



Nebraska Public Power District
Nebraska's Energy Leader

NLS990115
December 15, 1999

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

Subject: Proposed Change to CNS Technical Specifications
Change to Average Power Range Monitors (APRMs) Neutron Flux-High (Flow Biased) Allowable Value
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Reference: 1. Letter to USNRC from G. R. Horn (NPPD) dated July 29, 1991, "Proposed Change No. 90 to Technical Specifications Extended Load Line Limit and ARTS Improvement Program," NLS9100187

In accordance with the provisions of 10 CFR 50.4 and 50.90, the Nebraska Public Power District (District) hereby submits a request for an amendment to License DPR-46 to change the Cooper Nuclear Station (CNS) Technical Specifications (TS). This proposed TS change will revise the Average Power Range Monitors (APRMs) Neutron Flux-High (Flow Biased) allowable value based on a revised Power to Flow Map (Attachment 3, Figure 1-1). The revised Power to Flow Map extends the current plant operating domain to above the rated rod line, to within an envelope referred to as the Maximum Extended Load Line Limit (MELLL) and adds the Increased Core Flow (105%) region. The current Power to Flow Map is based on a region bounded by the Extended Load Line Limit (ELLL) and evaluations prepared as part of the Core Operating Limits Report (COLR). All other changes resulting from use of the MELLL and Increased Core Flow (ICF) region, such as change to the APRM flow biased rod block setpoint, will be addressed through the Core Operating Limits Report (COLR) and the requirements of 10 CFR 50.59 (as part of the CNS design change process to confirm no Unreviewed Safety Question is created).

Changes to the Power to Flow Map to use the MELLL and ICF region have been implemented at other boiling water reactor plants, such as Brunswick Units 1 and 2 (Amendment 147 to DPR-71 and Amendment 168 to DPR-62) and Fermi (Amendment 69 to NPF-43), and are consistent with previously approved changes at NPPD to extend the plant operating domain based on the ELLL (Reference 1).

Change LTR ENCL
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The APRM Neutron Flux-High (Flow Biased) allowable value can restrict the operational flexibility of the plant in achieving and maintaining rated power. With the expansion of the Power to Flow Map to the region bounded by the MELLL, the effect of these restrictions on operation becomes more severe. The operating restrictions can be relaxed with the implementation of an increased flow biased allowable value. The proposed change does not relax operating restrictions in the ICF region as the flow biased allowable value is limited by the 119% reactor thermal power fixed value at high core flows. No change to the 119% fixed value is proposed.

Operation in the expanded Power to Flow Map regions enhances the ability to more efficiently approach and maintain operation at rated power by allowing operation to be maintained with recirculation flow over a wider flow range. In addition, less frequent control rod adjustments would be required to compensate for reactivity depletion. The need to perform power reductions to perform control rod withdrawals would also be decreased. As a result, the plant would be able to operate for longer periods at rated power, have more flexibility to schedule load reductions, and be able to operate in a safer, more efficient, and more economical manner.

Attachment 1 contains a detailed description of the proposed TS change, its basis, the no significant hazards determination, and environmental impact considerations. Attachment 2 contains the affected CNS TS page in marked-up form and the proposed revised page. Attachment 3 contains the principal reference supporting the basis for the TS change. Please note that the information contained in Attachment 3 is of the type that General Electric Nuclear Energy (GENE) withholds from public disclosure. We hereby request that this information be withheld from public disclosure in accordance with 10 CFR 9.17 and 10 CFR 2.790. An affidavit attesting to this fact is provided in Attachment 4.

Attachment 3 is a draft report that includes analyses verified by GENE in support of this TS change. The District has reviewed the results contained in Attachment 3 and finds the results acceptable for use in supporting this proposed change. Though the analyses are Cooper-specific, MELLL analyses have been prepared by GENE for many utilities and used in support of NRC approved license changes. Attachment 3 includes other sections with results of analyses yet to be completed. It is anticipated that final review and approval of all of the analyses and written submittal of the results and final report will be provided to the NRC by February 17, 2000 (see attached commitment list). Both a proprietary version (with signed affidavit) and non-proprietary version of the final report will be provided. Substantive changes to this submittal are not expected as the outstanding analyses do not impact the requested TS change. Therefore, the District requests NRC processing of this change in the Federal Register at this time in that no change in the significant hazards consideration is anticipated when the final GENE document is issued.

