Mr. G. R. Horn
Sr. Vice President of Energy Supply
Nebraska Public Power District
1414 15th Street
Columbus, NE 68601

July 29, 1998

SUBJECT: COOPER NUCLEAR STATION - AMENDMENT NO. 177 TO FACILITY OPERATING LICENSE NO. DPR-46 (TAC NO. M98015)

Dear Mr. Horn:

The Commission has issued the enclosed Amendment No. 177 to Facility Operating License No. DPR-46 for the Cooper Nuclear Station (CNS). The amendment consists of changes to the Technical Specifications in response to your application dated February 10, 1997, as supplemented by letters dated December 26, 1997, July 16, and July 28, 1998.

The amendment changes the Technical Specifications to reflect the adoption of the BWR Owner's Group Long-Term Solution Stability System Option 1-D in addressing reactor operation in or near a region of potential thermal hydraulic instability.

A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,
ORIGINAL SIGNED BY;
James R. Hall, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-298

Enclosures: 1. Amendment No. 177 to License No. DPR-46
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 29, 1998

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2. Safety Evaluation

cc w/encls: See next page

cc:

Mr. John R McPhail, General Counsel
Nebraska Public Power District
P. O. Box 499
Columbus, NE 68602-0499

Nebraska Public Power District
ATTN: Mr. J. H. Swailes
Vice President of Nuclear Energy
P. O. Box 98
Brownville, NE 68321

Randolph Wood, Director
Nebraska Department of Environmental Control
P. O. Box 98922
Lincoln, NE 68509-8922

Mr. Larry Bohlken, Chairman
Nemaha County Board of Commissioners
Nemaha County Courthouse
1824 N Street
Auburn, NE 68305

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 218
Brownville, NE 68321

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Ms. Cheryl Rogers, LLRW Program Manager
Division of Radiological Health
Nebraska Department of Health
301 Centennial Mall, South
P. O. Box 95007
Lincoln, NE 68509-5007

Mr. Ronald A. Kucera, Department Director of Intergovernmental Cooperation
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

Lincoln Electric System
ATTN: Mr. Ron Stoddard
Box 80869
Lincoln, NE 68501

MidAmerican Energy
ATTN: Dr. William D. Leech, Manager-Nuclear
907 Walnut Street
P. O. Box 657
Des Moines, IA 50303-0657

Nebraska Public Power District
ATTN: Mr. B. L. Houston, Nuclear Licensing & Safety Manager
P. O. Box 98
Brownville, NE 68321

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NEBRASKA PUBLIC POWER DISTRICT

DOCKET NO. 50-298

COOPER NUCLEAR STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 177
License No. DPR-46

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Nebraska Public Power District (the licensee) dated February 10, 1997, as supplemented by letters dated December 26, 1997, July 16, and July 28, 1998, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. DPR-46 is hereby amended to read as follows:

   2. Technical Specifications

      The Technical Specifications contained in Appendix A, as revised through Amendment No. 177, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of its date of issuance, and is to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

James R. Hall

James R. Hall, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: July 29, 1998

ATTACHMENT TO LICENSE AMENDMENT NO.177

FACILITY OPERATING LICENSE NO. DPR-46

DOCKET NO. 50-298

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE PAGES	INSERT PAGES
17	17
98	98
98a	-
98b	-
98c	-
103	103
212a	212a
214a	214a
214b	214b
234	234

2.1 Bases:

The abnormal operational transients applicable to operation of the CNS Unit have been analyzed throughout the spectrum of planned operating conditions. The analyses were based upon plant operation in accordance with Reference 3. In addition, 2381 MWt is the licensed maximum power level of CNS, and this represents the maximum steady-state power which shall not knowingly be exceeded.

The transient analyses performed each reload are given in Reference 1. Models and model conservatisms are also described in this reference. As discussed in Reference 2, the core wide transient analyses for one recirculation pump operation is conservatively bounded by two-loop operation analyses and the flow-dependent rod block and scram setpoint equations are adjusted for one-pump operation.

