Exhibit B

Monticello Nuclear Generating Plant

License Amendment Request dated June 22, 1995

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:

Page	
15	
107	(Insert text for page 107 provided on separate page)
108	
109	
114	(Insert text for page 114 provided on separate page)
211	
249b	

Bases Continued:

For analyses of the thermal consequences of the transients, the Operating MCPR Limit (T.S.3.11.C) is conservatively assumed to exist prior to initiation of the transients.

This choice of using conservative values of controlling parameters and initiating transients at the design power level, produces more pessimistic answers than would result by using expected values of control parameters and analyzing at higher power levels.

Deviations from as-left settings of setpoints are expected due to inherent instrument error, operator setting error, drift of the setpoint, etc. Allowable deviations are assigned to the limiting safety system settings for this reason. The effect of settings being at their allowable deviation extreme is minimal with respect to that of the conservatisms discussed above. Although the operator will set the setpoints within the trip settings specified, the actual values of the various setpoints can vary from the specified trip setting by the allowable deviation.

A violation of this specification is assumed to occur only when a device is knowingly set outside of the limiting trip setting or when a sufficient number of devices have been affected by any means such that the automatic function is incapable of preventing a safety limit from being exceeded while in a reactor mode in which the specified function must be operable. Sections 3.1 and 3.2 list the reactor modes in which the functions listed above are required.

A. Neutron Flux Scram The average power range monitoring (APRM) system, which is calibrated using heat balance data taken during steady state conditions, reads in percent of rated thermal power (1670 MWt). Because fission chambers provide the basic input signals, the APRM system responds directly to average neutron flux. During transients, the instantaneous rate of heat transfer from the fuel (reactor thermal power) is less than the instantaneous neutron flux due to the time constant of the fuel. Therefore, during abnormal operational transients, the thermal power of the fuel will be less than that indicated by the neutron flux at the scram setting. Analyses demonstrate that, with a 120% scram trip setting, none of the abnormal operational transients analyzed violate the fuel Safety Limit and there is a substantial margin from fuel damage. ~~Therefore, the use of flow referenced scram trip provides even additional margin.~~ Also, the flow biased neutron flux scram (specification 2.3.A.1) provides protection to the fuel safety limit in the unlikely event of a thermal-hydraulic instability.

3.0 LIMITING CONDITION FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
F. Recirculation System	F. Recirculation System
3X. The reactor may be started and operated, or operation may continue with only one recirculation loop in operation provided that:	1. See Specification 4.6.G
a. The following changes to setpoints and safety limit settings will be made within 24 hours after initiating operation with only one recirculation loop in operation.	~~2. The following baseline noise levels will be obtained prior to operation with only one recirculation pump in operation at a core thermal power greater than that specified in Figure 3.5.1 or with a core flow greater than 45% provided that baseline values have not been established since the last core refueling. Baseline values will be taken with only one recirculation pump running.~~
1. The Operating Limit MCPR (MCPR) will be changed per Specification 3.11.C.	~~a. Establish a baseline core plate AP noise level.~~
2. The Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) will be changed ~~as noted in Table 3.11.1.~~ per Specification 3.11.A.	~~b. Establish a baseline APRM and LPRM neutron flux noise level.~~
3. The APRM Neutron Flux Scram and APRM Rod Block setpoints will be changed as noted in Specification 2.3.A and Table 3.2.3.	~~3. With only one recirculation loop in operation at a core thermal power greater than that specified in Figure 3.5.1 or with a core flow greater than 45%, determine the following noise levels at least once per 8 hour period and within 30 minutes after a core thermal power increase of greater than 5% of rated thermal power.~~
b. ~~Total core flow will be maintained greater than 39% when core thermal power is above the limit specified in Figure 3.5.1.~~ Technical specification 3.5.F.1 and 3.5.F.2 are met.	~~a. Core plate AP noise levels.~~
4. With no reactor coolant system recirculation loops in operation: a. Comply with Technical specifications 3.5.F.1 and 3.5.F.2 by inserting control rods and then comply with specifications 3.6.A.2 and 3.5.F.3 for operation with only one recirculation loop, or	~~b. APRM and LPRM neutron noise levels.~~
b. The reactor shall be placed in Hot Shutdown within 12 hours.	

