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October 31, 2001
L-01-132

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

Subject: Beaver Valley Power Station, Unit No. 1 and No. 2
BV-1 Docket No. 50-334, License No. DPR-66
BV-2 Docket No. 50-412, License No. NPF-73
Response to a Request for Additional Information Pertaining to Proposed MSSV Changes In Support of LAR Nos. 289 and 161

This letter provides the FirstEnergy Nuclear Operating Company (FENOC) response to a NRC Request for Additional Information (RAI) in support of License Amendment Requests (LAR) 289 and 161. These LARs were submitted by FENOC letter L-01-006 dated January 18, 2001. The 1.4 % power uprate portion of these LARs were issued as License Amendment 243 for Unit 1 and License Amendment 122 for Unit 2 by an NRC letter dated September 24, 2001. The LARs submitted by FENOC letter L-01-006 also included proposed changes to Technical Specification 3.7.1.1, "Main Steam Safety Valves (MSSVs)", which are not included in License Amendments 243 (Unit 1) and 122 (Unit 2). FENOC letter L-01-086 (dated June 26, 2001) provided, per an NRC request, a supplement to the no significant hazards evaluation submitted in L-01-006. The supplemental no significant hazards evaluation addresses the changes to Technical Specification 3.7.1.1. This letter provides a response to an RAI pertaining to the proposed changes to the MSSVs setpoints contained in LARs 289 (Unit 1) and 161 (Unit 2).

The FENOC responses to the RAI are provided in Attachment A of this letter. As discussed in Attachment A, additional changes to Technical Specification 3.7.1.1 are being proposed by this transmittal. Attachment B contains the additional changes as revised marked-up Technical Specifications and Bases pages. These pages should replace the corresponding pages submitted via FENOC letter L-01-006. This information does not change the evaluations or conclusions presented in FENOC letters L-01-006 and L-01-086.

FENOC requests NRC approval of the MSSV portions License Amendment Requests 289 and 161 by December 14, 2001. An implementation period of up to 60 days is requested following the effective date of this amendment.

A001

If there are any questions concerning this matter, please contact Mr. Thomas S. Cosgrove, Manager Regulatory Affairs at 724-682-5203.

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 31, 2001.

Sincerely,

Lew W. Myers

Attachment

c: Mr. L. J. Burkhart, Project Manager
Mr. D. M. Kern, Sr. Resident Inspector
Mr. H. J. Miller, NRC Region I Administrator
Mr. D. A. Allard, Director BRP/DEP
Mr. L. E. Ryan (BRP/DEP)

Response to Request for Additional Information

By letters dated January 18, 2001, June 9, 2001, and June 29, 2001, FirstEnergy Nuclear Operating Company (FENOC), the licensee for the Beaver Valley, Unit Nos. 1 and 2 (BVPS-1 and 2), submitted information requesting a license amendment to raise the plant operating power level by 1.4 percent (from 2652 MWt to 2689 MWt). Included in this submittal was a request to change Technical Specification (TS) 3/4.7.1 "Turbine Cycle - Main Steam Safety Valves (MSSVs)" and its associated Bases. The Nuclear Regulatory Commission (NRC) staff reviewed the information provided and determined that additional information is necessary to complete its review.

(1) Given the maximum allowable power equation in TS Bases section 3/4.7.1.1, "Main Steam Safety Valves," the NRC staff expects that a power uprate would cause all maximum allowable power levels with inoperable MSSVs to decrease. However, not all of the proposed maximum allowable power values of Table 3.7.1, "Operable Main Steam Safety Valves versus Maximum Allowable Power," decreased as expected. To resolve this discrepancy, please provide the information used for determining the maximum allowable power levels with inoperable MSSVs in Table 3.7.1 for both BVPS-1 and 2. Include the nominal NSSS power rating of the plant (Q), minimum total steam flow rate capability of the MSSVs (w_s), heat of vaporization for the steam (h_{fg}), assumed operable MSSVs, assumed MSSV lift pressures, assumed Nuclear Instrumentation System trip channel uncertainties, and assumed calorimetric power uncertainty. Also, provide the pertinent data used for determining these values, for example, the equations and values or references used to determine w_s. Provide the above information for both the current TS values and new proposed values. Explain any variation or differences in assumptions and justify why these changes are conservative.