A. Trip Settings

The bases for individual trip settings are discussed in the following paragraphs.

1. Neutron Flux Trip Settings

a. APRM Flux Scram Trip Setting (Run Mode)

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 (2381 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. Also, the flow biased neutron flux scram provides protection to the Safety Limit MCPR in the unlikely event of a thermal-hydraulic instability.

LIMITING CONDITIONS FOR OPERATION

3.3.C (Cont'd.)

3. The maximum scram insertion time for 90% insertion of any operable control rod shall not exceed 7.00 seconds.

D. Reactivity Anomalies

At a specific steady state base condition of the reactor actual control rod inventory will be periodically compared to a normalized computer prediction of the inventory. If the difference between observed and predicted rod inventory reaches the equivalent of 1% Δk reactivity, the reactor will be shut down until the cause has been determined and corrective actions have been taken as appropriate.

E. Restrictions

If Specifications 3.3.A through D above cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the Shutdown condition within 24 hours.

F. Recirculation Pumps

1. A recirculation pump shall not be started while the reactor is in natural circulation flow and reactor power is greater than 1% of rated thermal power.

2. The reactor may be started and operated, or operation may continue with one recirculation loop not in operation provided that;

   a. The idle loop is isolated electrically by disconnecting the breaker to the recirculation pump motor generator (M/G) set drive motor prior to startup, or if disabled during reactor operation, within 24 hours.

   b. The recirculation system controls will be placed in the manual flow control mode.

3. With no recirculation loops in operation, the reactor shall be placed in the hot shutdown condition within 12 hours.

SURVEILLANCE REQUIREMENTS

4.3.C (Cont'd.)

D. Reactivity Anomalies

During the startup test program and startup following refueling outages, the critical rod configurations will be compared to the expected configurations at selected operating conditions. These comparisons will be used as base data for reactivity monitoring during subsequent power operation throughout the fuel cycle. At specific power operating conditions, the critical rod configuration will be compared to the configuration expected based upon appropriately corrected past data. This comparison will be made at least every full power month.

G. Scram Discharge Volume

1. The scram discharge volume (SDV) vent and drain valves shall be cycled and verified open at least once every 31 days and prior to reactor start-up.

2. The SDV vent and drain valves shall be verified to close within 30 seconds after receipt of a signal for control rod scram once per refueling cycle.

3. SDV vent and drain valve operability shall be verified following any maintenance or modification to any portion (electrical or mechanical) of the SDV which may affect the operation of the vent and drain valves.

the control rod motion is estimated to actually begin. However, 200 milliseconds is conservatively assumed for this time interval in the transient analyses and this is also included in the allowable scram insertion times of Specification 3.3.C. The time to deenergize the pilot valve scram solenoid is measured during the calibration tests required by Specification 4.1.

D. Reactivity Anomalies

During each fuel cycle excess operative reactivity varies as fuel depletes and as any burnable poison in supplementary control is burned. The magnitude of this excess reactivity may be inferred from the critical rod configuration. As fuel burnup progresses, anomalous behavior in the excess reactivity may be detected by comparison of the critical rod pattern at selected base states to the predicted rod inventory at that state. Power operating base conditions provide the most sensitive and directly interpretable data relative to core reactivity. Furthermore, using power operating base conditions permits frequent reactivity comparisons.

Requiring a reactivity comparison at the specified frequency assures that a comparison will be made before the core reactivity change exceeds 1% Δk. Deviations in core reactivity greater than 1% Δk are not expected and require thorough evaluation. One percent reactivity limit is considered safe since an insertion of the reactivity into the core would not lead to transients exceeding design conditions of the reactor system.

F. Recirculation Pumps

Until analyses are submitted for review and approval by the NRC which prove that recirculation pump startup from natural circulation does not cause a reactivity insertion transient in excess of the most severe coolant flow increase currently analyzed, Specification 3.3.F.1 prevents starting recirculation pumps while the reactor is in natural circulation above 1% of rated thermal power. Operation in natural circulation mode, with no recirculation loops in operation, can place the reactor in a condition closer to the onset of thermal-hydraulic instabilities. Based on operating experience, 12 hours is a reasonable time to reach Hot Shutdown from higher power conditions, in an orderly manner and without challenging plant systems.