Insert new 3.5.F.1 and 3.5.F.2 on next page

Move text to page 108

Insert Text for Page 107

F. Recirculation System

1. Intentional entry into the stability exclusion region of the power-flow map defined in the Core Operating Limits Report (COLR) is prohibited. If entry into the stability exclusion region does occur, immediately perform one or more of the following until the stability exclusion region has been exited:

   a. Insert control rods,

   b. Increase the speed of an operating recirculation pump.

2. Entry into the stability buffer region of the power-flow map as defined in the COLR is prohibited unless the power distribution controls as defined in the COLR are in effect. If the power distribution controls are not in effect and entry into the stability buffer region does occur, immediately perform one or more of the following until the stability buffer region has been exited:

   a. Insert control rods,

   b. Increase the speed of an operating recirculation pump.

3.0 LIMITING CONDITION FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
~~c. Prior to continued operation with only one recirculation pump in operation,~~ ~~1. the surveillance requirements of Specification 4.5.F.2 shall be~~ met within 4 hours or, ~~2. action shall be taken to:~~ ~~a. reduce total core flow to less than 45%~~ and~~,~~ b. ~~reduce core thermal power to less than the limit specified in Figure 3.5.1~~. d. ~~If the core plate ΔP noise level is found to be greater than 1.0 psi and 2 times its established~~ baseline ~~during the performance of Specification 4.5.F.3, immediately~~ initiate corrective action ~~and restore the noise levels to within the required limits within 2 hours by decreasing core flow and/or initiating an orderly reduction of~~ core ~~thermal power by inserting control~~ rods. e. ~~If the APRM and/or LPRM neutron flux noise levels are found to be greater than three times their established baseline values during the performance of Specification 4.5.F.3,~~ immediately initiate ~~corrective action to restore the noise levels to within the required limits~~ within 2 hours by increasing core flow and/or initiating an orderly ~~reduction of core thermal power by inserting control rods~~.	

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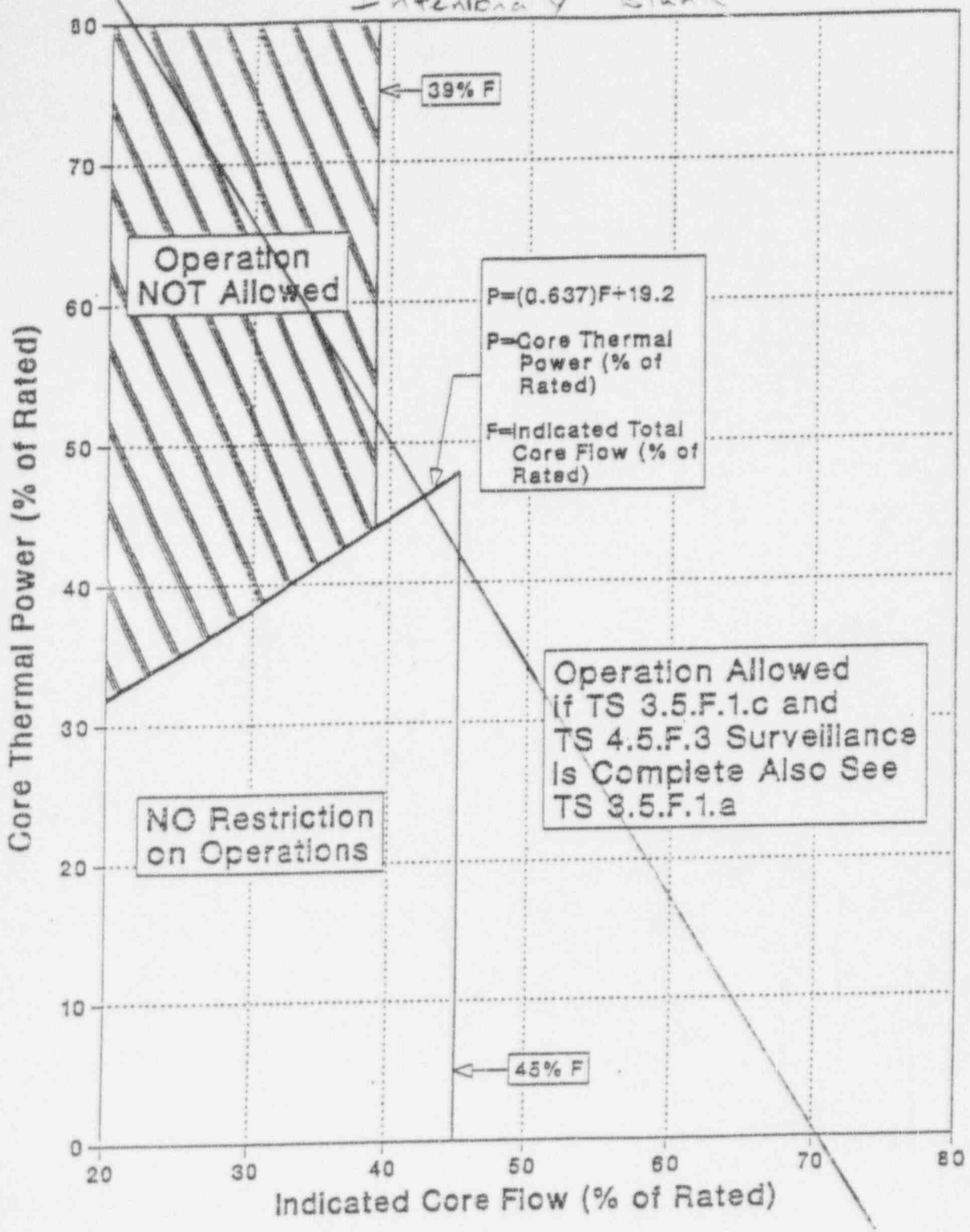

