

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 1346
FILE: _____

FROM: Florida Power & Light Co. Miami, Fla. 33101 Mr. R.E. Uhrig			DATE OF DOC 1-31-75	DATE REC'D 2-5-75	LTR X	TWX	RPT	OTHER
TO: A. Giambusso			ORIG 3 signed	CC	OTHER	SENT AEC PDR SENT LOCAL PDR		XXX XXX
CLASS	UNCLASS XXX	PROP INFO	INPUT XXX	NO CYS REC'D 40		DOCKET NO: <u>50-250/251</u>		

DESCRIPTION:
Ltr requesting an amdt to the OL....notarized
1-31-75....trans the following.....

ENCLOSURES:
Proposed change to the tech specs.....
concerning....consistency between the
protective instrumentation setpoints and
remainder of the instrumentation setpoints...

(40 cys encl rec'd)

PLANT NAME: Turkey Point 3 & 4

FOR ACTION/INFORMATION 2-5-75 JB

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| ✓ 1 - LOCAL PDR <i>Homestead, Fla.</i> | 1 - NATIONAL LABS | 1 - PDR-SAN/LA/NY ⁽²⁾ |
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Rm B-127 GT |
| 1 - Newton Anderson | | 1 - J. D. RUNKLES, Rm E-201
GT |
| ✓ 12 - ACRS HOLDING/SENT | | |

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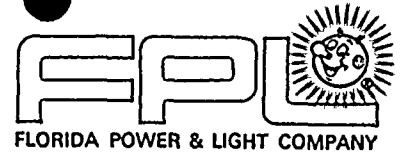
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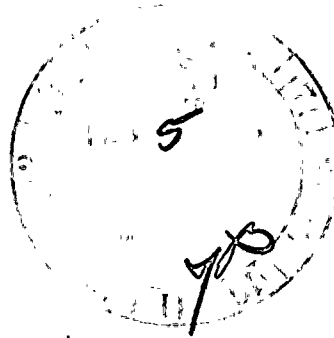
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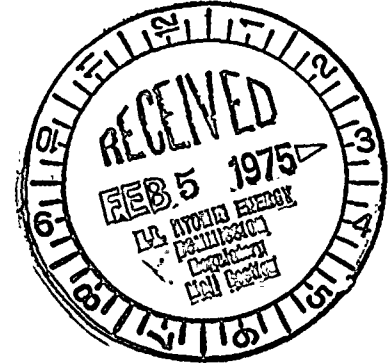
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January 31, 1975
L-75-54



Mr. Angelo Giambusso, Director
Division of Reactor Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



Dear Mr. Giambusso:

Re: Turkey Point Plant Unit Nos. 3 and 4
Docket Nos. 50-250 and 50-251
Proposed Amendment to Facility
Operating Licenses DPR-31 and DPR-41

In accordance with 10 CFR 50.30, Florida Power & Light Company submits herewith three (3) signed originals and forty (40) conformed copies of a request to amend Appendix A of the Facility Operating Licenses DPR-31 and DPR-41.

We can avoid abnormal occurrence reports which have no safety significance and establish consistency between the protective instrumentation setpoints and the remainder of the instrumentation setpoints by utilizing the allowances for setpoint tolerance contained in the safety analyses. Florida Power & Light Company and the Nuclear Steam Supply System vendor have investigated the protective instrumentation Technical Specifications in conjunction with the safety analyses provided in the FSAR and established proposed Technical Specifications which incorporate an instrument setpoint tolerance.

The proposed changes are as set forth in the attached revised Technical Specification pages bearing the date of 1/17/75 in the lower right hand corner and as described below.

Page 2.3-1

Under the heading "Specification" change 25% to 26%.

Page 2.3-2

Add a factor of 1.035 to the coefficient of ΔT_0 contained in the expression for the overtemperature ΔT setpoint at the top of the page.

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[The text in this section is extremely faint and illegible due to low contrast and noise. It appears to be a large block of text, possibly a list or a series of entries, but the individual characters and words cannot be discerned.]

January 31, 1975

Page 2.3-3

Add a factor of 1.03 to the coefficient of ΔT_0 contained in the expression for the overpower ΔT setpoint at the top of the page.