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.11.D. 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.

3.11 Bases: (Cont'd)

C. Minimum Critical Power Ratio (MCPR)

The required operating limit MCPRs at steady state operating conditions as specified in Specification 3.11C are derived from the established fuel cladding integrity Safety Limit and an analysis of abnormal operational transients (References 2 and 11). For any abnormal operating transient analysis evaluation with the initial condition of the reactor being at the steady state operating limit it is required that the resulting MCPR does not decrease below the Safety Limit MCPR at any time during the transient assuming instrument trip setting given in Specification 2.1.

To assure that the fuel cladding integrity Safety Limit is not exceeded during any anticipated abnormal operational transient, the more limiting transients have been analyzed to determine which result in the largest reduction in critical power ratio (CPR). The models used in the transient analyses are discussed in Reference 1.

Flow-dependent and power-dependent MCPR limits ($MCPR_F$ and $MCPR_P$) are used to define the required Operating Limit MCPR (OLCPR) such that the above Safety Limit MCPR requirement is met for all power/flow conditions. $MCPR_F$ provides the thermal margin required to protect the fuel from transients resulting from inadvertent core flow increases. $MCPR_P$ protects the fuel from the other limiting abnormal operating transients, including localized events such as a rod withdrawal error.

Direct scram on Turbine Stop Valve Closure or Turbine Control Valve fast closure provides the fastest response to an abnormal operating transient such as load rejection, turbine trip, or feedwater controller failure. These direct scrams are bypassed at low power (P_{bypass}), to reduce the frequency of scrams during power ascension. For operation at or above P_{bypass} (30% of rated power), the required OLMCPR is the larger of $MCPR_F$ or $MCPR_P$ at the existing core power/flow state; where $MCPR_F$ and $MCPR_P$ are determined in the Core Operating Limits Report by multiplying the scram time dependent MCPR limit for rated power and flow MCPR(100) by the K_P factor. Below 30% of rated power, when the direct scrams are bypassed, a slightly more severe transient response results. To compensate for the more severe transient response, two power dependent MCPR limits are established, one for high flow (>50% of rated) conditions and one for low flow (≤50% of rated) conditions. These limits are specified in the Core Operating Limits Report. Further information on the MCPR operating limits for off-rated conditions is presented in Reference 11.

D. Thermal-Hydraulic Stability

The reactor is designed such that thermal-hydraulic oscillations are prevented or can be readily detected and suppressed without exceeding specifed fuel design limits. To minimize the likelihood of a thermal-hydraulic instability, a Stability Exclusion Region, to be avoided during normal power operation, is calculated using the approved methodology of References 12 and 13. Since the Stability Exclusion Region may change each fuel cycle, the Exclusion Region is contained in the Core Operating Limits Report (COLR). Specific directions are provided to avoid operation in this region and to immediately exit upon entry. Entries into the Stability 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 Stability Exclusion Region may be needed too prevent equipment damage, but actual time spent inside the Region is minimized. Although operator action can prevent the occurrence of and protect the reactor from an instability, the APRM flow biased scram function will suppress oscillations prior to exceeding the Safety Limit MCPR. While core-wide reactor instability is the

3.11 Bases: (Cont'd)

predominate mode and the regional mode oscillations are not expected to occur, the reactor is protected from regional mode oscillations through avoidance of the Stability Exclusion Region and administrative controls on reactor conditions which are primary factors affecting reactor stability.

References for Bases 3.11

1. "General Electric Standard Application for Reactor Fuel," NEDE-24011-P-A. (The approved revision at the time the reload analyses are performed.) The approved revision number shall be identified in the Core Operating Limits Report.

2. "Supplemental Reload Licensing Submittal for Cooper Nuclear Station," (applicable reload document).

