UNITED STATES NUCLEAR REGULATORY COMMISSION REGION III 799 ROOSEVELT ROAD GLEN ELLYN, ILLINDIS 60137

March 25, 1976

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NORTHERN STATES POWER (MONTICELLO) DOCKET NO. 50-263 BWR REFUELING BRIDGE

During a recent inspection trip, March 15-17, 1976, to Monticello, a review of significant operating event (SOE) 75-07, which occurred on October 22, 1975, revealed a significant safety problem. The significant operating event occurred when an operator commenced lateral movement of the refueling bridge, with a fuel assembly attached to the hoist/grapple and not fully withdrawn from the fuel storage rack. The operator quickly realized his error, ceased the lateral movement of the refueling bridge and returned to a position directly over the fuel assembly. The fuel assembly was damaged and had to be returned to the vendor by the licensee for replacement due to misalignment.

The refueling bridge and trolley drives are not interlocked with the fuel handling hoist/grapple to prevent unsafe movement of the bridge and trolley with the fuel handling hoist/grapple and assembly at an unsafe elevation within the storage racks or the core. It appears possible to seriously damage the fuel assembly, conned or uncanned, within the normal refueling bridge controls available to the operator and without any restrictive interlocks provided on the hoist/grapple bridge and trolley drives. The potential release from a damaged irradiated fuel assembly, being withdrawn from the core, all 49 fuel rods failing from the bending force applied by the bridge or trolley movement (Monticello FSAR, Section 14.6.4) and possible damage to adjacent fuel assemblies, would have a substantial radiological effect on the personnel within the containment and an impact on the environ outside the containment.

The refueling machine at Monticello is similar to refueling machines installed at numerous GE-BWR plants.

This safety item appears to require review and evaluation to determine if corrective measures are warranted to prevent serious fuel assembly damage through an operator error.

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