

Docket No. 50-334

May 25, 1984

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Mr. J. J. Carey, Vice President
Nuclear Division
Duquesne Light Company
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Dear Mr. Carey:

SUBJECT: BEAVER VALLEY UNIT 1 - ASYMMETRIC LOCA LOADS

Generic Letter 84-04, dated February 1, 1984 subject "Safety Evaluation of Westinghouse Topical Reports Dealing With Eliminating of Postulated Pipe Breaks in PWR Primary Main Loops" indicated an acceptable technical basis has been provided for the 16 Westinghouse Owners Group plants so that the asymmetric blowdown loads resulting from double ended pipe breaks in the main coolant loop piping need not be considered as a design basis provided certain specified conditions are met.

However, as you are one of several independently represented nuclear plant facilities currently under review for their ability to withstand asymmetric loadings from postulated loss-of-coolant accident (LOCA), we are transmitting this request for additional information in order to complete our safety evaluation which is scheduled for completion for late 1984. Under review are the plant-specific LOCA analysis submitted by the independent utilities for the following plants: Salem Unit 1, Trojan, Beaver Valley Unit 1, Prairie Island Unit 1 and 2, Kewaunee, Maine Yankee and St. Lucie Unit 1.

Your submittals dated January 14 and June 18, 1976 have been reviewed against the guidelines set forth by NUREG-0609. The Enclosure lists the major areas of concern that have not met these established guidelines. It is our understanding that a substantial portion of the information which would resolve these concerns is available with the NSSS vendors.

Please respond to the concerns identified in the Enclosure by July 31, 1984.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

/s/SVarga

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosure:
As stated

cc w/enclosure:

See next page

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Duquesne Light Company

Beaver Valley Power Station
Unit 1

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Beaver Valley Power Station
Unit 1

- 2 -

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REQUEST FOR ADDITIONAL INFORMATION

BEAVER VALLEY UNIT 1

ASYMMETRIC LOCA LOADS

1. Please provide information on the following items regarding cavity pressurization analysis:
 - A. Qualification status of Stone & Webster's THREED computer program, indicating if the code is NRC-accredited for licensing review utilization for subcompartment analysis;
 - B. The methodology used in the calculation of the mass and energy release rates and the resulting values used in the analysis;
 - C. Details of the vent areas existing and those possibly created during the transient blowdown;
 - D. A justification demonstrating that the pipe break at the reactor vessel inlet nozzle produces the worst or limiting loads for the reactor vessel, steam generator, and pump supports.
2. Provide information on the following items regarding thermal hydraulics analysis:
 - A. The MULTIFLEX node-volume spatial schematics for the postulated break analyzed;
 - B. A list of MULTIFLEX thermal hydraulic input parameters;
 - C. The resulting absolute and differential pressure transients across the core support barrel.
3. The structural analyses of the following components need quantitative results, allowable values, and the basis for the allowables as follows:
 - A. Fuel assemblies
 1. assembly component stresses and grid impact forces,
 2. derivation and value of the minimum grid strength (P_{crit});
 - B. Reactor vessel internals components other than the core barrel;
 - C. Core support barrel (allowables and acceptance criteria only), also the structural model and computer code use;
 - D. ECCS piping and supports, also the structural model and computer code used;
 - E. Reinforced concrete structures, also the structural model and computer code used.

4. A complete LOCA analysis adhering to the criteria outlined in NUREG-0609 is needed for the control rod drive mechanisms.
5. Documentation is required to insure that the two proposed ECCS piping restraint modifications have been provided and are adequate for the imposed LOCA loadings.