Exhibit B

Monticello Nuclear Generating Plant

License Amendment Request dated January 4, 1994

Proposed Changes Marked Up on Existing
Technical Specification Pages

Exhibit B consists of the existing Technical Specification pages with the proposed changes marked up on those pages. Existing pages affected by this change are listed below:

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3.11 REACTOR FUEL ASSEMBLIES

Applicability

The Limiting Conditions for Operation associated with the fuel rods apply to those parameters which monitor the fuel rod operating conditions.

Objective

The objective of the Limiting Conditions for Operation is to assure the performance of the fuel rods.

Specifications

A. Average Planar Linear Heat Generation Rate (APLHGR)

~~During two recirculation loop power operation, the APLHGR limiting condition for operation for each type of fuel as a function of~~ axial location and average ~~planar exposure shall not exceed limits based on applicable APLHGR limit values which have been approved for the respective fuel and lattice types as determined by the approved methodology described in NEDE-24011-P-A (GESTAR II). This approval is based on and limited to GESTAR II methodology~~. When hand calculations are required, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed the limiting value for the most limiting lattice (excluding natural uranium) provided in the Core Operating Limits Report.

Change A

During one recirculation loop power operation, the APLHGR limiting condition for operation for each type of fuel shall not exceed the above values multiplied by 0.85.

If at any time during power operation, it is determined that the APLHGR limiting condition for operation is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits. If the APLHGR is not returned to within the prescribed limits within two hours, reduce thermal power to less than 25% within the next four hours.

During two recirculation loop power operation, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed the applicable limiting value specified in the Core Operating Limits Report.

4.11 REACTOR FUEL ASSEMBLIES

Applicability

The Surveillance Requirements apply to the parameters which monitor the fuel rod operating conditions.

Objective

The objective of the Surveillance Requirements is to specify the type and frequency of surveillance to be applied to the fuel rods.

Specifications

A. Average Planar Linear Heat Generation Rate (APLHGR)

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at $\geq$25% rated thermal power.

7. Core Operating Limits Report

a. Core operating limits shall be established and documented in the Core Operating Limits Report before each reload cycle or any remaining part of a reload cycle for the following:

Rod Block Monitor Operability Requirements
(Specification 3.2.C.2a)

Rod Block Monitor Upscale Trip Settings
(Table 3.2.3, Item 4.a)

Maximum Average Planar Linear Heat Generation Rate Limits
(Specification 3.11.A)

Linear Heat Generation Ratio Limits
(Specification 3.11.B)

Minimum Critical Power Ratio Limits
(Specification 3.11.C)

Power to Flow Map
(Bases 2.3.A)

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version)

NSPNAD-8608-A, "Reload Safety Evaluation Methods for Application to the Monticello Nuclear Generating Plant" (latest approved version)

NSPNAD-8609-A, "Qualification of Reactor Physics Methods for Application to Monticello" (latest approved version)

Change B

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, transient analysis limits and accident analysis limits) of the safety analysis are met.

d. The Core Operating Limits Report, including any mid-cycle revisions or supplements, shall be supplied upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

6.7

ANF-91-0481(P)(A), "Advanced Nuclear Fuels Corporation Methodology for Boiling Water Reactors-EXEM BWR Evaluation Model," Siemens Power Corporation (latest approved version)

Bases Continued:

MCPR Limit is determined from the analysis of transients discussed in Bases Sections 2.1 and 2.3. By maintaining an operating MCPR above these limits, the Safety Limit (T.S. 2.1.A) is maintained in the event of the most limiting abnormal operational transient.

At less than 100% of rated flow and power the required MCPR is the larger value of the $MCPR_F$ and $MCPR_P$ at the existing core flow and power state. The required MCPR is a function of flow in order to protect the core from inadvertent core flow increases such that the 99.9% MCPR limit requirement can be assured.

~~The MPCRs were calculated such that for the maximum core flow rate and the corresponding thermal power along the 105% of rated power/flow control line, the limiting bundle's relative power was adjusted until the MCPR was slightly above the Safety limit. Using this relative bundle power, the MCPRs were calculated at different points along the 105% of rated power flow control line corresponding to different core flows. The calculated MCPR at a given point of core flow ($MCPR_F$) is provided in the Core Operating Limits Report.~~

Change C

For operation above 45% of rated thermal power, the core power dependent MCPR operating limit is the rated MCPR limit, MCPR(100), multiplied by the factor, provided in the Core Operating Limits Report. For operation below 45% of rated thermal power (turbine control valve fast closure and turbine stop valve closure scrams can be bypassed) MCPR limits are provided in the Core Operating Limits Report. This protects the core from plant transients other than core flow increase, including a localized event such as rod withdrawal error.

