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JHT/91-150

September 25, 1991

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: Submittal of Topical Report BAW-10180, NEMO, Nodal Expansion Method Optimized, September 1991.

References:

1. NOODLE - A Multi-Dimensional Two-Group Reactor Simulator, BAW-10152-A, June 1985.
2. Power Peaking Nuclear Reliability Factors, BAW-10119P-A, February 1979.
3. Comparison of Core Physics with Measurements, BAW-10120P-A, March 1978.
4. CASMO-3 - A Fuel Assembly Burnup Program, STUDSVIK/NFA-89/3, Studsvik AB, Nykoping, Sweden, November 1989.

Gentlemen:

Enclosed are twenty (20) copies of Topical Report BAW-10180, NEMO - Nodal Expansion Method Optimized. This report describes NEMO, which is an improved nodal code for core reactivity and power distribution calculations using the nodal expansion method. NEMO also has the ability to perform pin power reconstruction.

This report will be referenced by B&W utility customers to support amendments to operating licenses. The first such application is expected to occur in May 1992. The report utilizes significant portions of previously approved data and methods described in references 1 through 3 as well as methodology from reference 4. They are noted here for the convenience of your assigned reviewers.

Very truly yours,

J. H. Taylor, Manager
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cc: R. C. Jones, NRC
Valeria Wilson, NRC
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