Response

The calculation to determine the setpoints based on the number of operable MSSVs uses the formula in Westinghouse Nuclear Safety Advisory Letter, NSAL-94-001, dated January 20, 1994, i.e.,:

$$Hi\ \Phi = (100/Q)\ (w_s\ h_{fg}\ N) / K$$

Where:

Hi Φ = Safety Analysis power range high neutron flux setpoint, percent.

Q = Nominal NSSS power rating of the plant (including Reactor Coolant pump heat), MWt.

K = Conversion factor, 947.82 (BTU/sec)/ MWt.

w_s = Minimum total steam flow rate capability of the operable MSSVs on any one steam generator at the highest MSSV opening pressure including tolerance and accumulation as appropriate in lb/sec.

For example, if the maximum number of inoperable MSSVs on any one steam generator is one, then w_s should be a summation of the capacity of the operable MSSVs at the highest operable MSSV operating pressure, excluding the highest capacity MSSV. If the maximum number of inoperable MSSVs per steam generator is three then w_s should be a summation of the capacity of the operable MSSVs at the highest operable MSSV operating pressure, excluding the three highest capacity MSSVs.

h_{fg} = heat of vaporization for steam at the highest MSSV opening pressure including tolerance and accumulation as appropriate, BTU/lbm

N = Number of loops in plant

The flow capability of a safety valve is dependent on the pressure upstream of the valve. The rated capacity of a safety valve is stated at the opening pressure of the valve plus the specified accumulation. Thus, at pressures lower than the setpoint plus accumulation, the valve will pass less than rated flow. Therefore, if a negative tolerance is applied to the setpoint, the valve capacity must be adjusted accordingly. Likewise at pressures higher than the lift pressure, e.g., at the accumulation pressure, the valve would pass a flow higher than at the lift setting. Since higher flows yield higher allowable powers in the above formula, including accumulation may be non-conservative considering that safety valves are designed to be fully open at less than the accumulation pressure.

The basis for the setpoint formula is to provide enough relieving capacity for events which could challenge the design pressure of the steam generators and main steam system. In the analysis of these events, the Technical Specification positive tolerance is assumed on the lift setpoints. This maximizes the pressure in the secondary system. Therefore, to be consistent with this analysis and the wording above (from NSAL 94-001) related to flow capability which specifies the flow associated with the highest opening pressure, the current TS values were calculated based on using the positive tolerance on the setpoint. Accumulation was not included based on the above discussion.

It was recognized when recalculating these values for the uprated power conditions that while this method is consistent with the analysis, it does not provide the most conservative result in terms of the actual setpoint. A negative tolerance on the setpoint would provide a lower adjusted capacity and therefore a lower, more conservative setpoint. Therefore, this method was used when recalculating the proposed setpoints. Along with this change, a plant specific instrument uncertainty was used in the new analysis in place of the generic 9% value which had been used previously.

The values used to calculate the current and proposed setpoints are shown in Tables 1 through 4. The differences between the two calculations are: the use of a negative 3% tolerance on the set pressure for the safety valves for the proposed setpoint versus a positive 1% tolerance for the current setpoint, a rated power level of 2697 MWt for the proposed setpoint versus 2660 MWt for the current setpoint, and a nuclear instrument uncertainty of 5.52% for the proposed setpoint versus 9% for the current setpoint. It should also be noted that the proposed values in the original submittal of the License

Amendment Request were conservatively low with respect to the calculated values for the uprate condition. This was due to the fact that the h_{fg} values were based on the set pressure plus 1% tolerance which results in a lower calculated setpoint. However, this is an inconsistent and unnecessary conservatism in the calculation. The calculation has been revised to reflect the results shown in Tables 3 and 4. Based on these changes, revised Technical Specification pages are being included with this response to remove the unnecessary conservatism in the setpoints and to be consistent with the revised calculation.

The maximum allowable power level associated with one inoperable MSSV per steam generator and no positive moderator temperature coefficient at any power level is calculated using the NSAL 94-001 formula (as shown in Tables 3) and subtracting the calorimetric power uncertainty. An uncertainty value of 2% is used to bound operation with either the LEFM or the feedwater flow venturis. The derivation of the Action a value is identified below.

