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MEMORANDUM FOR: T. H. Novak, Assistant Director  
for Licensing, DL  
FROM: L. S. Rubenstein, Assistant Director  
for Core and Plant Systems, DSI  
SUBJECT: BEAVER VALLEY UNIT 2 SAFETY EVALUATION REPORT

Plant Name: Beaver Valley Unit 2  
Docket Number: 50-412  
Licensing Stage: Operating License  
Responsible Branch: Licensing Branch No. 3  
Project Manager: L. Lazo  
DSI Review Branch: Core Performance Branch  
Review Status: Seven confirmatory and two open issues in Section 4.2, four open issues in Section 4.4, and one confirmatory issue in Section 15.4.3.

The Core Performance Branch has previously submitted DSER sections for the Beaver Valley Unit 2 FSAR. Sections 4.3, 4.4, 15.4.1, 15.4.2, 15.4.3, 15.4.7 and 15.4.8 were sent February 10, 1984 and section 4.2 was sent April 12, 1984. These sections contained several open and confirmatory issues. No information has been received to alter the status of any of these issues. Therefore the SER remains the same as our DSER. Since there are no changes, no copy of these sections is enclosed.

A listing of the open and confirmatory issues, unchanged from those accompanying the DSER sections, follows.

Confirmatory Issues:

1. Confirmation that the peak pellet design basis burnup of 53,000 Mwd/MTU is consistent with the region discharge burnup of 33,000 Mwd/MTU (see Section 4.2.1).
2. Specification of the correct values for several parameters (e.g., fuel rod diameter and Zircaloy weight) in the description of and design drawings for Beaver Valley Unit 2 fuel (see Section 4.2.2).

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3. Confirmation that the rod bowing analysis has been performed (see Section 4.2.3.1(6)).
4. Confirmation that the fuel rod internal pressure is consistent with WCAP-8963 (see Section 4.2.3.1(8)).
5. Confirmation that the predicted cladding collapse time exceeds the expected residence time of the fuel (see Section 4.2.3.2(2)).
6. Confirmation that combined seismic and LOCA loads, using the SRSS method and a worst-case LOCA, are applied in calculating grid stresses (see Section 4.2.3.3(4)).
7. Confirmation of the ability of the reactor coolant letdown radiation monitors to detect fuel rod failures (see Section 4.2.4.2).
8. Confirmation that the analysis of the dropped control rod event meets DNB limits (see Section 15.4.3, second paragraph).

Open Issues:

1. Fuel assembly non-grid component forces from combined seismic and LOCA loads have not been shown to meet SRP Section 4.2 guidelines (see Section 4.2.3.3(4)).
2. Commitment to use the on-line detection method to monitor fuel rod failures (see Section 4.2.4.2).
3. Provide a commitment to supply a report describing the loose parts detection program and implementation of the system (see Section 4.4.5).
4. Supply the information for Item II.F.2 of NUREG-0737 (see Section 4.4.8).
5. Provide a description of flow measurement capability and procedure (see Section 4.4.4.2).
6. Address concerns regarding the effect of rod bow on DNB (see Section 4.4.4.1).

Original signed by  
*L. S. Rubenstein*  
 L. S. Rubenstein, Assistant Director  
 for Core and Plant Systems, DSI

cc: D/DSI  
 D. Eisenhut  
 G. Knighton  
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DATE	7/13/84	7/13/84	7/13/84	7/13/84	7/13/84	7/16/84

SALP EVALUATION FROM THE CORE PERFORMANCE BRANCH  
FOR BEAVER VALLEY UNIT 2

We had no direct interaction with the licensee on this review. The written material, however, is of acceptable quality.

Rating: Category 2