



Duquesne Light

Nuclear Division
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May 23, 1983

Director of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Attn: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Cycle 4 Reload Safety Evaluation Report

Gentlemen:

Enclosed are ten (10) copies of the Beaver Valley Power Station, Unit No. 1 Cycle 4 Reload Safety Evaluation Report (RSER), to specify the basic parameters used in the Cycle 4 reload core design.

Duquesne Light Company has performed a detailed review of the Cycle 4 RSER including a review of the core characteristics to determine those parameters affecting all postulated accidents described in the FSAR. The consequences of those incidents which could potentially be affected by the reload core characteristics were reanalyzed and we have verified that the reanalyses were performed in accordance with the methodology described in WCAP-9273, "Westinghouse Reload Safety Evaluation Methodology".

No changes to the Beaver Valley Power Station, Unit No. 1 Technical Specifications are required as a result of the Cycle 4 reload core design or the RSER.

The RSER analyzes the reload core for both the standard (borosilicate glass) burnable absorber rods and the Wet Annular Burnable Absorber (WABA) rods (WCAP-10021, Revision 1, "Westinghouse Wet Annular Burnable Absorber Evaluation Report"). We have been informed by Westinghouse that they will be unable to meet the required schedule for manufacture of the WABA rods for Cycle 4, therefore, the standard burnable absorber rods will be used.

The new dropped rod methodology was instituted for the cycle 4 design and will be utilized for future cycle core designs. The new dropped rod methodology was submitted to the NRC by Westinghouse (NS-EPR-2545, E. P. Rahe to C. H. Berlinger, January 20, 1982) and will provide the basis for removal of the interim restrictions on rod control and insertion. This will be addressed by letter at a later date.

The reload core design will be verified by performing the standard Westinghouse reload core startup physics tests.

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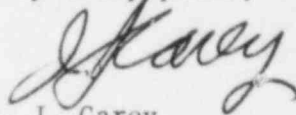
The results of the following tests will be submitted in accordance with Technical Specification 6.9.1.3:

1. Control rod drive tests and rod drop time measurements
2. Critical boron concentration measurements
3. Control rod bank worth measurement
4. Moderator temperature coefficient measurement
5. Startup power distribution measurements using the incore flux mapping system.

The Beaver Valley Onsite Safety Committee (OSC) and the Duquesne Light Offsite Review Committee (ORC) have reviewed this RSER and concluded that no unreviewed safety questions, as defined by 10 CFR 50.59, are involved with this reload core design.

In accordance with our request for Technical Specification Change No. 75, dated December 16, 1982 and Amendment No. 61, dated January 19, 1983, we are requesting that the change to require 50% of the incore moveable detector thimbles for a full core flux map be instituted for Cycle 4. This change will then enable us to continue to study the thimble plugging problem and to determine the cause and an effective solution.

Very truly yours,


J. J. Carey
Vice President, Nuclear

cc: Mr. W. M. Troskoski, Resident Inspector
U. S. Nuclear Regulatory Commission
Beaver Valley Power Station
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