Based on the upcoming refueling outage, the District requests issuance of the proposed license amendment by March 15, 2000. The revised Technical Specification is required for startup of

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Cycle 20, which is currently scheduled for April 3, 2000. Receipt of this amendment within the requested period will allow the District to make the desired setpoint change during less risk adverse shutdown conditions and allow more efficient use of fuel after the outage. This has been discussed with the NRC staff in several telephone calls in late November. We also recognize NRC approval cannot be received prior to final review and approval of Attachment 3 by GENE and submittal of the final report by NPPD.

This proposed TS change has been reviewed by the necessary review committees and incorporates all amendments to the CNS Facility Operating License through Amendment 179 issued July 26, 1999.

By copy of this letter and its attachment, the appropriate State of Nebraska official is notified in accordance with 10 CFR 50.91 (b) (1). Copies to the NRC Region IV office and the CNS Resident Inspector are also being provided in accordance with 10 CFR 50.4 (b) (2).

Should you have any questions regarding this matter, please contact me.

Sincerely,



John H. Swailes
Vice President of Nuclear Energy

/rss/des
Attachments

cc: Regional Administrator w/attachments
USNRC - Region IV

Senior Project Manager w/attachments
USNRC - NRR Project Directorate IV-1

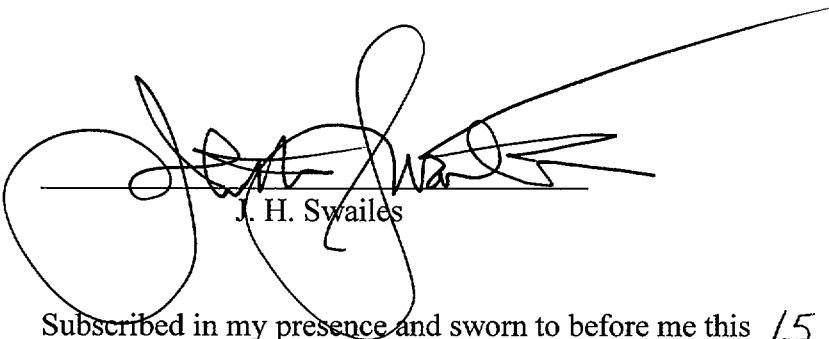
Senior Resident Inspector w/attachments
USNRC

Environmental Health Division - Program Manager w/attachments
Nebraska Department of Health

NPG Distribution w/o attachments

STATE OF NEBRASKA)
)
NEMAHA COUNTY)

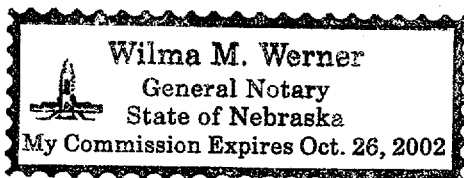
J. H. Swailes, being first duly sworn, deposes and says that he is an authorized representative of the Nebraska Public Power District, a public corporation and political subdivision of the State of Nebraska; that he is duly authorized to submit this correspondence on behalf of Nebraska Public Power District; and that the statements contained herein are true to the best of his knowledge and belief.



J. H. Swailes

Subscribed in my presence and sworn to before me this 15 day of December, 1999.

Wilma M Werner
NOTARY PUBLIC



LIST OF NRC COMMITMENTS

Correspondence No: NLS990115

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
Written submittal of the results and final report will be provided to the NRC by February 17, 2000	2/17/2000

NUCLEAR STATION TECHNICAL SPECIFICATIONS

Change to APRM Neutron Flux-High (Flow Biased) Allowable Value

Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Revised Technical Specifications Page

3.3-6

1.0 Introduction

This proposed CNS Technical Specification (TS) change will revise the Average Power Range Monitors (APRMs) Neutron Flux-High (Flow Biased) setpoint based on a revised Power to Flow Map (Attachment 3, Figure 1-1). The revised Power to Flow Map extends the current plant operating domain to above the rated rod line, to within an envelope referred to as the Maximum Extended Load Line Limit (MELLL) and adds the Increased Core Flow (105%) region. The current Power to Flow Map is based on a region bounded by the Extended Load Line Limit (ELLL) and evaluations prepared as part of the Core Operating Limits Report (COLR). All other changes resulting from use of the MELLL and Increased Core Flow (ICF) region, such as change to the APRM flow biased rod block setpoint, will be addressed through COLR and the requirements of 10 CFR 50.59 (as part of the CNS design change process to confirm no Unreviewed Safety Question is created).