~~Figure 3.5-1 Single Loop Operation Surveillance Power/Flow Curve~~

Bases 3.5/4.5 Continued:

F. Recirculation System

Insert new text found on next page

~~Specification 3.5.F.1 is based upon providing assurance that neutron flux limit cycle oscillations, which~~ have a small probability of occurring in the high power/low flow corner of the operating domain, are detected and suppressed. Under certain high power/low flow conditions that could occur during a recirculation pump trip and subsequent Single Loop Operation (SLO) where reverse flow occurs in inactive jet pumps, a hydraulic/reactor kinetic feedback mechanism can be enhanced such that sustained limit cycle oscillations of flow noise with peak to peak levels several times normal values are exhibited. Although large margins to safety limits are maintained when these limit cycle oscillations occur, they are to be monitored for, and suppressed when flux noise exceeds the three time baseline value by inserting rods and/or increasing coolant flow. The line in Figure 3.5.1 is based on the 80% rod line below which the probability of limit cycle oscillations occurring is negligible.

APRM and/or LPRM oscillations in excess of those specified in Specification 3.5.F.1.e could be an indication that a condition of thermal hydraulic instability exists and that appropriate remedial action should be taken. By restricting core flow to greater than or equal to 39% of rated, which corresponds to the core flow at the 80% rod line with 2 recirculation pumps running at minimum speed, the region of the power/flow map where these oscillations are most likely to occur is avoided (~~Ref. 1~~).

Above 45% of rated core flow in Single Loop Operation there is the potential to set up high flow-induced noise in the core. Thus, surveillance of core plate ΔP noise is required in this region of the ~~power/flow map to alert the operators to take appropriate remedial action if such a condition exists.~~

Specification 3.6.A.2 governs the restart of the pump in an idle recirculation loop. Adherence to this specification limits the probability of excessive flux transients and/or thermal stresses.

~~References: 1. General Electric Service Information Letter No. 380, Rev. 1, February 10, 1984~~

NEXT PAGE IS 121

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The reactor is designed such that thermal hydraulic oscillations are prevented or can be readily detected and suppressed without exceeding specified fuel design limits. To minimize the likelihood of a thermal-hydraulic instability, a power-flow exclusion region, to be avoided during normal operation, is calculated using the approved methodology as stated in specification 6.7.A.7. Since the exclusion region may change each fuel cycle the limits are contained in the Core Operating Limits Report. Specific directions are provided to avoid operation in this region and to immediately exit upon an entry. Entries into the exclusion region are not part of normal operation. An entry may occur as the result of an abnormal event such as a single recirculation pump trip. In these events, operation in the exclusion region may be needed to prevent equipment damage, but actual time spent inside the exclusion region is minimized. Though operator action can prevent the occurrence and protect the reactor from an instability, the APRM flow biased scram function will suppress oscillations prior to exceeding the fuel safety limit.

