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August 5, 1987
NRC/TMI 87-059

Docket No. 50-320

Mr. F. R. Standerfer
Vice President/Director, TMI-2
GPU Nuclear Corporation
P. O. Box 480
Middletown, PA 17057

Dear Mr. Standerfer:

Subject: Heavy Load Handling Inside Containment

By reference (1) you submitted a Safety Evaluation Report (SER) for the movement of the R-2 and R-4 missile shields and structural support beams over the "A" D-ring in the reactor building. As stated in the enclosed safety evaluation issued by the Nuclear Regulatory Commission (NRC) staff, we conclude that the proposed activities can be accomplished without a significant risk to the health and safety of the public. This activity falls within the scope of activities previously considered in the Programmatic Environmental Impact Statement.

Sincerely,

John A. Thomas for

William D. Travers, Director
TMI-2 Cleanup Project Directorate

Enclosure: As stated

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REFERENCES

- (1) GPUN letter 4410-87-L-0102, F. R. Standerfer to W. D. Travers, Heavy Load Handling, dated June 30, 1987.
- (2) NRC letter NRC/TMI 85-093, W. D. Travers to F. R. Standerfer, Relocation of Missile Shields, dated November 20, 1985.
- (3) GPUN letter 4410-85-L-0199, F. R. Standerfer to W. D. Travers, Relocation of Missile Shields, dated October 17, 1985.
- (4) NRC letter NRC/TMI 87-057, W. D. Travers to F. R. Standerfer, Heavy Load Handling Inside Containment, dated July 23, 1987.
- (5) GPUN letter 4410-86-L-0084, F. R. Standerfer to W. D. Travers, Safety Evaluation Report for Heavy Load Handling Inside Containment - Revision 3, dated June 7, 1986.

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION FOR LIFT OF I-BEAMS OVER EXCLUSION AREA INSIDE THE TMI-2 CONTAINMENT

A. INTRODUCTION

As part of the continuing defueling and recovery effort at TMI-2, General Public Utilities Nuclear Corporation (GPUNC) needs to remove fuel from the tubesheet of the "A" Once Thru Steam Generator (OTSG). To accomplish this the missile shields on the "A" D-ring will have to be relocated. GPUNC has proposed the placement of I-beams and rollers to achieve these missile shield movements. The placement of the I-beams will involve the lifting of a heavy load over an exclusion area as defined in the licensee's load handling program (reference 5). Lifts over the exclusion area are to be minimized in number and evaluated on a case by case basis. The SER for this proposed activity (Reference 1) describes the specifics of a series of lifts and provides the information required for the case by case determination.

B. DISCUSSION

The activities include lifting two beams of 2650 lbs. and 2350-lbs. respectively and two beams and two channels each less than 200 lbs. The missile shields will not be lifted over the exclusion areas.

GPUNC's load handling program incorporates phase I of Generic Letter 81-07 (i.e., section 5.1.1 of NUREG-C612). Phase I included the following activities:

1. Definition of safe load paths
2. Development of load handling procedures
3. Periodic inspection and testing of cranes
4. Qualifications, training and specified conduct of operators
5. Special lifting devices should satisfy the guidelines of ANSI N14.6
6. Lifting devices that are not specially designed should be installed and used in accordance with the guidelines of ANSI B30.9
7. Design of cranes to ANSI B30.2 or CMAA-70

Implementation of these activities assures that the potential for a load drop is extremely small. GPUNC has taken an additional safety measure

using an additional sling and shackle attached to the beams on one end to a reactor coolant pump support beam on the other. This would serve to catch the load if it were dropped and protects against the failure of any single component. The sling and shackle are certified to ANSI B30.9 and have a safety factor greater than 5 to the ultimate tensile strength.

C. CONCLUSION

GPUNC has implemented a load handling program which assures that the potential for a load drop is extremely small. Additionally, they have provided a means to catch a dropped load while it is outside the previously analyzed load path area. Based on the above and the licensee's demonstrated operational history on heavy load handling within the reactor building, the staff has determined the relocation of the beams and channels can be implemented without significant risk to the health and safety of the public.

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