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US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Modification of Commitment for Core Unload
and Reload Pattern for Full Core Discharges

We plan to modify a commitment made in our correspondence dated November 4, 1983 to the Nuclear Regulatory Commission concerning the core unloading and loading pattern to be used during full core discharges.

During discussions with the Nuclear Regulatory Commission staff in the course of obtaining approval of a Technical Specification change, we committed in our November 4, 1983 correspondence to perform full core discharges and reloads using a generally spiral pattern centered about a Source Range Monitor. Since that time, the Boiling Water Reactor industry has put a lot of thought into what is the best way to perform full core discharges and reloads. The conclusion of the Boiling Water Reactor Owners Group Reactivity Controls Review Committee is that the neutronic coupling between the fuel and each Source Range Monitor should be maximized. The conclusion of an EPRI refueling accidents study (NSAC/164, "Guidelines for Reactivity Control During Refueling", draft copy) is that the first bundles should be loaded so as to neutronically couple the Source Range Monitors using a loading scheme which minimizes overall reactivity of the initial fuel mass. These recommendations are best implemented using a discharge/reload scheme in which the discharge spiral leaves a narrow "U"-shaped path of fuel bundles adjacent to the Source Range Monitors, then disassembles the "U" leaving 2 bundles adjacent to each Source Range Monitor, then removes the last bundles (a narrow path of bundles is a high-leakage, low reactivity configuration). The reload would be done in reverse order: load 2 bundles adjacent to each Source Range Monitor, connect the Source Range Monitors using a narrow "U"-shaped path, then generally spiral out from around one Source Range Monitor. This methodology for core unloads has been utilized by the Susquehanna Electric Station and is being considered for use by other members of the Boiling Water Reactor Owners Group Reactivity Controls Review Committee.

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In summary we make the following commitment:

> Full core unloading and loading will be performed in a pattern which spirals around a Source Range Monitor while maintaining/establishing neutronic coupling between the four Source Range Monitor detectors. Deviations from the spiral pattern may be made for control blade changeout/Control Rod Drive maintenance concerns.

We intend to use this revised methodology for our upcoming core unload commencing February 1, 1993. Please contact us if you have any questions related to the revised commitment.

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