2.0 Basis for Change

Many factors restrict the operational flexibility of boiling water reactors during power ascension from the low power/low core flow condition to the high power/high core flow condition. Once rated power is achieved, periodic adjustments must also be made to compensate for reactivity changes due to xenon effects and fuel burnup.

The APRM Neutron Flux-High (Flow Biased) and Upscale (Flow Biased) Control Rod Block allowable values can restrict the operational flexibility of the plant in achieving and maintaining rated power. With the expansion of the Power to Flow Map to the region bounded by the MELLL, the effect of these restrictions on operation becomes more severe. The operating restrictions can be relaxed with the implementation of an increased flow biased allowable value. Increasing the APRM Neutron Flux-High (Flow Biased) allowable value does not relax operating restrictions in the ICF region as the flow biased allowable value is limited by the 119% reactor thermal power fixed value at high core flows. No change to the 119% fixed value is proposed.

With the Cooper implementation of Improved Technical Specifications, the APRM Upscale (Flow Biased) Control Rod Block allowable value, which is part of the Technical Requirements Manual, can be changed in accordance with the requirements of 10 CFR 50.59 (as part of the CNS design change process to confirm no Unreviewed Safety Question is created). The APRM Neutron Flux-High (Flow Biased) allowable value, however, is a TS requirement that requires a license amendment per the provisions of 10 CFR 50.4 and 10 CFR 50.90 to change.

Operation in the expanded Power to Flow Map regions enhances the ability to more efficiently approach and maintain operation at rated power by allowing operation to be maintained with recirculation flow over a wider flow range. Full power operation at less than rated core flow also allows for spectral shift operation using reactor recirculation flow control, which improves cycle fuel economics. The current operating envelope will be modified to include the expanded region of operation bounded by the rod line which passes through the 100% power and 75% core flow point (approximately 121% rod line). In addition, less frequent control rod adjustments would be required to compensate for reactivity depletion. The need to perform power reductions to perform control rod withdrawals would also be decreased. As a result, the plant would be able to operate for longer periods at rated power, have more flexibility to schedule load reductions, and be able to operate in a safer, more efficient, and more economical manner.

A report on the effects at MELLL and ICF conditions was prepared by General Electric Nuclear Energy (GENE) and is included as Attachment 3 (Reference 1). The anticipated operational occurrence and overpressure protection safety analyses documented in the report were performed for CNS Cycle 20 (upcoming refueling outage). The remaining analyses are independent of the fuel cycle. The Emergency Core Cooling System (ECCS) analyses were performed for the limiting fuel design. The analyses presented in Attachment 3 demonstrate the plant can safely operate within the expanded Power to Flow Map regions and acceptance criteria for postulated accidents and transients are still satisfied.

Changes to the Power to Flow Map to use the MELLL and ICF region have been implemented at other boiling water reactor plants such as Brunswick Units 1 and 2 (Amendment 147 to DPR-71 and Amendment 168 to DPR-62) (References 2 and 3) and Fermi (Amendment 69 to NPF-43) (Reference 4), and are consistent with previously approved changes at NPPD to extend the plant operating domain based on the Extended Load Line Limit (References 5 and 6).

Attachment 3 is a draft report that includes analyses verified by GENE in support of this TS change. The District has reviewed the results contained in Attachment 3 and finds the results acceptable for use in supporting this proposed change. Though the analyses are

Cooper-specific, MELLL analyses have been prepared by GENE for many utilities and used in support of NRC approved license changes (References 2, 3, and 4). Attachment 3 includes other sections with results of analyses yet to be completed. Substantive changes to this submittal are not expected as the outstanding analyses do not impact the requested TS change. Therefore, no change in the significant hazards consideration is anticipated when the final GENE document is issued.

3.0 Description of Change

The proposed change to CNS Technical Specifications is to change the allowable value for APRM Neutron Flux-High (Flow Biased) setpoint (Function 2.b on Table 3.3.1.1-1 of the TS) **from:**

“ $\leq 0.58 W + 61.0\% RTP$ and $\leq 119.0\% RTP^{(b)}$ ”

To:

“ $\leq 0.66 W + 71.5\% RTP$ and $\leq 119.0\% RTP^{(b)}$ ”

No change to the limiting setting of 119% Reactor Thermal Power (RTP) is proposed. Additionally, footnote (b) to TS Table 3.3.1.1-1 will be changed **from:**

“ $0.58 W + 61.0\% - 0.58 \Delta W RTP$ when reset for single loop operation per LCO 3.4.1, ‘Recirculation Loops Operating.’”

