaluated, create an accident of a different type than previously evaluated, or reduce the margin of safety of any Technical Specification. In addition, this activity does not require a change to the Plant's Technical Specification.

Per the requirements of 10 CFR 170, an application fee of \$150.00 is enclosed.

Sincerely,



M. B. Roche  
Director, TMI-2

RDW/emf

Enclosed: GPU Nuclear Corp. Check No. 017710

cc: R. J. Conte - Senior Resident Inspector, TMI  
W. T. Russell - Regional Administrator, Region 1  
J. F. Stolz - Director, Plant Directorate IV  
L. H. Thonus - Project Manager, TMI Site