Power distribution controls are established to ensure the reactor is operated within the bounds of the stability analysis. With these controls in place, there is confidence that an oscillation will not occur outside of the stability exclusion region. Without these controls, it is theoretically possible to operate the reactor in such a manner as to cause an oscillation outside of the exclusion region. A nominal 5% power-flow buffer region outside of the exclusion region is provided to establish a stability margin to the analytically defined exclusion region. The buffer region may be entered only when the power distribution controls are in place.

Continuous operation with one recirculation loop was analyzed and the adjustments specified in specification 3.5.F.2 were determined by NEDO-24271, June 1980, "Monticello Nuclear Generating Plant Single Loop Operation".

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS

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 ≥25% rated thermal power.

During one recirculation loop operation, the APLHGR limiting condition for operation for each type of fuel shall not exceed the most limiting of:

a. The above values multiplied by 0.85, or

b. The above values multiplied by the appropriate flow and power dependent correction factors provided in the Core Operating Limits Report.

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)

Recirculation System Power to Flow Map Stability Regions (specification 3.5.F)

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" (the approved version at the time the reload analyses are performed)

NSPNAD-8608-A, "Reload Safety Evaluation Methods for Application to the Monticello Nuclear Generating Plant" (the approved version at the time the reload analyses are performed)

NSPNAD-8609-A, "Qualification of Reactor Physics Methods for Application to Monticello" (the approved version at the time the reload analyses are performed)

ANF-91-048(P)(A), "Advanced Nuclear Fuels Corporation Methodology for Boiling Water Reactors-EXEM BWR Evaluation Model," Siemens Power Corporation (the approved version at the time the reload analyses are performed)

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 NEDO-31960, "BWR Owners' Group Long-Term Stability Solutions Licensing Methodology," June 1991 (the approved version at the time the reload analyses are performed) 249b REV

NEDO-31960, Supplement 1, "BWR Owners' Group Long-Term Stability Solutions Licensing Methodology," March 1992 (the approved version at the time the reload analyses are performed)

Exhibit C

Monticello Nuclear Generating Plant

License Amendment Request dated June 22, 1995

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:

Page
15
107
108
109
114
211
249b

Bases Continued:

For analyses of the thermal consequences of the transients, the Operating MCPR Limit (T.S.3.11.C) is conservatively assumed to exist prior to initiation of the transients.

This choice of using conservative values of controlling parameters and initiating transients at the design power level, produces more pessimistic answers than would result by using expected values of control parameters and analyzing at higher power levels.

Deviations from as-left settings of setpoints are expected due to inherent instrument error, operator setting error, drift of the setpoint, etc. Allowable deviations are assigned to the limiting safety system settings for this reason. The effect of settings being at their allowable deviation extreme is minimal with respect to that of the conservatisms discussed above. Although the operator will set the setpoints within the trip settings specified, the actual values of the various setpoints can vary from the specified trip setting by the allowable deviation.

A violation of this specification is assumed to occur only when a device is knowingly set outside of the limiting trip setting or when a sufficient number of devices have been affected by any means such that the automatic function is incapable of preventing a safety limit from being exceeded while in a reactor mode in which the specified function must be operable. Sections 3.1 and 3.2 list the reactor modes in which the functions listed above are required.

A. Neutron Flux Scram The average power range monitoring (APRM) system, which is calibrated using heat balance data taken during steady state conditions, reads in percent of rated thermal power (1670 MWt). Because fission chambers provide the basic input signals, the APRM system responds directly to average neutron flux. During transients, the instantaneous rate of heat transfer from the fuel (reactor thermal power) is less than the instantaneous neutron flux due to the time constant of the fuel. Therefore, during abnormal operational transients, the thermal power of the fuel will be less than that indicated by the neutron flux at the scram setting. Analyses demonstrate that, with a 120% scram trip setting, none of the abnormal operational transients analyzed violate the fuel Safety Limit and there is a substantial margin form fuel damage. Also, the flow biased neutron flux scram (specification 2.3.A.1) provides protection to the fuel safety limit in the unlikely event of a thermal-hydraulic instability.