To:

“ $0.66 W + 71.5\% - 0.66 \Delta W RTP$ when reset for single loop operation per LCO 3.4.1, ‘Recirculation Loops Operating.’”

A markup of the actual TS page is included in Attachment 2.

The recirculation system single loop operation (SLO), footnote (b), is changed to match the new MELLL settings. This change corresponds to the APRM Neutron Flux-high (Flow Biased) setpoint change and is supported by Attachment 3 (Reference 1).

The proposed change to allowable value is in accordance with approved setpoint methodology, is based on the analytical limit provided in Attachment 3, and will be implemented in accordance with approved plant procedures (References 7 and 8).

4.0 Significant Hazards Determination

As required by 10 CFR 50.91(a)(1), a significant hazards determination to support the proposed change has been prepared in accordance with the criteria specified in 10 CFR 50.92(c).

4.1 **The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.**

Attachment 3 (Reference 1) evaluates operation in the Maximum Extended Load Line Limit (MELLL) and Increased Core Flow (ICF) regions and the impact on equipment and safety system performance. Impacts on containment, the reactor vessel, Recirculation System, reactor vessel internals, limiting transients for the Cycle 20 reload (upcoming refuel outage), Loss of Coolant Accident (LOCA), and Anticipated Transients Without SCRAM (ATWS) events were evaluated. The conclusion is that for all events, accidents, and equipment evaluated, operation and event response remain within previously established design limits and acceptance criteria. No changes in the initiators of accidents previously evaluated are being made by this change. Because operation in the expanded regions maintains adequate design margin and there are no changes in the accident initiators, the proposed change does not involve a significant increase in the probability of an accident previously evaluated.

In support of operation in the MELLL region, the proposed change modifies (increases) the Average Power Range Monitor (APRM) Neutron Flux-High (Flow Biased) allowable value. Changes to the setpoint and allowable value will be implemented in accordance with approved setpoint methodology and plant procedures (References 7 and 8). As noted in Technical Specifications (TS) Bases Section B.3.3.1.1.2.b: "No specific safety analyses take credit for the APRM Neutron Flux-High (Flow Biased) Function." The APRM allowable value credited in accident analyses is based on the 120% fixed scram allowable value (TS Table 3.3.1.1-1, Function 2.c), which remains unchanged as a result of this requested TS change. Though not credited in analyses, the limiting flow biased value of 119% Reactor Thermal Power (RTP) also remains unchanged. Evaluations presented in Attachment 3 demonstrate that operation in the MELLL envelope, with reliance on the credited fixed scram allowable value (analytically assumed at 123% RTP to justify a 120% TS allowable value), results in event and accident responses within design limits and established acceptance criteria. Therefore, no significant increase in source term, radiological consequences or other accident consequences occurs as a result of the proposed change.

The proposed change has no affect on operation in the ICF region. The allowable value, as part of the proposed change, will reach its clamped upper limit value of 119% reactor thermal power. Core flows at or above this level will result in the allowable value

reaching its current TS upper limit of 119%. As stated above, the limiting value remains unchanged as part of this request.

The postulated failure mechanisms for the equipment are not changed, nor are any design limits exceeded. The proposed change will result in the need to replace APRM equipment to allow operation in the extended power to flow domain. These replacements will be evaluated per the requirements of 10 CFR 50.59 as part of the Cooper Nuclear Station (CNS) design change process to confirm no Unreviewed Safety Question is created. Therefore, implementation of this proposed TS amendment will not result in a significant increase in the probability or consequences of an accident previously evaluated.

4.2 The proposed change will not create the possibility of a new or different kind of accident than previously evaluated.

This proposed change does not modify the functional requirements of the affected equipment, create any new system interfaces or interactions, create any new process conditions that exceed design limits, nor create any new system failure modes or sequences of events that could lead to an accident. The postulated failure mechanisms for the equipment are not changed, nor are any design limits or acceptance criteria exceeded. The proposed change will result in the need to replace APRM equipment to allow operation in the extended power to flow domain. These replacements will be evaluated per the requirements of 10 CFR 50.59 as part of the CNS design change process to confirm no Unreviewed Safety Question is created. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

4.3 The proposed change will not involve a significant reduction in a margin of safety.

Change to the APRM Neutron Flux-High (Flow Biased) allowable value is still limited by the 119% RTP value of TS. This value is not credited in the safety analyses. In addition, the existing 120% fixed scram allowable value (TS Table 3.3.1.1-1, Function 2.c) still provides the same margin to the Analytical Limit of 123% RTP. Analyses documented in Attachment 3 demonstrate that for operation in the MELLL envelope or ICF region, adequate margin to design limits is maintained and event acceptance criteria are met. Thus, the proposed change does not involve a significant reduction in a margin of safety.

