ATTACHMENT 3

TECHNICAL SPECIFICATIONS CHANGES

PROPOSED CHANGES

To implement this request changes will be required to the Recirculation Loop and APRM flow biased scram and rod block limits. The changes are listed below and markups of the specifications are included.

Tech Spec Sections	Proposed Changes
LCO 3.4.1; item B.1, page 3.4-1	THERMAL POWER $\leq$ 83% RTP
LCO 3.4.1; CONDITION B, page 3.4-2	THERMAL POWER > 83% RTP during single loop operation
LCO 3.4.1 REQUIRED ACTION B.1, page 3.4-2	Reduce THERMAL POWER to $\leq$ 83% RTP
TABLE 3.3.1.1-1 FUNCTION 2.b, page 3.3-7	$\leq$ 0.66 W + 67% RTP and $\leq$ 113% RTP
TABLE 3.3.1.1-1 FUNCTION 2.b footnote (b), page 3.3-7	Allowable value is $\leq$ 0.66 W + 61% RTP when reset for single loop operation per LCO 3.4.1, "Recirculation Loops Operating."

Markups of the Technical Requirements Manual and BASES changes are also included in support of this request.

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	H	SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.6 SR 3.3.1.1.7 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 122/125 divisions of full scale
	5(a)	3	I	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 122/125 divisions of full scale
b. Inop	2	3	H	SR 3.3.1.1.4 SR 3.3.1.1.15	NA
	5(a)	3	I	SR 3.3.1.1.5 SR 3.3.1.1.15	NA
2. Average Power Range Monitors					
a. Neutron Flux – High, Setdown	2	3	H	SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.7 SR 3.3.1.1.8 SR 3.3.1.1.11 SR 3.3.1.1.15	≤ 20% RTP
b. Flow Biased Simulated Thermal Power – High	1	3	G	SR 3.3.1.1.1 SR 3.3.1.1.2 SR 3.3.1.1.3 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.11 SR 3.3.1.1.14 SR 3.3.1.1.15 SR 3.3.1.1.17 SR 3.3.1.1.18	≤ 0.66 W + ~~54%~~ RTP and ≤ 113% RTP(b)

(continued)

(a) With any control rod withdrawn from a core cell containing one or more fuel assemblies.

(b) Allowable Value is ≤ 0.66 W + ~~65.7%~~ 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	NOMINAL SETPOINT/ RESPONSE TIME
1.	Intermediate Range Monitors					
a.	Neutron Flux - High	2	3	H	SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.6 SR 3.3.1.1.7 SR 3.3.1.1.13 SR 3.3.1.1.15	120/125 divisions of full scale
		5(a)	3	I	SR 3.3.1.1.1 SR 3.3.1.1.5 SR 3.3.1.1.13 SR 3.3.1.1.15	120/125 divisions of full scale
b.	Inop	2	3	H	SR 3.3.1.1.4 SR 3.3.1.1.15	NA
		5(a)	3	I	SR 3.3.1.1.5 SR 3.3.1.1.15	NA
2.	Average Power Range Monitors					
a.	Neutron Flux - High, Setdown	2	3	H	SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.7 SR 3.3.1.1.8 SR 3.3.1.1.11 SR 3.3.1.1.15	15% RTP
b.	Flow Biased Simulated Thermal Power - High	1	3	G	SR 3.3.1.1.1 SR 3.3.1.1.2 SR 3.3.1.1.3 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.11 SR 3.3.1.1.14 SR 3.3.1.1.15 SR 3.3.1.1.17 SR 3.3.1.1.18	0.66 W + [redacted]% RTP and [redacted]% RTP(b) ≤ 0.09 sec(c)(d)

(continued)

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

(b) Nominal setpoint is 0.66 W + [redacted]% RTP when reset for single loop operation per LCO 3.4.1, "Recirculation Loops Operating."

(c) Not including simulated thermal power time constant specified in the COLR.

(d) Response time shall be measured from the detector output or from the input to the first electronic component in the channel.