3-8. Deleted

9. Letter (with attachment), R. H. Buckholz (GE) to P. S. Check (NRC), "Response to NRC Request for Information on ODYN Computer Model," September 5, 1980.

10. "Cooper Nuclear Station Single-Loop Operation," NEDO 24258.

11. "Extended Load Line Limit and ARTS Improvement Program Analysis for Cooper Nuclear Station Cycle 14," NEDC-31892P, Revision 1, May 1991.

12. "BWR Owners' Group Long-Term Stability Solutions Licensing Methodology," NEDO-31960 (the approved revision at the time the reload analyses are performed).

13. "BWR Owners' Group Long-Term Stability Solutions Licensing Methodology," NEDO-31960, Supplement 1.

4.11 Bases:

A&B. Average and Local LHGR

The LHGR shall be checked daily to determine if fuel burnup, or control rod movement has caused changes in power distribution. Since changes due to burnup are slow, and only a few control rods are moved daily, a daily check of power distribution is adequate.

C. Minimum Critical Power Ratio (MCPR) - (Surveillance Requirement)

At core thermal power levels less than or equal to 25%, the reactor will be operating at less than or equal to minimum recirculation pump speed and the moderator void content will be very small. For all designated control rod patterns which may be employed at this point, operating plant experience indicated that the resulting MCPR value is in excess of requirements by a considerable margin. With this low void content, any inadvertent core flow increase would only place operation in a more conservative mode relative to MCPR. During initial start-up testing of the plant, a MCPR evaluation was made at 25% thermal power level with minimum recirculation pump speed. The MCPR margin was thus demonstrated such that subsequent MCPR evaluation below this power level was shown to be unnecessary. The daily requirement for calculating MCPR above 25% rated thermal power is sufficient since power distribution shifts are very slow when there have not been significant power or control rod changes. The requirement for calculating MCPR when an operating limit MCPR is approached ensures that MCPR will be known following a change in power or power shape (regardless of magnitude) that could place operation at a thermal limit.

Core Operating Limits Report (Continued)

b. The Linear Heat Generation Rate for Specification 3.11.B.

c. The Minimum Critical Power Ratio (MCPR) for Specification 3.11.C.

d. The Rod Block Monitor upscale setpoint for Table 3.2.C of Specification 3.2.C.

e. The power/flow map, defining the Stability Exclusion Region for Specification 3.11.D.

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:

1. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (Revision specified in COLR).

2. "BWR Owner's Group Long-Term Stability Solutions Licensing Methodology", NEDO-31960 June 1991, (Approved by NRC SER, dated July 12, 1993).

3. "BWR Owner's Group Long-Term Stability Solutions Licensing Methodology", NEDO-31960, Supplement 1, March 1992, (Approved by NRC SER, dated July 12, 1993).

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.

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

6.5.2 Reportable Events

A Reportable Event shall be any of those conditions specified in Section 50.73 to 10CFR Part 50. The NRC shall be notified and a report submitted pursuant to the requirements of Section 50.73. Each Reportable Event shall be reviewed by SORC and the results of this review shall be submitted to SRAB and the Nuclear Power Group Manager.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 177 TO FACILITY OPERATING LICENSE NO. DPR-46

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

DOCKET NO. 50-298

1.0 INTRODUCTION

By letter dated February 10, 1997, as supplemented by letters dated December 26, 1997, July 16, and July 28, 1998, the Nebraska Public Power District (NPPD) (the licensee) submitted a request for changes to the Technical Specifications (TS) for the Cooper Nuclear Station (CNS). The requested changes would revise the TS to reflect the adoption of the BWR Owners' Group (BWROG) Long-Term Solution Stability System Option 1-D in addressing reactor operation in or near a region of potential thermal hydraulic instability. The licensee's submittal consisted of a plant specific licensing topical report (LTR), supporting application of the previously approved Long-Term Stability Solution Option 1-D to Cooper and a description of the associated TS changes. The LTR and the BWROG Long-Term Stability Solutions methodology are identified as References 1 and 2, respectively. The proposed changes are part of the licensee's long-term actions in response to NRC Generic Letter (GL) 94-02, "Long-Term Solutions and Upgrade of Interim Operating Recommendations for Thermal Hydraulic Instabilities in Boiling Water Reactors," dated July 11, 1994.

