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W3F1-2008-0050

September 17, 2008

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: License Amendment Request NPF-38-276
Core Power Calculator Power Calibration Adjustment Limit
Waterford 3 Steam Electric Station, Unit 3 (Waterford 3)
Docket No.50-382
License No. NPF-38

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. (Entergy) hereby requests a license amendment to the above license in the form of changes to the Technical Specification 3/4.3.1. The proposed change will revise the Operating License to modify Note 2 of Waterford 3 Technical Specification Table 4.3-1. The proposed change will result in the addition of conservatism to Core Protection Calculator (CPC) power indications when calibrations are required in certain conditions. The proposed amendment is similar to amendments the NRC approved at Palo Verde Nuclear Generating Station and Arkansas Nuclear One Nuclear Generating Station Unit 2.

Attachment 1 provides an analysis of the proposed technical specification change. Attachment 2 provides Technical Specification 3/4.3.1, Reactor Protective Instrumentation Surveillance Requirements, Table 4.3-1 – For Information Only. Attachment 3 provides Proposed Technical Specification Changes (mark-up). Attachment 4 provides Changes to Technical Specification Bases Pages – For Information Only.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c), and it has been determined that this change involves no significant hazards consideration. The bases for these determinations are included in the attached submittal.

There are no new regulatory commitments contained in this submittal.

Entergy requests approval of the proposed amendment by September 10, 2009, in order to support the fall 2009 refueling outage. Once approved, the amendment shall be implemented within 60 days. Although this request is neither exigent nor emergency, your prompt review is requested.

A001
NRR

If you have any questions or require additional information, please contact Robert J. Murillo, Manager, Licensing at (504) 739-6715.

I declare under penalty of perjury that the foregoing is true and correct. Executed on September 17, 2008.

Sincerely,

KTW/MEM/ssf

Attachments:
1. Analysis of Proposed Technical Specification Change
2. Technical Specification 3/4.3.1, Reactor Protective Instrumentation Surveillance Requirements, Table 4.3-1 – For Information Only
3. Proposed Technical Specification Changes (mark-up)
4. Changes to Technical Specification Bases Pages – For Information Only

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Attachment 1

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Analysis of Proposed Technical Specification Change

1.0 DESCRIPTION

This is a request to amend the Operating License for Waterford 3.

In preparation for installation of the Core Protection Calculator (CPC) addressable constants for the Cycle 15 startup, site personnel observed that one of the listed calibration requirements from the Startup Test and Setpoints Transmittal (STST) for Cycle 15 was more restrictive than that listed in Technical Specification 3/4.3.1, Table 4.3-1, Functional Item 14, Note 2 (see Attachment 2).

The proposed change will revise the Operating License to modify Waterford 3 Technical Specification 3/4.3.1, Table 4.3-1 Functional Item 14, Note 2. The proposed change will result in the addition of conservatism to CPC power indications when calibrations are required in certain conditions. Specifically, in conformance with the STST, at power levels between 15% RATED THERMAL POWER (RTP) and 80% RTP when calibrations of CPC ΔT power and CPC neutron flux power are required because as-found values are more than 10% higher than calorimetric power, CPC ΔT power and CPC neutron flux power are adjusted to between 8% and 10% RTP greater than calorimetric power. The proposed change will also clarify that (1) no adjustments are required below 15% RATED THERMAL POWER, (2) certain adjustments should result in CPC power indications being as close as practical to calorimetric power, and (3) ranges of acceptance criteria and adjustment limits are stated as percentages of RATED THERMAL POWER instead of percentages of current power.

2.0 PROPOSED CHANGE

Technical Specification (TS) 3/4.3.1, Table 4.3-1, Note (2) is revised to modify the power calibration requirements for Core Protection Calculator (CPC) ΔT power and the CPC neutron flux power signals between 15% and 80% power. Note (2) of Table 4.3-1 currently requires that CPC power indications found to be greater than calorimetric power by more than 10% for power levels between 15% and 80% RATED THERMAL POWER (RTP) must be adjusted such that they are between 0% and 10% above calorimetric power. The proposed amendment revises the adjustment for CPC power indications to between 8% and 10% above calorimetric power.

