

November 26, 1984
(NMP2L 0258)

Mr. R. W. Starostecki
U.S. Nuclear Regulatory Commission
Region I
Division of Project and Resident Programs
631 Park Avenue
King of Prussia, PA 19406

Re: Nine Mile Point Unit 2
Docket No. 50-410

Dear Mr. Starostecki:

This letter provides our response to Nuclear Regulatory Commission I.E. Bulletin 84-03. This bulletin concerns the failure of a refueling cavity water seal at the Haddam Neck plant.

The possibility of an outer refueling seal failure occurring at Nine Mile Point Unit 2 is not considered credible. Nine Mile Point Unit 2's design, installation and machining techniques of the seal support plates differ from Haddam Neck's refueling cavity water seal (see attached sketch). Therefore, detailed evaluation of the consequences of seal failure is not necessary. The Nine Mile Point Unit 2 design maintains an annular width of 2 inches between the two support plates to within $\pm 1/4$ inch. These support plates are integrally attached to either the reactor head cavity pit wall or floor, thus ensuring that the desired width is maintained. The Haddam Neck refueling cavity water seal did not maintain adequate "interference between the width of the seal annulus and the width of the opening, which allowed the seal to be significantly displaced." At Nine Mile Point Unit 2, this interference is achieved by maintaining the width.

The top of the Nine Mile Point Unit 2 seal support plates are chamfered at an angle so to form a matching seat for the seal chamfer. This configuration forms a wedge between the support plates and the seal which, when subjected to water pressure, will wedge even tighter. In contrast, the Haddam Neck seal support plates were not chamfered, thus possibly causing the seal to have hinged and pivoted about the edge of the seal support plates. This pivot action may have induced unwanted movement in the inflatable seal.

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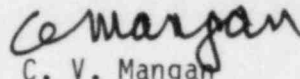
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As opposed to the Haddam Neck refueling cavity water seal design, the Nine Mile Point Unit 2 design has full contact between the seal and support plates, thus creating an increased contact area and interference between the seal and support plates. This increased contact area and interference mitigates the potential for the seal to be dislodged or pushed through as did the Haddam Neck seal.

As an added safety measure, alarm systems have been provided in the Nine Mile Point Unit 2 design to detect any pressure drop in the inflated seal as well as detect any water leakage past the seal.

Sincerely,



C. V. Mangan
Vice President
Nuclear Engineering & Licensing

CVM/GG/csb

cc: Director of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

P. A. Gramm, NRC Resident Inspector

NMP2 REFUELING CAVITY WATER SEAL