5.0 Environmental Impact Considerations

The proposed change involves no significant hazards consideration, does not result in a significant change in the types or amounts of any effluents that may be released offsite,

and does not result in a significant increase in individual or cumulative occupational radiation exposure. As demonstrated in Attachment 3, analysis of the various accident and transient events, increase in the APRM neutron flux-high (flow biased) allowable value, and operation in the MELLL envelope or ICF region does not result in exceeding any previously established design limits or event acceptance criteria. Therefore, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10CFR51.22(c)(9). Therefore, pursuant to 10CFR51.22(b), an environmental assessment or an environmental impact statement for the proposed change is not required.

6.0 Conclusions

NPPD has concluded that the operation of Cooper Nuclear Station in accordance with the proposed change to the APRM Neutron Flux High (Flow Biased) allowable value involves no significant hazards consideration.

7.0 References

1. NEDC-32914P, Draft, Maximum Extended Load Line Limit and Increased Core Flow for Cooper Nuclear Station, Revision B, Class III (GE Proprietary Information), December 1999 (see Attachment 3).
2. Letter from NRC to Carolina Power & Light Company, dated October 23, 1990, Issuance of Amendment No. 147 to Facility Operating License No. DPR-71 Regarding Maximum Extended Operating Domain- Brunswick Steam Electric Plant, Unit 1.
3. Letter from NRC to Carolina Power & Light Company, dated October 12, 1989, Issuance of Amendment No. 168 to Facility Operating License No. DPR-62 – Brunswick Steam Electric Plant, Unit 2, Regarding Maximum Expanded of Operating Domain.
4. Letter from NRC to Detroit Edison Company, dated May 15, 1991, Amendment No. 69 to Facility Operating License No. NPF-43.
5. Extended Load Line Limit and ARTS Improvement Program Analyses for Cooper Nuclear Station Cycle 14, NEDC-31892P Rev.1, May 1991 [GE Proprietary Information].
6. Letter to NRC from G. R. Horn (NPPD) dated July 29, 1991, “Proposed Change No. 90 to Technical Specifications Extended Load Line Limit and ARTS Improvement Program”, NLS9100187.

7. Cooper Nuclear Station, Engineering Procedure 3.26, Instrument Setpoint and Meter Banding Control.
8. Cooper Nuclear Station, Engineering Procedure 3.26.3, Instrument Setpoint and Channel Error Calculation Methodology.

ATTACHMENT 2

Cooper Nuclear Station, NRC Docket 50-298, DPR-46

Proposed Technical Specifications Marked Up and Revised Page

Included Page(s):

3.3-6

Attachment 2 (Marked up TS Change)

Table 3.3.1.1-1 (page 1 of 3)
Reactor Protection System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Intermediate Range Monitors					
a. Neutron Flux — High	2	3	G	SR 3.3.1.1.1 SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.5 SR 3.3.1.1.6 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 121/125 divisions of full scale
	5(a)	3	H	SR 3.3.1.1.1 SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 121/125 divisions of full scale
b. Inop	2	3	G	SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.13	NA
	5(a)	3	H	SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.2.2.13	NA
2. Average Power Range Monitors					
a. Neutron Flux — High (Startup)	2	2	G	SR 3.3.1.1.1 SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.6 SR 3.3.1.1.8 SR 3.3.1.1.10 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 14.5% RTP
b. Neutron Flux-High (Flow Biased)	1	2	F	SR 3.3.1.1.1 SR 3.3.1.1.2 SR 3.3.1.1.4 SR 3.3.1.1.7 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 0.66 ↓ ≤ 0.66 W + 61.0% RTP and ≤ 119.0% RTP(b) </div> 71.5%

(continued)

(a) With any control rod withdrawn from a core cell containing one or more fuel assemblies.

(b) $0.66 \text{ W} + 61.0\% - 0.66 \text{ W RTP}$ when reset for single loop operation per LCO 3.4.1, "Recirculation Loops Operating."