(e), (f), (g), (h) not used this page

Table 3.3.2.1-1(Page 1 of 2)
Control Rod Block Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP FUNCTION	CONDITIONS REFERENCED FROM TLCO REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	NOMINAL SETPOINT	ALLOWABLE VALUE
1. Rod Pattern Control System						
a. Rod withdrawal limiter	(a)	2	ENTER LCO 3.3.2.1	SR 3.3.2.1.1 SR 3.3.2.1.6 SR 3.3.2.1.9 TSR 3.3.2.1.7 TSR 3.3.2.1.10		
	(b)	2		SR 3.3.2.1.2 SR 3.3.2.1.5 SR 3.3.2.1.7 SR 3.3.2.1.9 TSR 3.3.2.1.10		
b. Rod pattern controller	1[(c)],2	2	ENTER LCO 3.3.2.1	SR 3.3.2.1.3 SR 3.3.2.1.4 SR 3.3.2.1.5 SR 3.3.2.1.7 SR 3.3.2.1.9		
2. Reactor Mode Switch Shutdown Position	(d)	2	ENTER LCO 3.3.2.1	SR 3.3.2.1.8		
3. Low Power Setpoint	(b),(c),2	2	ENTER LCO 3.3.2.1	TSR 3.3.2.1.11	27.5 ± 3% RTP	27.5 ± 7.5% RTP
4. High Power Setpoint	> HPSP	2	ENTER LCO 3.3.2.1	TSR 3.3.2.1.11	67.9% RTP	≤ 68.2% RTP
5. Average Power Range Monitors						
a. Flow Biased Simulated Thermal Power - High						
1) Two Recirculation Loop Operation	1	6	B	TSR 3.3.2.1.13 TSR 3.3.2.1.14 TSR 3.3.2.1.16 TSR 3.3.2.1.18	.66W + 58% RTP [1] and ≤108% RTP	≤.66W + 61% RTP [1] and ≤110% RTP
2) Single Recirculation Loop Operation	1	6	B	TSR 3.3.2.1.13 TSR 3.3.2.1.14 TSR 3.3.2.1.16 TSR 3.3.2.1.18	.66W + 52% RTP [1] and ≤108% RTP	≤.66W + 55% RTP [1] and ≤110% RTP
b. Inoperative	1,2	6	B	TSR 3.3.2.1.13 TSR 3.3.2.1.14	NA	NA
c. Downscale	1	6	B	TSR 3.3.2.1.13 TSR 3.3.2.1.14 TSR 3.3.2.1.16	5% RTP	≥ 3% RTP
d. Neutron Flux - High, Setdown	2	6	B	TSR 3.3.2.1.13 TSR 3.3.2.1.14 TSR 3.3.2.1.16	12% RTP	≤ 14% RTP

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.1 Recirculation Loops Operating

LCO 3.4.1

A. Two recirculation loops shall be in operation with:

1. Matched flows; and

2. Total core flow and THERMAL POWER within limits.

OR

B. One recirculation loop shall be in operation with:

1. THERMAL POWER ≤ ~~70%~~ 83 RTP;

2. Total core flow and THERMAL POWER within limits;

3. Required limits modified for single recirculation loop operation as specified in the COLR; and

4. LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," Function 2.b (Average Power Range Monitors Flow Biased Simulated Thermal Power—High), Allowable Value of Table 3.3.1.1-1 reset for single loop operation.

----------NOTE----------
Required limit and setpoint modifications for single recirculation loop operation may be delayed for up to 12 hours after transition from two recirculation loop operation to single recirculation loop operation.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Recirculation loop jet pump flow mismatch not within limits.	A.1 Shutdown one recirculation loop.	2 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. THERMAL POWER > ~~70%~~ 83 RTP during single loop operation.	B.1 Reduce THERMAL POWER to ≤ ~~70%~~ 83 RTP.	1 hour
C. Total core flow as a function of THERMAL POWER within Region II of Figure 3.4.1-1.	C.1 Determine APRM and LPRM neutron flux noise levels.	Once per 8 hours AND 30 minutes after an increase of ≥ 5% RTP
D. Total core flow as a function of THERMAL POWER within Region II of Figure 3.4.1-1. AND APRM or LPRM neutron flux noise level > 3 times established baseline noise level.	D.1 Restore APRM and LPRM neutron flux noise level to ≤ 3 times established baseline levels.	2 hours
E. Total core flow as a function of THERMAL POWER within Region III of Figure 3.4.1-1.	E.1 Restore total core flow as a function of THERMAL POWER to within Region I or II of Figure 3.4.1-1.	4 hours

(continued)

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
TSR 3.4.1.1.1	Verify volumetric loop flow rate of the loop in operation is ≤ 33000 gpm.	Initially, within 1 hour and once per 12 hours thereafter
TSR 3.4.1.1.2	Verify THERMAL POWER is ≤ ~~70%~~ 83 RTP.	Initially, within 1 hour and once per 12 hours thereafter
TSR 3.4.1.1.3	Verify flow control is in Loop Manual.	Initially, within 1 hour and once per 12 hours thereafter

BASES

APPLICABLE SAFETY ANALYSES (continued)

The recirculation system is also assumed to have sufficient flow coastdown characteristics to maintain fuel thermal margins during abnormal operational transients (Ref. 2), which are analyzed in Chapter 15 of the USAR.