Note (2) is revised to clarify that certain adjustments should result in CPC power indications being as close as practical to calorimetric power. Between 15% and 80% power, Note (2) currently requires that CPC power indications or (Reactor Protection System) RPS linear power found to be less than calorimetric power by more than 0.5% must be adjusted such that they are within 0.0% to 10% of the calorimetric power (see Attachment 2). The proposed amendment revises the adjustment for CPC power indications or RPS linear power to be within -0.5% and 10% above calorimetric power. At or above 80% power, Note (2) currently requires that CPC power indications or RPS linear power found to differ from calorimetric power by an absolute value of more than 2% must be adjusted to be within 2% of the calorimetric power (see Attachment 2). The proposed amendment revises the adjustment for CPC power indications or RPS linear power to within -0.5% to 2% above calorimetric power.

Note (2) is revised to clarify the intent of the calibration requirements for CPC power indications when at less than 15% power, and specifies adjustment limits are percentages of RATED THERMAL POWER instead of percentages of current power.

In summary, CPC power indications are revised to a smaller calibration adjustment limit for power levels between 15% and 80% RATED THERMAL POWER. CPC power indications are revised to be as close as practical to calorimetric power. Additionally, the intent of the calibration requirements for CPC power indications when the plant is at less than 15% power is clarified.

The Technical Specification Bases is revised to explain the basis for the revision to Note (2) of TS 3/4.3.1, Table 4.3-1. Additionally, the Technical Specification Bases of TS 3/4.3.1 is revised to explain the usage of the CPC addressable constant PCALIB associated with CPC power indication calibration adjustments. The TS Bases is being provided for information only.

3.0 BACKGROUND

The Core Protection Calculator (CPC) system is part of the Reactor Protection System (RPS). It is designed to provide automatic protective action to assure that the specified acceptable fuel design limits are not exceeded during anticipated operational occurrences. The CPC system ensures the departure from nucleate boiling ratio (DNBR) of the most limiting fuel assembly in the reactor core is not less than 1.26 and the local power density (LPD) of the most limiting fuel assembly in the core does not exceed 21 KW/ft.

The CPC system monitors the reactor parameters via the four redundant CPCs and the two redundant control element assembly calculators. Independent calculations of DNBR and LPD are performed by each CPC. Each of the CPCs is associated with one of the four RPS protection channels. If an unsafe condition is found to exist by the CPC, it sends a reactor trip signal to the RPS. The RPS circuitry will shut down the reactor upon receiving trip signals from any two of the four CPC channels.

Each CPC receives signals from the ex-core subchannels and then corrects the power measurement for shape annealing, CEA shadowing, and temperature shadowing factors. This calibrated power measurement is then referred to as CPC neutron flux power. The CPCs also calculate a primary calorimetric calculation (CPC ΔT power) from its reactor coolant system inputs. The CPCs then internally auctioneer the higher of the neutron flux power and ΔT power to determine which is to be used in the DNBR and LPD algorithms.

In preparation for installation of the CPC addressable constants for the Cycle 15 startup, site personnel observed that one of the listed calibration requirements from the Startup Test and Setpoints Transmittal (STST) for Cycle 15 was more restrictive than that listed in Technical Specification 3/4.3.1, Table 4.3-1, Functional Item 14, Note 2 (see Attachment 2). Specifically, the STST required CPC ΔT power and CPC neutron flux power adjustment to between 8% and 10% RTP greater than calorimetric power when either CPC power was greater than 10% RTP above calorimetric power in the CPC power range of 15% to 80% power after plant startup from the refueling outage. For this same plant condition, Technical Specification 3/4.3.1, Table 4.3-1, Functional Item 14, Note 2 required CPC ΔT power and

CPC neutron flux power adjustment to between 0% and 10% RTP greater than calorimetric power.

To address calibration requirements associated with the CPC power indications, compensatory actions were taken including revising OP-903-001 to a smaller calibration adjustment limit and incorporating the update of CPC addressable constant PCALIB (PID 104) into the calibration process for CPC power indications to satisfy the requirements given by Westinghouse in the STST.