Under the heading of Pressurizer in the middle of the page, change-

1715 psig to 1680 psig
2385 psig to 2375 psig
92% to 93%

Under the heading of Reactor Coolant Flow change 90% to 89% and 56.1 Hz to 56.0 Hz.

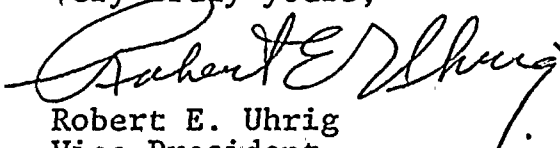
Page 2.3-4

In paragraph 1.0, change 10% to 11% and in paragraph 2.0, change 45% to 46%.

Table 3.5-4

In the column headed Setpoint, change 1715 psig to 1680 psig and 5% span to 4% span.

Very truly yours,



Robert E. Uhrig
Vice President

REU:HNP:nch
Attachments

cc: Mr. Norman C. Moseley
Mr. Jack R. Newman



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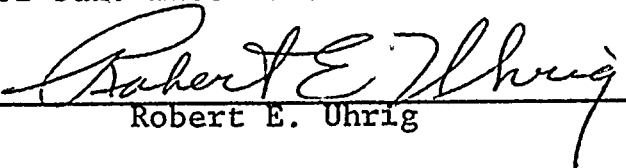
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COUNTY OF DADE)

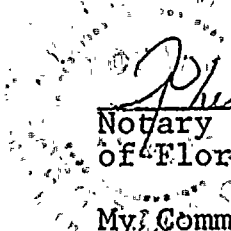
ROBERT E. UHRIG, being first duly sworn, deposes and says:

That he is a Vice President of Florida Power & Light Company,
the Licensee herein;

That he has executed the foregoing instrument, that the statements
made in this said instrument are true and correct to the best of
his knowledge, information and belief; and that he is authorized
to execute the instrument of said Licensee.


Robert E. Uhrig

Subscribed and sworn to before me this
31st day of January, 1975.


Phyllis Quate
Notary Public, in and for the State
of Florida at Large
My Commission expires _____
NOTARY PUBLIC, State of Florida at Large
My Commission Expires August 24, 1975
Bonded by AUTO OWNERS INSURANCE



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2.3 LIMITING SAFETY SYSTEM SETTINGS, PROTECTIVE INSTRUMENTATION

Applicability: Applies to trip settings for instruments monitoring reactor power; reactor coolant pressure, temperature and flow; pressurizer level; and steam generator level.

Objective: To prevent the principal process variables from exceeding a safety limit.

Specification: Reactor trip settings shall be as follows:

Nuclear Flux

Power range (low set point) equal to or less than 26% of rated power, may be bypassed when power is greater than 10% of rated power.

Power range (high set point) equal to or less than 109% of rated power.



Reactor Coolant Temperature

Overtemperature ΔT

$$\leq \Delta T_o \cdot 1.035 \left[K_1 - 0.0174(T-566.6) + 0.000976(P-1885) - f(\Delta q) \right]$$