3.0 LIMITING CONDITION FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
F. Recirculation System	F. Recirculation system
1. Intentional entry into the stability exclusion region of the power-flow map defined in the Core Operating Limits Report (COLR) is prohibited. If entry into the stability exclusion region does occur, immediately perform one or more of the following until the stability exclusion region has been exited: a. Insert control rods, b. Increase the speed of an operating recirculation pump.	1. See Specification 4.6.G
2. Entry into the stability buffer region of the power-flow map as defined in the COLR is prohibited unless the power distribution controls as defined in the COLR are in effect. If the power distribution controls are not in effect and entry into the stability buffer region does occur, immediately perform one or more of the following until the stability region has been exited: a. Insert control rods, b. Increase the speed of an operating recirculation pump.	

3.0 LIMITING CONDITION FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
F. Recirculation System 3. The reactor may be started and operated, or operation may continue with only one recirculation loop in operation provided that: a. The following changes to setpoints and safety limit settings will be made within 24 hours after initiating operation with only one recirculation loop in operation. 1. The Operating Limit MCPR (MCPR) will be changed per Specification 3.11.C. 2. The Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) will be changed per Specification 3.11.A. 3. The APRM Neutron Flux Scram and APRM Rod Block setpoints will be changed as noted in Specification 2.3.A and Table 3.2.3. b. Technical Specifications 3.5.F.1 and 3.5.F.2 are met. 4. With no reactor coolant system recirculation loops in operation: a. Comply with Technical Specifications 3.5.F.1 and 3.5.F.2 by inserting control rods and then comply with specifications 3.6.A.2 and 3.5.F.3 for operation with only one recirculation loop in operation, OR b. The reactor shall be placed in hot shutdown within 12 hours.	

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Bases 3.5/4.5 continued:

F. Recirculation System

The reactor is designed such that thermal hydraulic oscillations are prevented or can be readily detected and suppressed without exceeding specified fuel design limits. To minimize the likelihood of a thermal-hydraulic instability, a power-flow exclusion region, to be avoided during normal operation, is calculated using the approved methodology as stated in specification 6.7.A.7. Since the exclusion region may change each fuel cycle the limits are contained in the Core Operating Limits Report. Specific directions are provided to avoid operation in this region and to immediately exit upon an entry. Entries into the exclusion region are not part of normal operation. An entry may occur as the result of an abnormal event such as a single recirculation pump trip. In these events, operation in the exclusion region may be needed to prevent equipment damage, but actual time spent inside the exclusion region is minimized. Though operator action can prevent the occurrence and protect the reactor from an instability, the APRM flow biased scram function will suppress oscillations prior to exceeding the fuel safety limit.

Power distribution controls are established to ensure the reactor is operated within the bounds of the stability analysis. With these controls in place, there is confidence that an oscillation will not occur outside of the stability exclusion region. Without these controls, it is theoretically possible to operate the reactor in such a manner as to cause an oscillation outside of the exclusion region. A nominal 5% power-flow buffer region outside of the exclusion region is provided to establish a stability margin to the analytically defined exclusion region. The buffer region may be entered only when the power distribution controls are in place.

Continuous operation with one recirculation loop was analyzed and the adjustments specified in specification 3.5.F.2 were determined by NEDO-24271, June 1980, "Monticello Nuclear Generating Plant Single Loop Operation". Specification 3.6.A.2 governs the restart of a recirculation pump in an idle recirculation loop. Adherence to this specification limits the probability of excessive flux transients and/or thermal stresses.

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3.0 LIMITING CONDITION FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS

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 power 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 most limiting of:

a. The above values multiplied by 0.85, or

b. The above values multiplied by the appropriate flow and power dependent correction factors provided in the Core Operating Limits Report.

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)
Recirculation System Power to Flow Map Stability Regions (Specification 3.5.F)
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" (the approved version at the time the reload analyses are performed)

NSPNAD-8608-A, "Reload Safety Evaluation Methods for Application to the Monticello Nuclear Generating Plant" (the approved version at the time the reload analyses are performed)

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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.