

DEC 12 1984

Docket Nos. 50-272
50-311

Public Service Electric and Gas Company
ATTN: Mr. Richard A. Uderitz
Vice President - Nuclear
P.O. Box 236
Hancock's Bridge, New Jersey 08038

Gentlemen:

Subject: IE Bulletin 84-03: Refueling Cavity Water Leak

The purpose of this letter is to provide you with the results of our preliminary review of your submittal dated November 21, 1984. Your response to the subject Bulletin does not adequately assess or justify, from a safety viewpoint, the use of a solitary inflatable reactor cavity seal during refueling operations in light of recent experiences at other facilities.

The safety evaluation enclosed with your response attempts, in a qualitative way, to demonstrate that seal failure is unlikely. The evaluation fails to evaluate postulated failure mechanisms, mitigation, and corrective actions in a comprehensive way.

In view of your plans to begin fuel movement from the reactor vessel in Unit 2 shortly, you are strongly urged to re-evaluate your design prior to challenging the system.

Our preliminary review of your response has identified the following deficiencies;

- Qualitative assertions (lubrication, flange size, beveled edge, rubber hardness) are unsupported by analyses or tests.
- The consequences of a dropped fuel assembly or heavy load on the seal are not addressed.
- In the event of seal failure, no flow limiting feature is provided nor are there procedures in place to aid the operators in mitigating the consequences of seal failure. Such consequences could also include handling of spent fuel concurrent with seal failure.
- Failure mechanisms such as overpressurization or loss of air pressure are not addressed.
- Assuming a postulated failure of the seal, there appears to be no redundant feature capable of performing the design function. Application of the defense-in-depth philosophy to the proposed design should be discussed.

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The above concerns are illustrative of an incomplete assessment. In light of the potential failures and consequences associated with fuel handling in the reactor cavity and transfer canal, more detailed consideration should be given to the design and integrity of those features whose failure can result in the loss of reactor cavity or transfer canal water.

Your prompt attention to this matter is warranted.

original signed by:

Richard W. Starostecki, Director
Division of Project and Resident
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cc:

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