ΔT_o = Indicated ΔT at rated power, F

T = Average temperature, F

P = Pressurizer pressure, psig

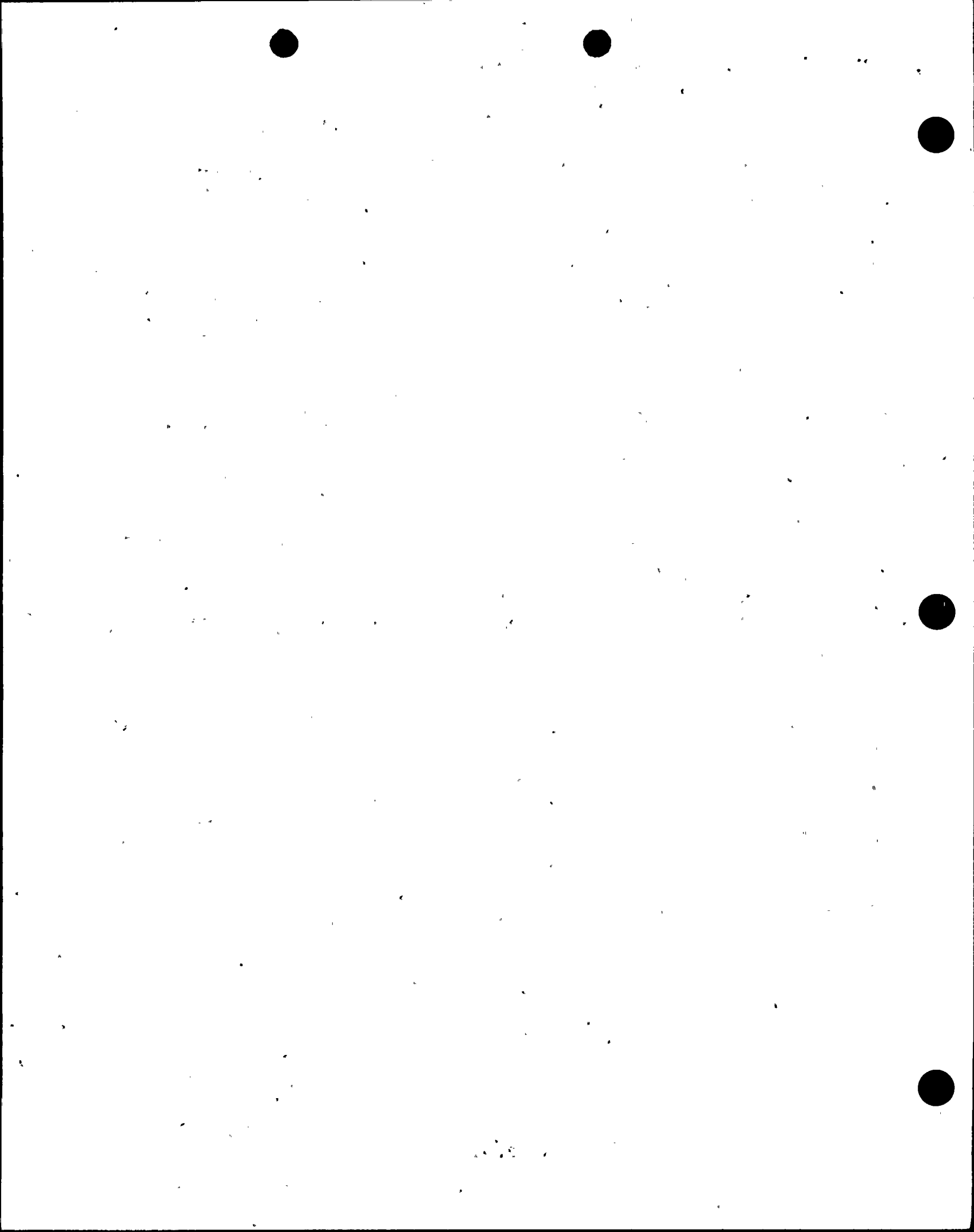
$f(\Delta q)$ = a function of the indicated difference between top and bottom detectors of the power-range nuclear ion chambers; with gains to be selected based on measured instrument response during startup tests such that:

For $(q_t - q_b)$ within +10 percent and -14 percent where q_t and q_b are the percent power in the top and bottom halves of the core respectively, and $q_t + q_b$ is total core power in percent of rated power, $f(\Delta q) = 0$.

For each percent that the magnitude of $(q_t - q_b)$ exceeds +10 percent, the Delta-T trip set point shall be automatically reduced by 3.5 percent of its value at interim power.

For each percent that the magnitude of $(q_t - q_b)$ exceeds -14 percent, the Delta-T trip set point shall be automatically reduced by 2 percent of its value at interim power.

K_1 (Three Loop Operation) = 1.120 ;
(Two Loop Operation) = 0.88



Over-
power ΔT

$\leq \Delta T_o$ 1.03

$$\left[1.09 - K_1 \frac{dT}{dt} - K_2 (T - T') - f(\Delta q) \right]$$

ΔT_o = Indicated ΔT at rated power, F

T = Average temperature, F

T' = Indicated average temperature at nominal conditions and rated power, F

K_1 = 0 for decreasing average temperature,
0.2 sec./F for increasing average temperature

K_2 = 0.00134 for T equal to or more than T';
0 for T less than T'

$\frac{dT}{dt}$ = Rate of change of temperature, F/sec

f(Δq) = As defined above

Pressurizer

Low Pressurizer pressure - equal to or greater than 1680 psig.

High Pressurizer pressure - equal to or less than 2375 psig.