Unit 1	63.67%-2.0%= 61.67%
Unit 2	65.15%-2.0%= 63.15%

Safety valve capacities are based on the rated capacity of the specific valves prorated to the lift pressure assumed in the analysis including tolerance. This is based on the ASME formula which is a linear function of inlet pressure, i.e.,

$$W_{actual} = W_{rated} \, (P_{actual} / P_{lift\ plus\ accumulation})$$

The safety valves have a lift setting tolerance of –3 / +1%. The total capacity used in the calculation is the sum of the lowest capacity valves at the highest lift pressure for the assumed operable valves less 3% setpoint tolerance. The following Tables provide the manufacturer rated capacities for the four lowest lift pressure safety valves for Beaver Valley Units 1 and 2. These values are taken from the valve specification data sheets.

Beaver Valley Unit 1 MSSV Rated Capacities

Lift Pressure (psig)	Specified Accumulation (%)	Lift + Accumulation (psia)	Rated Capacity (lbm/hr)
1075	10	1197.20	767,176
1085	9	1197.35	873,598
1095	8	1197.30	873,598
1110	7	1202.40	873,598

Beaver Valley Unit 2 MSSV Rated Capacities

Lift Pressure (psig)	Specified Accumulation (%)	Lift + Accumulation (psia)	Rated Capacity (lbm/hr)
1075	3	1121.95	811,237
1085	3	1132.25	818,685
1095	3	1142.55	826,132
1110	3	1158.00	837,303

TABLE 1
Current Setpoint Calculation

Q= 2660 MWt
K = 947.82
N (number of loops)= 3

Number of Operable Safety Valves	Highest Set Pressure (psig)	Set Pressure + 1% tolerance (psig)	h_{fg} at set pressure + 1% tolerance BTU/Lbm	w_s; Unit 1 Safety valve capacity at set pressure +1% Lb/Hr	Unit 1 Hi Neutron Flux Setpoint %	w_s; Unit 2 Safety valve capacity at set pressure +1% Lb/Hr	Unit 2 Hi Neutron Flux Setpoint %
2	1085	1095.85	629.54	1,521,909	31.67	1,605,367	33.40
3	1095	1105.95	627.65	2,353,376	48.82	2,429,950	50.41
4	1110	1121.10	624.84	3,213,871	66.38	3,283,734	67.82

TABLE 2
Current Setpoint Values with 9% uncertainty

Number of Operable Safety Valves	Unit 1 Hi Neutron Flux Setpoint with uncertainty %	Unit 2 Hi Neutron Flux Setpoint with uncertainty %
2	31.67 - 9 = 22.67	33.40 – 9 = 24.40
3	48.82 - 9 = 39.82	50.41 – 9 = 41.41
4	66.38 - 9 = 57.38	67.82 – 9 = 58.82

TABLE 3
Revised Setpoint Calculation

Q= 2697 MWt
K = 947.82
N (number of loops)= 3

Number of Operable Safety Valves	Highest Set Pressure (psig)	Set Pressure –3% tolerance (psig)	h_{fg} at set pressure - 3% tolerance BTU/Lbm	w_s; Unit 1 Safety valve capacity at set pressure -3% Lb/Hr	Unit 1 Hi Neutron Flux Setpoint %	w_s; Unit 2 Safety valve capacity at set pressure -3% Lb/Hr	Unit 2 Hi Neutron Flux Setpoint %
2	1085	1067.15	637.64	1,462,442	30.40	1,543,227	32.08
3	1095	1076.85	635.87	2,261,448	46.88	2,335,881	48.42
4	1110	1091.40	633.13	3,084,955	63.67	3,156,590	65.15

TABLE 4
Proposed* Setpoint Values with 5.52% uncertainty

Number of Operable Safety Valves	Unit 1 Hi Neutron Flux Setpoint with uncertainty %	Unit 2 Hi Neutron Flux Setpoint with uncertainty %
2	30.40 – 5.52 = 24.88	32.08 – 5.52 = 26.56
3	46.88 – 5.52 = 41.36	48.42 – 5.52 = 42.90
4	63.67 – 5.52 = 58.15	65.15 – 5.52 = 59.63

* As discussed in this response, the proposed setpoint values for both units are being conservatively revised to the setpoint values for Unit 1.