The December 26, 1997, July 16, and July 28, 1998, letters provided clarifying information and an administrative change that did not change the basis for the NRC staff's initial proposed no significant hazards consideration determination (62 FR 14462).

2.0 EVALUATION

The BWROG Long-Term Stability Solutions Generic Option 1-D consists of two parts. First, an exclusion region in the power to flow map is established within which power oscillations are credible. Should the unit enter this region, operators are instructed to immediately exit the region and to scram the plant should power oscillations be detected. Second, a statistical method is employed to show that the existing flow-biased Average Power Range Monitor (APRM) scram is sufficient to shutdown the plant in the event of oscillations before the Safety Limit Minimum Critical Power Ratio (SLMCPR) is violated. This method is described in NEDO-32465-A (Reference 3). In Reference 2, it was concluded that before Option 1-D can be applied to a plant, the unit must meet several criteria. First, the core must be small and, therefore, tightly coupled. Second, the core must have relatively tight inlet orificing. Cooper is a medium power BWR/4 with 548 fuel bundles. The supporting analysis (Reference 1) confirms that the core-wide decay ratio far exceeds the channel decay ratio over a wide range of operating conditions. This means that Cooper is most likely to experience core-wide (fundamental mode), as opposed to out-of-phase (higher mode), oscillations. The second criterion has been demonstrated to favor the core-wide mode over the out-of-phase mode. Cooper has a peripheral orifice size 9% smaller than a typical BWR/4. Cooper, therefore, meets the two criteria necessary to use Option 1-D.

In addition to meeting the acceptance criteria stated above for an Option 1-D plant, licensees have a choice of either using power distribution controls while operating or using an on-line stability monitor. NPPD has opted to use an on-line stability monitor to provide operators with a means to detect degradation of the stability margin. The staff finds this approach acceptable for Cooper.

The detect and suppress methodology, as described in NEDO-32465-A (Reference 3), was used to calculate the maximum MCPR during a postulated power oscillation event. This method allows demonstration, with a high statistical certainty, that the SLMCPR will not be violated before the flow-biased APRM system trips the plant. The procedure outlined in NEDO-32465-A is acceptable for Cooper and was properly applied. The final MCPR (FMCPR) was calculated to be 1.13. Since this is still above the SLMCPR of 1.07, the calculation demonstrates that, with a 95 percent probability and a 95 percent confidence (the 95/95 value), power oscillations will be successfully terminated.

In order for the analysis presented in Reference 1 to be applicable to all fuel cycles, specific reload confirmation values have been developed. The LTR establishes design changes which do not require the FMCPR calculation to be redone. For these cases, the calculations in Reference 1 are assumed to apply to the operating cycle under consideration. This approach has also been proposed and approved for the Monticello and Duane Arnold units and General Electric has performed confirmatory calculations to demonstrate that the approach is valid. This approach is also acceptable for Cooper.

Review of individual TS changes necessary to implement Option 1-D follows:

<u>Change to Page 17</u>

This change adds a discussion to the Bases about the APRM flow-biased scram providing protection to the safety limit during postulated stability events. This change is consistent with Option 1-D and is acceptable.

<u>Changes to Page 98</u>

These changes remove requirements to check APRM and LPRM noise levels which were required when using the Interim Stability Corrective Actions (ICAs) requested by NRC GL 88-07. Removing these sections is consistent with the implementation of Option 1-D and is acceptable.

These changes also add revised TS 3.3.F.3, to require that, with no recirculation loops in operation, the reactor shall be placed in the hot shutdown condition within 12 hours.