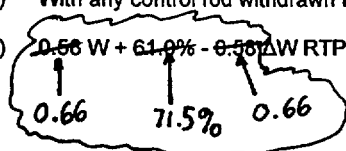


Table 3.3.1.1-1 (page 1 of 3)
Reactor Protection System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Intermediate Range Monitors					
a. Neutron Flux — High	2	3	G	SR 3.3.1.1.1 SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.5 SR 3.3.1.1.6 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 121/125 divisions of full scale
	5(a)	3	H	SR 3.3.1.1.1 SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 121/125 divisions of full scale
b. Inop	2	3	G	SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.13	NA
	5(a)	3	H	SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.2.2.13	NA
2. Average Power Range Monitors					
a. Neutron Flux — High (Startup)	2	2	G	SR 3.3.1.1.1 SR 3.3.1.1.3 SR 3.3.1.1.4 SR 3.3.1.1.6 SR 3.3.1.1.8 SR 3.3.1.1.10 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 14.5% RTP
b. Neutron Flux-High (Flow Biased)	1	2	F	SR 3.3.1.1.1 SR 3.3.1.1.2 SR 3.3.1.1.4 SR 3.3.1.1.7 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.10 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 0.66 W + 71.5% RTP and ≤ 119.0% RTP(b)

(continued)

(a) With any control rod withdrawn from a core cell containing one or more fuel assemblies.

(b) 0.66 W + 71.5% - 0.66 ΔW RTP when reset for single loop operation per LCO 3.4.1, "Recirculation Loops Operating."

ATTACHMENT 4

Cooper Nuclear Station, NRC Docket 50-298, DPR-46

**General Electric Nuclear Energy Affidavit
Regarding Withholding from Public Disclosure**

General Electric Company

AFFIDAVIT

I, George B. Stramback, being duly sworn, depose and state as follows:

- (1) I am Project Manager, Regulatory Services, General Electric Company ("GE") and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in the GE proprietary report NEDC-32914P, "*DRAFT*" *Maximum Extended Load Line Limit and Increased Core Flow for Cooper Nuclear Station*, Revision B, Class III (GE Proprietary Information), dated December 1999. The proprietary information is delineated by bars marked in the margin adjacent to the specific material.
- (3) In making this application for withholding of proprietary information of which it is the owner, GE relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), 2.790(a)(4), and 2.790(d)(1) for "trade secrets and commercial or financial information obtained from a person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information", and some portions also qualify under the narrower definition of "trade secret", within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).
- (4) Some examples of categories of information which fit into the definition of proprietary information are:
 - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by General Electric's competitors without license from General Electric constitutes a competitive economic advantage over other companies;
 - b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;

- c. Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of General Electric, its customers, or its suppliers;
- d. Information which reveals aspects of past, present, or future General Electric customer-funded development plans and programs, of potential commercial value to General Electric;
- e. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

The information sought to be withheld is considered to be proprietary for the reasons set forth in both paragraphs (4)a. and (4)b., above.

- (5) The information sought to be withheld is being submitted to NRC in confidence. The information is of a sort customarily held in confidence by GE, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GE, no public disclosure has been made, and it is not available in public sources. All disclosures to third parties including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge. Access to such documents within GE is limited on a "need to know" basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his delegate), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GE are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.
- (8) The information identified in paragraph (2), above, is classified as proprietary because it contains detailed results of analytical models, methods and processes, including computer codes, which GE has developed, obtained NRC approval of, and applied to perform evaluations of maximum extended load line limits (MELLL) and increased core flow (ICF) for BWRs.

The development and approval of the BWR analysis computer codes used in this analysis was achieved at a significant cost, on the order of several million dollars, to GE.

The development of the evaluation process along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GE asset.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

The research, development, engineering, analytical and NRC review costs comprise a substantial investment of time and money by GE.

The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

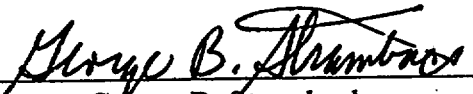
The value of this information to GE would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing these very valuable analytical tools.

STATE OF CALIFORNIA)
)
) ss:
COUNTY OF SANTA CLARA)

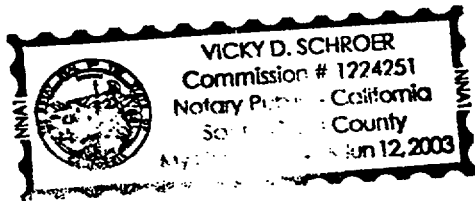
George B. Stramback, being duly sworn, deposes and says:


That he has read the foregoing affidavit and the matters stated therein are true and correct to the best of his knowledge, information, and belief.

Executed at San Jose, California, this 6th day of December 1999.


George B. Stramback
General Electric Company

Subscribed and sworn before me this 6th day of December 1999.




Notary Public, State of California