Revised Proposed Changes

Since Beaver Valley is in the process of consolidating the Technical Specifications for both units into one document as part of the Improved Standard Technical Specifications (ISTS) conversion project, it was decided to utilize one set of values for both units. The specific values are based on the most limiting results for either plant, i.e., Unit 1, and truncated to an integer value. The resulting values are shown in the following tables.

The Maximum Allowable Power Level for ACTION a of TS 3.7.1.1 for Unit 1 will remain unchanged from the current value of 61%. For Unit 2, the Maximum Allowable Power Level will be conservatively changed to 61% to be consistent with the value for Unit 1. This change is reflected on the revised marked-up of Unit 2 Insert 8 appearing in Attachment B. Page 3/4 7-1 of the Unit 2 Technical Specifications is provided for information and is not changed from what was originally submitted.

The values appearing in Table 3.7-1 will be changed to the values shown in the table below for both units. For Unit 2, the values in Table 3.7-1 will be conservatively changed to be consistent with the Unit 1 values. These changes are reflected on the revised marked-ups of Table 3.7-1 for each unit appearing in Attachment B.

Number of Operable Safety Valves	High Neutron Flux Trip Setpoint
4	58%
3	41%
2	24%

(2) In addition to the above, the proposed TS Bases Section 3/4.7.1.1, "Main Steam Safety Valves," does not include the values for the Nuclear Instrumentation System trip channel uncertainties and calorimetric power uncertainty allowances. The TS traveler form (TSTF) for this Bases section, TSTF-235, was approved with the specific values to be included in the plant specific TS Bases. The NRC staff is generally not disposed to taking exception to language agreed to during TSTF review. Please provide your bases for the deviation from the TSTF and justify why this deviation is acceptable.

Response

The marked-up TS Bases pages originally submitted with LAR 289 (Unit 1) and 161 (Unit 2) did not include a discussion of Nuclear Instrumentation System trip channel uncertainties or calorimetric power uncertainty allowances because these portions of TSTF-235 were denoted as a "Reviewer's Note". The subject statements are also denoted as a "Reviewer's Note" in NUREG-1431, Revision 2. Information contained in a "Reviewer's Note" is generally not included in the TS Bases. It is provided for the NRC reviewer's information and is normally beyond the level of detail provided in the Bases. However it is noted that the existing Bases for the MSSVs contains a great deal of the information contained in the "Reviewer's Note" associated with the determination of Maximum NSSS Power. Since the BVPS TS Bases already contains most of the information in the Reviewer's Note, the statements pertaining to Nuclear Instrumentation System trip channel uncertainties and calorimetric power uncertainty allowances have been added to the proposed TS Bases changes. The additional text is provided on the revised marked-up Bases pages provided in Attachment B. The change addressing the calorimetric power uncertainty allowances is shown as Inserts 1-A and 2-A which is to be added to page B 3/4 7-1c for each unit. The change addressing the Nuclear Instrumentation System trip channel uncertainty is shown as a modification to Inserts 5 and 12 of the subject LARs.

Letter L-01-132

Attachment B

Revised Pages

TABLE 3.7-1

Maximum Allowable

OPERABLE Main Steam Safety Valves versus
~~Applicable~~ Power ~~in Percent of RATED THERMAL POWER (RTP)~~

~~MINIMUM~~ NUMBER OF MSSVs PER STEAM GENERATOR ~~REQUIRED~~ OPERABLE	MAXIMUM ALLOWABLE ~~APPLICABLE~~ POWER (% RTP)
~~5~~	~~≤ 100~~
4	≤ ~~57~~ ~~56~~ 58
3	≤ ~~39~~ ~~40~~ 41
2	≤ ~~22~~ ~~24~~ 24

(Proposed Wording)

MAIN STEAM SAFETY VALVES (MSSVs) (Continued)

ACTIONS (Continued)

where:

FPL = Fraction of RATED THERMAL POWER equivalent to the safety analysis limit minus 9 percent (to account for typical instrument and channel uncertainties). The uncertainty ensures the maximum plant operating power level will then be lower than the safety analysis limit by an appropriate operating margin.