4.0 TECHNICAL ANALYSIS

The Core Protection Calculator (CPC) System monitors process inputs and computes the core Departure from Nucleate Boiling Ratio (DNBR) and Local Power Density (LPD). The calculated values of DNBR and LPD are compared with trip setpoints and the system initiates automatic protective action to assure that the Specified Acceptable Fuel Design Limits (SAFDLs) on DNBR and LPD are not exceeded during Anticipated Operational Occurrences. The CPCs also aid the Engineered Safety Features Actuation System (ESFAS) in limiting the consequences of accidents.

The quality of CPC core power indications is important to ensure that calculated values of DNBR and LPD are conservative. Note (2) of Table 4.3-1 provides requirements for the periodic calibration of CPC power indications using calorimetric power as the calibration standard. Note (2) of Table 4.3-1 currently requires that CPC power indications found to be greater than calorimetric power by more than 10% for power levels between 15% and 80% RATED THERMAL POWER (RTP) must be adjusted such that they are between 0% and 10% above calorimetric power. Taking this action may not ensure a conservative CPC response to a power escalation event from lower powers. This condition has been identified in Waterford 3 Condition Report CR-WF3-2006-03726 and compensatory measures are implemented until the Technical Specification requirements are revised. Specifically, the downward adjustment to the CPC indication may remove too much conservatism such that when power subsequently increases in the event, the CPC power indication is no longer conservative relative to calorimetric power at the higher power. It is extremely unlikely that a CPC power indication would be found to be more than 10.0% RTP higher than the calorimetric indication. It is also unlikely that this would occur when Waterford 3 is operating below 80% RTP since operation at less than 100% RTP for an extended period of time is not common.

The setpoint analysis for Waterford 3 justifies the values of certain CPC addressable constants for a given cycle. This analysis assumes that adequate conservatism is maintained in the CPC ΔT power and CPC neutron flux power indications for the scenario described in the paragraph above. Specifically, the analysis assumes that if adjustments are required, the resulting indication will be between 8% and 10% RTP above calorimetric power. This retains adequate conservatism in the CPC power indications to address a power increasing event from lower power levels. Therefore, the proposed change to Note (2) of Table 4.3-1 requires that adjustments to CPC ΔT power and CPC neutron flux power indications between 15% and 80% RTP, when they are discovered to be more than 10% RTP above calorimetric power, result in as-left values greater than calorimetric power by 8% to 10% RTP. This requirement does not apply during initial power ascension testing after refueling until after 80% RTP has

been attained and the first calibration of the CPC indications has been performed above 80% RTP. This is because it is recognized that all power indications are closely monitored during startup testing and significant deviations of CPC power from calorimetric power would be promptly corrected. Therefore, this situation is not explicitly addressed in the setpoint and safety analyses because the likelihood that a power increasing event would occur and result in conditions inconsistent with analysis assumptions is acceptably low.

The other proposed changes to Note (2) of Table 4.3-1 clarify the intent of the requirements. The calibration of CPC power indications are not required at less than 15% RATED THERMAL POWER since inherent conservatisms in the CPC calculations at these power levels compensate for any potential de-calibration. The phrase "as close as practical to calorimetric power" was incorporated to convey the proper intent. The intent of adjustments to CPC power indications at power levels below 80% RTP that are found to be non-conservative (CPC indication is found to be less than calorimetric power) is that the adjustments should result in CPC power indications being as close as practical to calorimetric power. The intent of adjustments to CPC power indications at power levels at or above 80% RTP that are found not to be within ±2% RTP is that the adjustments should result in CPC power indications being as close as practical to calorimetric power. Finally, it is specifically identified in the proposed changes that the ranges of acceptance criteria and adjustment limits are percentages of RATED THERMAL POWER instead of percentages of current power. This change is included to provide clarity of the requirements.

5.0 REGULATORY ANALYSIS

5.1 Applicable Regulatory Requirements/Criteria

The proposed changes have been evaluated to determine whether applicable regulations and requirements continue to be met.

Entergy has determined that the proposed changes do not require any exemptions or relief from regulatory requirements, other than the TS, and do not affect conformance with any General Design Criterion (GDC) differently than described in the Updated Final Safety Analysis Report (UFSAR).

