



Duquesne Light

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September 24, 1984

Director of Nuclear Reactor Regulation
U. S. 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 5 Reload Safety Evaluation Report

Gentlemen:

Enclosed are ten (10) copies of the Beaver Valley Power Station, Unit No. 1 Cycle 5 Reload Safety Evaluation Report (RSER). This report presents an evaluation of the Cycle 5 design which demonstrates that the core reload will not adversely affect the safety of the plant.

Duquesne Light Company has performed a detailed review of the Cycle 5 RSER including a review of the core characteristics to determine those parameters affecting all postulated accidents described in the UFSAR. The consequences of those incidents which could potentially be affected by the reload core characteristics were reanalyzed, and we have verified that the reanalysis were performed in accordance with the methodology described in WCAP-9272, "Westinghouse Reload Safety Evaluation Methodology". The effects of the reload on the design basis and postulated incidents analyzed in the UFSAR were accommodated within the conservatism of the initial assumptions and are bounded by the current limits.

No changes to the Technical Specifications are required as a result of the Cycle 5 reload core design or the RSER.

The RSER evaluates the reload core utilizing the Wet Annular Burnable Absorber (WABA) rods. The WABA burnable poison rods provide significantly enhanced nuclear characteristics and the design has been approved by the NRC. The RSER incorporated into WCAP-10021-P-A Revision 1, "Westinghouse Wet Annular Burnable Absorber Evaluation Report".

The NRC approved dropped rod methodology used for the Cycle 4 design evaluation was also used in the Cycle 5 design evaluation and confirmed that the DNB design basis is met for all dropped rod events initiated from full power. Therefore, as in Cycle 4, no restrictions on rod control, either manual rod control or restricted rod insertion limits when in automatic rod control above 90% power are required for Cycle 5 operation.

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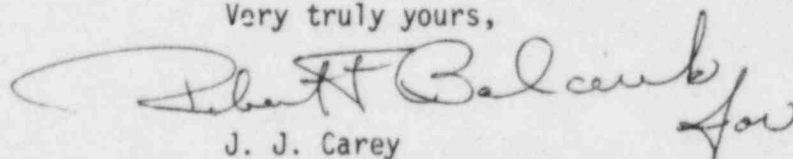
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The reload core design will be verified by performing the standard Westinghouse reload core startup physics tests. The results of the following startup tests will be submitted in accordance with Technical Specification 6.9.1.3:

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 Company Offsite Review Committee (ORC) have reviewed this RSER and determined that the Cycle 5 reload core design will not adversely affect the safety of the plant and does not involve an unreviewed safety question.

Very truly yours,



J. J. Carey
Vice President, Nuclear

cc: U. S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, DC 20555

Mr. W. M. Troskoski, Resident Inspector
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