Q = Nominal NSSS power rating of the plant (including reactor coolant pump heat), Mwt

K = Conversion factor, 947.82 $\frac{\text{(Btu/sec)}}{\text{Mwt}}$

w_s = Minimum total steam flow rate capability of the operable MSSVs on any one steam generator at the highest MSSV opening pressure including tolerance and accumulation, as appropriate, in lb/sec. For example, if the maximum number of inoperable MSSVs on any one steam generator is one, then w_s should be a summation of the capacity of the operable MSSVs at the highest operable MSSV operating pressure, excluding the highest capacity MSSV. If the maximum number of inoperable MSSVs per steam generator is three, then w_s should be a summation of the capacity of the operable MSSVs at the highest operable MSSV operating pressure, excluding the three highest capacity MSSVs.

OPERABLE

h_{fg} = Heat of vaporization for steam at the highest MSSV opening pressure including tolerance and accumulation, as appropriate, Btu/lbm

INSERT 1-A

N = Number of loops in plant

INSERT 5

(Proposed Wording)

Unit 1 Insert 1-A

For use in determining the % RTP in Action a, the Maximum NSSS Power calculated above is reduced by 2% RTP to account for the calorimetric power uncertainty. This is a conservative value that bounds the uncertainties associated with both the feedwater flow venturis and the Leading Edge Flow Meter.

Unit 1 INSERT 5

b. In the case of multiple inoperable MSSVs on one or more steam generators, with a reactor power reduction alone there may be insufficient total steam flow capacity provided by the turbine and remaining OPERABLE MSSVs to preclude overpressurization in the event of an increased reactor power due to reactivity insertion, such as in the event of an uncontrolled RCCA bank withdrawal at power. Furthermore, for a single inoperable MSSV on one or more steam generators if the Moderator Temperature Coefficient is positive the reactor power may increase as a result of an RCS heatup event such that flow capacity of the remaining OPERABLE MSSVs is insufficient. The 4 hour completion time to reduce reactor power is consistent with ACTION a. An additional 32 hours is allowed to reduce the Power Range Neutron Flux-High reactor trip setpoints. The total completion time of 36 hours is based on a reasonable time to correct the MSSV inoperability, the time to perform the power reduction, operating experience to reset all channels of a protection function, and on the low probability of occurrence of a transient that could result in steam generator overpressure during this period.

The maximum THERMAL POWER corresponding to the heat removal capacity of the remaining OPERABLE MSSVs is determined via a conservative heat balance calculation discussed above, with an appropriate allowance for Nuclear Instrumentation System trip channel uncertainties.

ACTION b. is modified by a note, indicating that the Power Range Neutron Flux-High reactor trip setpoint reduction is only required in MODE 1. In MODES 2 and 3 the reactor protection system trips specified in LCO 3.3.1.1, "Reactor Trip System Instrumentation," provide sufficient protection.

The allowed completion times are reasonable based on operating experience to accomplish the ACTIONS in an orderly manner without challenging unit systems.

To determine the Table 3.7-1 Maximum Allowable Power for Action b (% RTP), the calculated Maximum NSSS Power is reduced by 5.52 % to account for Nuclear Instrumentation System trip channel uncertainties. An additional conservatism is employed by setting the values equal to the most conservative between the two units. This being the Unit 1 values.

3/4.7.1 TURBINE CYCLE

MAIN STEAM SAFETY VALVES (MSSVs)

LIMITING CONDITION FOR OPERATION

3.7.1.1 ~~The MSSVs~~ shall be OPERABLE ~~as specified in Table 3.7-1 and Table 3.7-2.~~ Five MSSVs per steam generator

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- - - - - - - - - - - - - - - GENERAL NOTE - - - - - - - - - - - - - - - - -

Separate ACTION entry is allowed for each MSSV.