5.2 No Significant Hazards Consideration

Entergy Operations, Inc. has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change will redefine the tolerance band allowed for the Reactor Protection System (RPS) linear power, Core Protection Calculator (CPC) ΔT power, and CPC neutron flux power signals, and clarify the intent of the calibration

requirements for CPC power indications when at less than 15% power, and specify that adjustment limits are percentages of RATED THERMAL POWER instead of percentages of current power.

Redefining the tolerance band is in conformance with the safety analysis. The consequences of an accident will be in conformance with the safety analysis.

Clarifying the intent of there being no calibration requirements for CPC power indications when at less than 15% power is essentially editorial. At this low power level, CPC calculations compensate for any potential de-calibration. Specifying that adjustment limits are percentages of RATED THERMAL POWER instead of percentages of current power is essentially editorial. This change is made to avoid confusion in interpreting the requirements. This amendment request does not change the design, analysis or operation of any plant systems or components.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No.

   The proposed change to Technical Specification power calibration tolerance limits is in conformance with the safety analysis. This amendment request does not change the design, analysis or operation of any plant systems or components. CPC's cannot cause an accident, and this change will not create the possibility of a new of different type accident.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   The proposed change to Technical Specification power calibration tolerance limits is in conformance with the safety analysis. This proposed change maintains the margin of safety for design basis events. Therefore, this change does not involve a significant reduction in the margin of safety.

Based on the above, Entergy concludes that the proposed amendment(s) present no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.3 Environmental Considerations

The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 PRECEDENCE

The NRC issued License Amendment to Palo Verde Nuclear Generating Station (September 1, 1995) and Arkansas Nuclear One Nuclear Generating Station Unit 2 (May 5, 1997) approving the Technical Specification change requirement that CPC power indications found to be greater than calorimetric power by more than 10% for power levels between 15% and 80% RATED THERMAL POWER (RTP) must be adjusted such that they are between 8% and 10% above calorimetric power.

7.0 REFERENCES

1. Westinghouse Letter NF-WTFD-06-42, Startup Test and Setpoints Transmittal for Cycle 15, dated December 12, 2006.

Attachment 2

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Technical Specification 3/4.3.1, Reactor Protective Instrumentation Surveillance Requirements, Table 4.3-1

For Information Only

TABLE 4.3-1 (Continued)

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
13. Reactor Trip Breakers	N.A.	N.A.	Q (10,11), S/U(1)	1, 2, 3*, 4*, 5*
14. Core Protection Calculators	S	D(2,4),R(4,5)	Q(9),R(6)	1, 2
15. CEA Calculators	S	R	Q,R(6)	1, 2
16. Reactor Coolant Flow - Low	S	R	Q	1, 2

FOR INFORMATION ONLY.

Attachment 3

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Technical Specification Revised Pages

TABLE 4.3-1 (Continued)

TABLE NOTATIONS

*With the reactor trip breakers in the closed position, the CEA drive system capable of CEA withdrawal, and fuel in the reactor vessel.

#The provisions of Specification 4.0.4 are not applicable when reducing reactor power to less than 10^{-4}% of RATED THERMAL POWER[a] from a reactor power level greater than 10^{-4}% of RATED THERMAL POWER[a]. Upon reducing power below 10^{-4}% of RATED THERMAL POWER[a], a CHANNEL FUNCTIONAL TEST shall be performed within 2 hours if not performed during the previous 31 days. This requirement does not apply with the reactor trip breakers open.

(1) Each startup or when required with the reactor trip breakers closed and the CEA drive system capable of rod withdrawal, if not performed in the previous 7 days.

(2) Heat balance only (CHANNEL FUNCTIONAL TEST not included):

REPLACE WITH INSERT 'A'

a. Between 15% and 80% of RATED THERMAL POWER, compare the Linear Power Level, the CPC at ΔT power, and CPC nuclear power signals to the calorimetric calculation.

   If any signal is within -0.5% to +10% of the calorimetric calculation, then do not calibrate except as required during initial power ascension following refueling.

   If any signal is less than the calorimetric calculation by more than 0.5%, then adjust the affected signal(s) to within 0.0% to +10.0% of the calorimetric caluclation.