The current TS do not explicitly address this condition. The addition of this requirement will help to ensure that the plant will not be operated close to a region where thermal-hydraulic instabilities can occur. The staff has determined, based on operating experience, that the proposed completion time of 12 hours is reasonable to reach a mode of operation (Hot Shutdown) for which the Limiting Conditions for Operation do not apply. Twelve hours is sufficient time to conduct the mode change in an orderly manner without challenging plant systems. Therefore, the staff finds this change acceptable.

Changes to Pages 98a, 98b, and 98c

These pages are removed. Removal of these pages eliminates the operating restrictions on the reactor that were imposed consistent with GL 88-07 and the ICAs. They are not needed when using Option 1-D and, therefore, removing them is acceptable.

Change to Page 103

This change inserts a discussion into the Bases section covering the reactor recirculation pumps. The change states that operation in natural circulation (i.e., no recirculation loops operating) can lead to thermal-hydraulic instabilities and that 12 hours is a reasonable time to reach Hot Shutdown following a flow event. Based on operating experience, the staff has determined that 12 hours is sufficient time to conduct the mode change in an orderly manner without challenging plant systems. This change reflects the change to TS 3.3.F.3 and is acceptable.

Change to Page 212a

This change to TS 3.11.D instructs operators to immediately initiate actions to exit the exclusion region if it is entered. This change will help to avoid challenges to the safety limit MCPR, consistent with the application of the BWROG long-term stability solution Option 1-D methodology, and is therefore acceptable to the staff.

Changes to Pages 214a and 214b

The discussion in the Bases is revised to reflect the new approach for avoiding and protecting the fuel from thermal-hydraulic instabilities, consistent with the long-term stability solution Option 1-D methodology. References to the methodology are also included in the Bases. The staff finds these changes acceptable.

Changes to page 234

These changes revise TS 6.5.1.G, "Core Operating Limits Report," by relocating the power/flow map, which defines the Stability Exclusion Region, to the COLR by including it in the list of cycle-specific parameters; adding references to the NRC-approved reports, "BWR Owners' Group Long-Term Stability Solutions Licensing Methodology," NEDO-31960 and NEDO-31960, Supplement 1; and removing the core flow MCPR adjustment factor, K_f. The relocation of the power/ flow map, defining the stability exclusion region, to the COLR will allow the licensee to revise this cycle-specific parameter as appropriate, provided that such changes are determined using the NRC-approved methodologies also referenced in TS 6.5.1.G. The staff has determined that these methodologies are acceptable for application to the Cooper Nuclear Station, and that the use of these methodologies will ensure that the values of cycle-specific parameters are determined such that all applicable limits of the plant safety analyses are met. A license amendment would be required prior to using a methodology for calculating the stability exclusion region other than the methodologies specified in TS 6.5.1.G.

In addition, the core flow MCPR adjustment factor, K_f, is deleted from TS 6.5.1.G, as it is no longer applicable, as discussed in the staff's safety evaluation related to Amendment No. 151, dated November 29, 1991. This factor was inadvertently retained due to an administrative oversight. The staff finds the proposed changes to page 234 acceptable.

The staff has reviewed the changes proposed by the Nebraska Public Power District to implement the BWROG Long-Term Stability Solution Option 1-D at the Cooper Nuclear Station. The changes consist of modifying the TS to make them consistent with Option 1-D; relocating the power-to-flow map and the associated stability exclusion region to the Core Operating Limits Report; and referencing the NRC-approved methodologies for calculation of the power/flow map in TS 6.5.1.G. The staff concludes that the changes are acceptable for the plant-specific application of Option 1-D at Cooper, as discussed above.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Nebraska State official was notified of the proposed issuance of the amendment. The State official had no comment.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (62 FR 14462). The amendment also changes recordkeeping or reporting requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 REFERENCES

1. "Application of the 'Regional Exclusion with Flow-Biased APRM Neutron Flux Scram' Stability Solution (Option 1-D) to the Cooper Nuclear Station," GENE- A13-00395-01, November 1996.

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Principal Contributor: A. Ulses, NRR

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