Flow runout events are analyzed with the purpose of establishing a flow dependent MCPR limit that would prevent the Safety Limit CPR from being reached during a flow runout. A flow runout event is a slow flow and power increase which is not terminated by a SCRAM, but which stabilizes at a new core power corresponding to the maximum possible core flow. Initial conditions for the transient are set such that the limiting CPR is near the Safety Limit. MCPR values are determined from the resulting change in CPR when core flow is increased to a possible maximum. Several combinations of initial power, flow, and exposure are analyzed to cover the range of operability defined by the power/flow map. The calculated flow dependent MCPR limit ($MCPR_f$) for a given core flow is provided in the Core Operating Limits Report.

Exhibit C

Monticello Nuclear Generating Plant

License Amendment Request dated January 4, 1994

Revised Technical Specification Pages

Exhibit C consists of the Technical Specification pages with the proposed changes incorporated. Existing pages affected by this change are listed below:

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3.11 REACTOR FUEL ASSEMBLIES

Applicability

The Limiting Conditions for Operation associated with the fuel rods apply to those parameters which monitor the fuel rod operating conditions.

Objective

The objective of the Limiting Conditions for Operation is to assure the performance of the fuel rods.

Specifications

A. Average Planar Linear Heat Generating Ratio (APLHGR)

During two recirculation loop operation, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed the applicable limiting values specified in the Core Operating Limits Report. When hand calculations are required, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed the limiting value for the most limiting lattice (excluding natural uranium) provided in the Core Operating Limits Report.

During one recirculation loop power operation, the APLHGR limiting condition for operation for each type of fuel shall not exceed the above values multiplied by 0.85.

If at any time during power operation, it is determined that the APLHGR limiting condition for operation is being exceeded, action shall be initiated within 15 minutes to restore operation to within the prescribed limits. Surveillance and corresponding action shall continue until reactor operation is within the prescribed limits. If the APLHGR is not returned to within the prescribed limits within two hours, reduce thermal power to less than 25% within the next four hours.

4.11 REACTOR FUEL ASSEMBLIES

Applicability

The Surveillance Requirements apply to the parameters which monitor the fuel rod operating conditions.

Objective

The objective of the Surveillance Requirements is to specify the type and frequency of surveillance to be applied to the fuel rods.

Specifications

A. Average Planar Linear Heat Generation Rate (APLHGR)

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at $\geq$25% rated thermal power.

7. Core Operating Limits Report

a. Core operating limits shall be established and documented in the Core Operating Limits Report before each reload cycle or any remaining part of a reload cycle for the following:

Rod Block Monitor Operability Requirements
(Specification 3.2.C.2a)

Rod Block Monitor Upscale Trip Settings
(Table 3.2.3, Item 4.a)

Maximum Average Planar Linear Heat Generation Rate Limits
(Specification 3.11.A)

Linear Heat Generation Ratio Limits
(Specification 3.11.B)

Minimum Critical Power Ratio Limits
(Specification 3.11.C)

Power to Flow Map
(Bases 2.3.A)

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version)

NSPNAD-8608-A, "Reload Safety Evaluation Methods for Application to the Monticello Nuclear Generating Plant" (latest approved version)

NSPNAD-8609-A, "Qualification of Reactor Physics Methods for Application to Monticello" (latest approved version)

ANF-91-0481(P)(A), "Advanced Nuclear Fuels Corporation Methodology for Boiling Water Reactors-EXEM BWR Evaluation Model," Siemens Power Corporation (latest approved version)

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, transient analysis limits and accident analysis limits) of the safety analysis are met.

d. The Core Operating Limits Report, including any mid-cycle revisions or supplements, shall be supplied upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

Bases Continued:

MCPR Limit is determined from the analysis of transients discussed in Bases Sections 2.1 and 2.3. By maintaining an operating MCPR above these limits, the Safety Limit (T.S. 2.1.A) is maintained in the event of the most limiting abnormal operational transient.

At less than 100% of rated flow and power the required MCPR is the larger value of the $MCPR_f$ and $MCPR_p$ at the existing core flow and power state. The required MCPR is a function of flow in order to protect the core from inadvertent core flow increases such that the 99.9% MCPR limit requirement can be assured.

Flow runout events are analyzed with the purpose of establishing a flow dependent MCPR limit that would prevent the Safety Limit CPR from being reached during a flow runout. A flow runout event is a slow flow and power increase which is not terminated by a scram, but which stabilizes at a new core power corresponding to the maximum possible core flow. Initial conditions for the transient are set such that the limiting CPR is near the Safety Limit. MCPR values are determined from the resulting change in CPR when core flow is increased to a possible maximum. Several combinations of initial power, flow, and exposure are analyzed to cover the range of operability defined by the power/flow map. The calculated flow dependent MCPR limit ($MCPR_f$) for a given core flow is provided in the Core Operating Limits Report.

For operation above 45% of rated thermal power, the core power dependent MCPR operating limit is the rated MCPR limit, MCPR(100), multiplied by the factor, provided in the Core Operating Limits Report. For operation below 45% of rated thermal power (turbine control valve fast closure and turbine stop valve closure scrams can be bypassed) MCPR limits are provided in the Core Operating Limits Report. This protects the core from plant transients other than core flow increase, including a localized event such as rod withdrawal error.