A plant specific LOCA analysis has been performed assuming only one operating recirculation loop. This analysis has demonstrated that, in the event of a LOCA caused by a pipe break in the operating recirculation loop, the Emergency Core Cooling System response will provide adequate core cooling, provided the APLHGR requirements are modified accordingly (Ref. 3).

The transient analyses of Chapter 15 of the USAR have also been performed for single recirculation loop operation (Ref. 3) and demonstrate sufficient flow coastdown characteristics to maintain fuel thermal margins during the abnormal operational transients analyzed provided the MCPR requirements are modified. During single recirculation loop operation, modification to the Reactor Protection System average power range monitor (APRM) instrument setpoints is also required to account for the different relationships between recirculation drive flow and reactor core flow. The APLHGR and MCPR limits for single loop operation are specified in the COLR. The APRM flow biased simulated thermal power setpoint is in LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation."

Recirculation loops operating satisfies Criterion 2 of the NRC Policy Statement.

LCO

Two recirculation loops are normally required to be in operation with their flows matched within the limits specified in SR 3.4.1.1 to ensure that during a LOCA caused by a break of the piping of one recirculation loop the assumptions of the LOCA analysis are satisfied. In addition, the total core flow must be ≥ 45% of rated core flow or total core flow expressed as a function of THERMAL POWER must be in Region I as identified in Figure 3.4.1-1, "THERMAL POWER/Core Flow Stability Regions." Alternatively, with only one recirculation loop in operation, THERMAL POWER must be ≤ 70% RTP, the total core flow limitations identified above must be met, modifications to the required APLHGR limits (LCO 3.2.1, "AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)"), MCPR limits (LCO 3.2.2, "MINIMUM

(continued)

BASES

ACTIONS

A.1 (continued)

Alternatively, if the single loop requirements of the LCO are applied to operating limits and RPS setpoints, operation with only one recirculation loop would satisfy the requirements of the LCO and the initial conditions of the accident sequence.

The 2 hour Completion Time is based on the low probability of an accident occurring during this time period, on a reasonable time to complete the Required Action, and on frequent core monitoring by operators allowing abrupt changes in core flow conditions to be quickly detected.

B.1

Should a LOCA occur with THERMAL POWER > [illegible]% RTP, during single loop operation the core response may not be bounded by the LOCA analyses. Therefore, only a limited time is allowed to reduce THERMAL POWER to ≤ 70% RTP.

The 1 hour Completion Time is based on the low probability of an accident occuring during this time period, on a reasonable time to complete the Required Action, and on frequent core monitoring by operators allowing changes in THERMAL POWER to be quickly detected.

C.1, D.1, and E.1

Due to thermal hydraulic stability concerns, operation of the plant is divided into three regions based on THERMAL POWER and core flows. Region III is a power/flow ratio with core flow < 39% of the rated core flow. Region II is a power/flow ratio with core flow ≥ 39% and < 45% of the rated core flow. Deliberate entry into Region III is not permitted, and if it occurs, immediate action is required to exit the region within 4 hours by reducing THERMAL POWER through control rod insertion or by increasing recirculation loop flow by opening the flow control valve. Operation in Region II is also more susceptible to instability than normal operating parameters. However, operation in this region is allowed with the exception that if evidence of

(continued)

ATTACHMENT 4

NEDC-32611P

Note: this document provides the proprietary portions of the aforementioned request, General Electric Report NEDC-32611P. EOI requests that this attachment be held proprietary in accordance with 10 CFR 2.790(b) for the reasons stated in the attached General Electric affidavit.

General Electric Company

AFFIDAVIT

I, David J. Robare, being duly sworn, depose and state as follows:

(1) I am Licensing Services Manager, 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-32611P, MAXIMUM Extended Load Line Limit Analyses for River Bend Station, (GE Company Proprietary Information), dated November 1996. 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 instrument setpoints for BWR's.

The development and approval of the BWR setpoint methodology was achieved at a significant cost, on the order of a 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)

David J. Robare, 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 22ND day of NOVEMBER 1996.

David J. Robare
General Electric Company

Subscribed and sworn before me this 22nd day of November 1996.

PAULA F. HUSSEY
COMM. #1046120
Notary Public -- California
SANTA CLARA COUNTY
My Comm. Expires DEC 1,1998

Notary Public, State of California