   If any signal is greater than the calorimetric calculation by more than 10%, then adjust the affected signal(s) to within 0.0% to 10% of the calorimetric.

b. At or above 80% of RATED THERMAL POWER, compare the Linear Power Level, the CPC Δ T power, and CPC nuclear power signals to the calorimetric calculation. If any signal differs from the calorimetric calculation by an absolute difference of more than 2%, then adjust the affected signal(s) to agree with the calorimetric calculation within -2% to +2%.

During PHYSICS TESTS, these daily calibrations may be suspended provided these calibrations are performed upon reaching each major test power plateau and prior to proceeding to the next major test power plateau.

(3) Above 15% of RATED THERMAL POWER, verify that the linear power subchannel gains of the excore detectors are consistent with the values used to establish the shape annealing matrix elements in the Core Protection Calculators.

(4) Neutron detectors may be excluded from CHANNEL CALIBRATION.

(5) After each fuel loading and prior to exceeding 70% of RATED THERMAL POWER, the incore detectors shall be used to determine or verify acceptable values for the shape annealing matrix elements used in the Core Protection Calculators.

[a] As measured by the Logarithmic Power Channels.

INSERT A

a. No adjustments to RPS Linear Power or CPC power indications are required below 15% of RATED THERMAL POWER.

b. Between 15% and 80% of RATED THERMAL POWER, compare the RPS Linear Power, CPC ΔT power, and CPC neutron flux power indications to calorimetric power and take the following actions as applicable:

   IF RPS Linear Power or either CPC power indication is within -0.5% to +10% of RATED THERMAL POWER of calorimetric power, THEN do not calibrate the affected indication except as required during the initial power ascension following refueling.

   IF RPS Linear Power or either CPC power indication is less than calorimetric power by more than 0.5% of RATED THERMAL POWER, THEN calibrate the affected indication as close as practical to calorimetric power and within -0.5% to +10% of RATED THERMAL POWER of calorimetric power.

   IF the RPS Linear Power indication is greater than calorimetric power by more than 10% of RATED THERMAL POWER, THEN calibrate it such that it is within 0% to 10% of RATED THERMAL POWER greater than calorimetric power.

   IF either the CPC ΔT power or the CPC neutron flux power indication is greater than calorimetric power by more than 10% of RATED THERMAL POWER, THEN calibrate the affected CPC power indication such that it is 8% to 10% of RATED THERMAL POWER greater than calorimetric power. This requirement does not apply during the initial power ascension following refueling but becomes applicable after the first calibration of the CPC power indications at or above 80% of RATED THERMAL POWER in the power ascension.

c. At or above 80% of RATED THERMAL POWER, compare the RPS Linear Power, CPC ΔT power, and CPC neutron flux power indications to calorimetric power. IF any indication is not within $\pm$2% of RATED THERMAL POWER of calorimetric power, THEN calibrate the affected indication as close as practical to calorimetric power but within -0.5% to +2% of RATED THERMAL POWER of calorimetric power.

Attachment 4

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Technical Specification Bases Revised Pages

For Information Only

3/4.3 INSTRUMENTATION

BASES

3/4.3.1 and 3/4.3.2 REACTOR PROTECTIVE AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEMS INSTRUMENTATION

The OPERABILITY of the Reactor Protective and Engineered Safety Features Actuation Systems instrumentation and bypasses ensures that (1) the associated Engineered Safety Features Actuation action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, (2) the specified coincidence logic is maintained, (3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and (4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the safety analyses.

The redundancy design of the Control Element Assembly Calculators (CEAC) provides reactor protection in the event one or both CEACs become inoperable. If one CEAC is in test or inoperable, verification of CEA position is performed at least every 4 hours. If the second CEAC fails, the CPCs will use DNBR and LPD penalty factors to restrict reactor operation to some maximum fraction of RATED THERMAL POWER. If this maximum fraction is exceeded, a reactor trip will occur.

