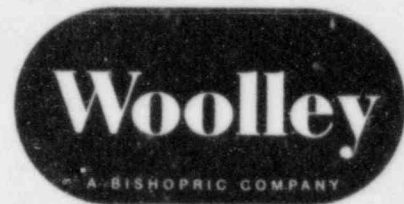


July 5, 1984



Mr. G. Keppler, Regional Administrator
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

In accordance with the requirements of 10CFR21, I am forwarding herewith a copy of Summary of Computational Errors For Missile Doors, dated July 5, 1984. The discovery of these errors and potential safety impact was reported by phone to your Mr. R. C. Kanop on June 29, 1984.

The attached summary provides a description of the discovery and evaluation of the calculational errors and the possible impact upon the design and functional requirements for missile shield doors for the Limerick and Shearon Harris nuclear power plants.

The missile protection doors, as defined in the attached summary, have been designed, fabricated, delivered and partially erected for the referenced nuclear power plants. Neither of the referenced power plants are presently in operation, and therefore, these errors do not presently present a possible safety hazard to the public.

An update of the evaluation of the calculational errors will be submitted on or before August 1, 1984.

If there are any questions, please contact me at our new location, 4413 Kings Run Drive, Cincinnati, Ohio 45232, telephone 513/ 641-0500.

Very truly yours,

Dwaine A. Godfrey
Vice President

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enclosures:
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Summary of Calculational Errors For Missile Shield Doors

By W. J. Woolley Company

July 5, 1984

On June 25, 1984 a difference in the preliminary designed thickness requirements for missile shield doors for an on going project was discovered to be greater than similar missile shield doors for previous projects designed by another engineering group. This difference was reported to Mr. Dwaine Godfrey, Vice President. Mr. Godfrey reported this difference to the President of the Company and requested an engineering evaluation to determine if possible engineering errors existed. A review meeting was scheduled on June 27. During this meeting, it was concluded that apparent engineering errors were made on the previous designs and was duplicated on subsequent designs. An immediate review of the design and the affected doors and plants was initiated. The results of this review were reported by phone to Mr. R. C. Kanop of the NRC Regional Office, Chicago on June 29, 1984.

The errors are associated with calculating the plastic moment resistance of a uniform rectangular plate. The plastic moment resistance is then used to verify that the calculated ductility ratio is within the specified limit. A preliminary review reveals that the corrected plastic moment capacity results in a ductility ratio greater than the specified limits for some of the missile shield doors. Further redesign will be required to determine the extent of exceeding the specified design allowables.

The nuclear power plants and the related missile shield doors are summarized as follows:

I. - Limerick Generating Station, Units 1 and 2

Missile Shield Doors identification numbers
193, 195, 196, 205, 289, 293, 294

II. - Shearon Harris Nuclear Station

Missile Shield Doors identification numbers
57, 90, 92, 232, 250, 312, 321, 462, 463

The completion of the design review, redesign and corrective measures, if required, will be dependent upon establishing appropriate modifications for those missile shield doors that fail to comply with the allowable design limits. A summary update will be submitted on or before August 1, 1984.

W.J. Woolley Co.

Summary of Calculational Errors
July 5, 1984
Page Two

Missile Shield doors are provided usually at openings on safety related structures and prevent the ingress of postulated missiles generated by a tornado. Such a missile is postulated to be a telephone pole, steel pipe, steel rod, lumber or automobile. The specifics are defined in the design requirements and Safety Analysis Report.

Neither of the above referenced plants are in operation and these design errors presently do not present a safety hazard to the general public.

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