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Nuclear Management Company, LLC
Point Beach Nuclear Plant
6610 Nuclear Road
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NPL 2001-0035

February 6, 2001

Document Control Desk
U.S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, D.C. 20555

10 CFR 50.4

Ladies/Gentlemen:

DOCKET 50-301
SUMMARY REPORT OF PLANT STARTUP
POINT BEACH NUCLEAR PLANT, UNIT 2

Point Beach Nuclear Plant (PBNP) Technical Specification 15.6.9.1.A.1 requires a summary report of plant startup and power escalation testing following installation of fuel that has a different design then that used previously in the core. During the Fall 2000 refueling, Point Beach Unit 2 was refueled. The core reload included 40 fuel assemblies of the new Westinghouse 422V+ fuel. This fuel features an increased fuel rod diameter and is clad with ZIRLO. Both these features are new fuel design parameters for Point Beach and necessitate this report. Point Beach Unit 2 was approved for use of this fuel design in License Amendment 198 to Facility Operating License DPR-27 for PBNP Unit 2 dated February 8, 2000.

Attachment 1 to this letter is our summary startup report for the PBNP Unit 2 Cycle 25 start up. The report includes a general description of the measured values obtained during the startup test program and a comparison of those values with design predictions and specifications. Criticality was achieved for this startup on December 14, 2000, and full power was reached on December 25, 2000.

Please contact us if you require additional information or more detail concerning this report.

Sincerely,

A. J. Cayia
Plant Manager

Enclosure

CWK/jlk

cc: NRC Resident Inspector
NRC Project Manager
NRC Regional Administrator
PSCW

IE24

Point Beach Nuclear Plant Unit 2
Cycle 25 Startup Physics Testing Results

Technical Specification 15.6.9.1 A.1.c requires a summary report concerning "...the tests described in the FSAR and includes a general description of the measured values obtained during the test program and a comparison of these values with design predictions and specifications..." for "Installation of fuel that has a different design...". Point Beach Nuclear Plant (PBNP) Unit 2, Cycle 25 contains 40 fuel assemblies of a design which contains some features not previously used at Point Beach, such as ZIRLO cladding. This fuel may be considered a new design. The new fuel design was reviewed and approved by the NRC as part of License Amendment 193 for PBNP Unit 1 and Amendment 198 for PBNP Unit 2.

The only tests described in the FSAR relative to this issue are in Section 13.4, "Initial Testing in the Operating Reactor". This section refers specifically to the initial testing program conducted during initial plant startup. The current testing sequence is not as extensive as the original testing. The current tests are based on Westinghouse recommendations, industry standards and good practices, and Technical Specification requirements. A general description of the measured values, the value obtained during the test program, and the predicted value and / or specification are given below.

Parameter	Predicted value	Measured value	Requirement
Rod worth (sum of six banks)	5732.5 pcm	5997 pcm	Measured greater than 93% of design (93% of design = 5331.2 pcm) (met)
ARO boron endpoint	1936 ppm	1912 ppm	+/- 100 ppm (met)
Individual bank worth: Shutdown bank A Shutdown bank B Control bank A Control bank B Control bank C Control bank D	 1070 pcm 652 pcm 1671 pcm 402 pcm 1042 pcm 895 pcm	 1110 pcm 670 pcm 1806 pcm 410 pcm 1089 pcm 912 pcm	Measured worth of all individual banks are within 15% or 100 pcm, whichever is greater (all met this criteria)
Sum of the measured rod worths	5732.5	5997	Measured within 5.6% of predicted (met)
Hot zero power moderator temperature coefficient	n/a	+1.30 pcm/°F	Less than +5 pcm/°F (met)
Isothermal temperature coefficient	-0.73 pcm/°F	-0.32 pcm/°F	Measured ITC within 2 pcm/°F of predicted (met)

Heatup and cooldown ITC	n/a	heatup: -0.32 pcm/°F cooldown: -0.32 pcm/°F	Measured heatup and cooldown ITC agree within 1 pcm/°F (met)
Hot channel factors	n/a	n/a	All flux map hot channel factor acceptance criteria were met for the 28%, 50%, 75%, 95%, and full power flux maps
Incore quadrant tilt	n/a	0.56%	Measured incore tilt less than 4% (met)
Core symmetry	n/a	n/a	For core locations with greater than 0.90 relative power density: deviation between highest and lowest relative power densities in symmetric locations within 10% OR measured relative power density within 10% of predicted. (met)