- -

b. ~~a.~~ INSERT 8 → ~~With one or more required MSSVs inoperable, within 4 hours reduce power to less than or equal to the applicable percent RATED THERMAL POWER listed in Table 3.7-1; otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.~~

c. ~~b.~~ With one or more steam generators with ~~less than two~~ four or more MSSVs ~~OPERABLE~~ inoperable, within 6 hours be in HOT STANDBY and in HOT SHUTDOWN within the next 6 hours.

d. ~~c.~~ The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify ~~(1)~~ (2) each required MSSV lift setpoint per Table 3.7-2 in accordance with the Inservice Testing Program. Following testing, lift settings shall be within ± 1 percent.

(1) Required to be performed only in MODE 1.
(2) ~~(1)~~ Required to be performed only in MODES 1 and 2.

(Proposed Wording)

Unit 2 INSERT 8

a. With one or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels, within 4 hours reduce THERMAL POWER to less than or equal to ~~63%~~ RTP; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.

61%

b. With one or more steam generators with two or more MSSVs inoperable, or with one or more steam generators with one MSSV inoperable and the MTC positive at any power level, within 4 hours reduce THERMAL POWER to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs, and reduce the Power Range Neutron Flux-High reactor trip setpoint to less than or equal to the Maximum Allowable % RTP specified in Table 3.7-1 for the number of OPERABLE MSSVs within the next 32 hours[1] ; otherwise, be in HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.

TABLE 3.7-1

Maximum Allowable

OPERABLE Main Steam Safety Valves versus
~~Applicable~~ Power ~~in Percent of RATED THERMAL POWER (RTP)~~

~~MINIMUM~~ NUMBER OF MSSVs PER STEAM GENERATOR ~~REQUIRED~~ OPERABLE	MAXIMUM ALLOWABLE ~~APPLICABLE~~ POWER (% RTP)
~~5~~	~~≤ 100~~
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(Proposed Wording)

BASES

MAIN STEAM SAFETY VALVES (MSSVs) (Continued)

ACTIONS (Continued)

where:

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h_{fg} = Heat of vaporization for steam at the highest MSSV opening pressure including tolerance and accumulation, as appropriate, Btu/lbm

Insert 2-A

N = Number of loops in plant

INSERT 12

(Proposed Wording)

Unit 2 Insert 2-A

For use in determining the % RTP in Action a, the Maximum NSSS Power calculated above is reduced by 2% RTP to account for the calorimetric power uncertainty. This is a conservative value that bounds the uncertainties associated with both the feedwater flow venturis and the Leading Edge Flow Meter.

Unit 2 INSERT 12

b. In the case of multiple inoperable MSSVs on one or more steam generators, with a reactor power reduction alone there may be insufficient total steam flow capacity provided by the turbine and remaining OPERABLE MSSVs to preclude overpressurization in the event of an increased reactor power due to reactivity insertion, such as in the event of an uncontrolled RCCA bank withdrawal at power. Furthermore, for a single inoperable MSSV on one or more steam generators if the Moderator Temperature Coefficient is positive the reactor power may increase as a result of an RCS heatup event such that flow capacity of the remaining OPERABLE MSSVs is insufficient. The 4 hour completion time to reduce reactor power is consistent with ACTION a. An additional 32 hours is allowed to reduce the Power Range Neutron Flux-High reactor trip setpoints. The total completion time of 36 hours is based on a reasonable time to correct the MSSV inoperability, the time to perform the power reduction, operating experience to reset all channels of a protection function, and on the low probability of occurrence of a transient that could result in steam generator overpressure during this period.

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ACTION b. is modified by a note, indicating that the Power Range Neutron Flux-High reactor trip setpoint reduction is only required in MODE 1. In MODES 2 and 3 the reactor protection system trips specified in LCO 3.3.1.1, "Reactor Trip System Instrumentation," provide sufficient protection.

The allowed completion times are reasonable based on operating experience to accomplish the ACTIONS in an orderly manner without challenging unit systems.

> To determine the Table 3.7-1 Maximum Allowable Power for Action b (% RTP), the calculated Maximum NSSS Power is reduced by 5.52 % to account for Nuclear Instrumentation System trip channel uncertainties. An additional conservatism is employed by setting the values equal to the most conservative between the two units. This being the Unit 1 values.