ADD INSERT 'B'

Table 3.3-3 ACTION 19 allows for continued operation in the applicable MODE(S) with one of the Refueling Water Storage Pool (RWSP) - Low or Steam Generator ΔP Emergency Feedwater Actuation Signal (EFAS) channels inoperable provided the channel is placed in the bypass or tripped condition within 1 hour. If an inoperable channel of the RWSP - Low or Steam Generator ΔP EFAS channel is required to be placed in the tripped condition within one hour, then within 48 hours the channel must either be restored to OPERABLE status or be placed in the bypassed condition. The bypassed channel must be restored to OPERABLE status prior to entering the applicable MODE(S) following the next MODE 5 entry. With one of the RWSP - Low or Steam Generator ΔP (EFAS) channels inoperable and in bypass, and a failure occurs or repairs are necessary on one of the remaining channels, ACTION 20 must be entered.

ACTION 19a is annotated with a 3.0.4 exemption to allow the changing of MODE(S) even though one channel is bypassed. MODE changes between MODES 1 and 4 with this configuration are allowed, to permit maintenance and testing on the inoperable channel. In this configuration, the protection system is in a two-out-of-three logic, and the probability of a random failure affecting two of the OPERABLE channels is remote. The tripped condition does not have this annotation as a single failure could cause the Emergency Core Cooling System and Containment Spray System suctions to be supplied from the Safety Injection System Sump prematurely and loss of the Low Pressure Safety Injection Systems with a premature

INSERT B

Note 2 of Table 4.3-1 provides requirements for the periodic calibration of CPC power indications using calorimetric power as the calibration standard.

No calibration of CPC power indications are required at less than 15% RATED THERMAL POWER since inherent conservatisms in the CPC calculations at these power levels compensate for any potential decalibration. Significant differences between CPC power indications and calorimetric power observed during surveillances should always be investigated to determine the cause of the deviation. The most accurate calorimetric power indication available at the time of calibration should be used.

Between 15% and 80% power, other than during the initial power ascension following refueling (before CPC power indications have been calibrated at greater than or equal to 80% power), if the daily surveillance finds that a CPC power indication is greater than the calorimetric power indication by more than 10% RTP, it should be adjusted to be within 8.0% and 10.0% RTP above the calorimetric. If the CPC power indications have been calibrated properly to the calorimetric power indication at high power (meaning 80% or above), then the most appropriate thing to do is not calibrate CPC powers below 80% power if they are conservative relative to calorimetric. In the extremely unlikely event that a CPC power indication is found to be more than 10.0% RTP higher than the calorimetric, it should be adjusted as little as possible to meet the requiremnts of the Technical Specifications. If this situation were to occur, it is likely that there is an anomaly in the calibration data or instrumentation. The safety and setpoint analysis does not explicitly address this situation because it is an unreasonable scenario without some other anomaly in the measurements, calibration or instrumentation. The probability of being greater than +10.0% from calibration following a power reduction from a calibrated condition, recalibrating to between +8.0% and +10.0% and then having a power increasing event which requires a CPC trip and having CPC be non-conservative at the point the trip is needed is too low to consider it as being within the CPC design basis.

At or above 80% RATED THERMAL POWER, the calorimetric power used must be at least as accurate as COLSS secondary calorimetric power (2% RATED THERMAL POWER, one sided 95/95 uncertainty). As used in Note 2, the phrase "as close as practical to calorimetric power" implies that the as-left difference between the affected CPC power indication and calorimetric power should be as near to 0% RATED THERMAL POWER as possible.

CPCs use the addressable constant PCALIB to determine power dependent biases for use in its calculations. Thus, when calibrations of CPC power indications are performed, it may be necessary to adjust the CPC constant PCALIB as described below:

- While operating below 80% RATED THERMAL POWER (plus uncertainty), whenever the calibration of either CPC neutron flux power or CPC ΔT power is adjusted, PCALIB must be set equal to the lower of the power level (in % RATED THERMAL POWER) of that adjustment and the power level (in % RATED THERMAL POWER) of the most recent calibration adjustment (or verification) of the other power indication (the one not being calibrated).

- PCALIB can be set to the current power level (in % RATED THERMAL POWER) whenever both CPC neutron flux power and CPC ΔT power are adjusted or verified to be within the Technical Specification requirements at that power level.

- PCALIB can be set to 100.0 whenever both CPC neutron flux power and CPC ΔT power have been adjusted or verified to be within the Technical Specification requirements at or above 80% RATED THERMAL POWER (plus uncertainty).

- PCALIB must be set to 20.0 prior to initial power ascension following refueling.