High Pressurizer water level - equal to or less than 93% of full scale.

Reactor Coolant Flow

Low reactor coolant flow - equal to or greater than .89% of normal indicated flow

Low reactor coolant pump motor frequency - equal to or greater than 56.0 Hz

Under voltage on reactor coolant pump motor bus - equal to or greater than 60% of normal voltage

Steam Generators

Low-low steam generator water level - equal to or greater than 5% of narrow range instrument scale



Reactor Trip Interlocks

Protective instrumentation settings for reactor trip interlocks shall be as follows:

1. Above 11% of rated power, the low pressurizer pressure trip, high pressurizer level trip and the low reactor coolant flow trip (for two or more loops) are made functional.
2. Above 46% of rated power the single loop loss of flow trip is made functional. It need not be made functional below 60% of rated power for two loop operation, if the overtemperature ΔT trip setpoint has been adjusted using $K_1 = 0.88$.



TABLE 3.5-4

ENGINEERED SAFETY FEATURE
SET POINTS

NO.	FUNCTIONAL UNIT	CHANNEL ACTION	SET POINT
1.	High Containment Pressure	Safety Injection Containment Spray * Steam Line Isolation * Containment Isolation *	≤ 6 psig
2.	High-High Containment Pressure	See No. 1	≤ 30 psig
3.	Pressurizer (coincident) Low Pressure Low Level	Safety Injection	≥ 1680 psig $\geq 4\%$ span
4.	High Steam Line Differential Pressure (2/3 between any header and any line)	Safety Injection	≤ 150 psi
5.	High Steam Line Flow (2/3 lines)	Safety Injection Steam Line Isolation	d/p for $3.84 \cdot 10^6$ lb/hr, 770 psig, 100% RP d/p for $0.64 \cdot 10^6$ lb/hr, 1005 psig, 0% RP d/p linear with 1st stg. press., 0-100% RP
	Coincident with:		
	Low Steam Line Pressure, Or		≥ 600 psig
	Low T _{avg.}		≥ 531 F

* High and High-High coincident



SAFETY EVALUATION

The revised instrument limiting safety system settings are consistent with the stated bases for such setpoints and represent the most current approach to such setpoints.

The target value for the setpoints used for actually setting the device will remain unchanged*. The change is a change on paper (Technical Specifications) to properly make allowance for the practical limitations that exist in actually achieving a given setpoint.

The limiting setpoint values as established in Chapter 14 of the FSAR have not been altered. The allowance for instrument error still exists between the revised Technical Specification and the safety analyses values as stated in the Technical Specification Bases.

The attached Table provides a comparison of the revised Technical Specifications and the limiting setpoint values utilized in the safety analyses provided in Chapter 14.0 of the FSAR.

*In the case of the pressurizer high pressure trip setpoint, the target value for the actual setpoint device will be revised but it will be revised in the conservative direction to correspond to the requested change in the Technical Specification which is also in the conservative direction.



11

COMPARISON OF THE LIMITING SETPOINT
ASSUMED IN THE SAFETY ANALYSES
AND THE PROPOSED TECHNICAL SPECIFICATIONS
(LSSS)

<u>Instrument Channel</u>	<u>Proposed Technical Specification</u>	<u>Margin for Instrument Error (1)</u>	<u>Limiting Value Assumed in the Safety Analyses (2)</u>
<u>Nuclear Flux Trip</u> (Low range, high level)	<26%	8%	34%
<u>Nuclear Flux Permissive Interlocks</u>			
P-7	<11%	8%	19%
P-8	<46%	8%	54%
<u>Pressurizer Pressure Trips</u>			
Low Pressure (1900 psia operation)	>1680 psig	20 psi	1660 psig
High Pressure (1900 psia operation)	<2375 psig	10 psi	2385 psig
<u>Pressurizer High Level Trip</u>	<93%	7%	100%
<u>RCS Flow Trips</u>			
Low Loop Flow	>89%	2%	87
Low Frequency, Pump Power Supply	>56.0 Hz	3 Hz	53 Hz
Pressurizer Low Level (SI)	>4%	4%	0%
Overpower ΔT (1900 psia)	<1.03 (ΔT_0 Coefficient)	=4%	1.07 (ΔT_0 Coefficient)
(SEE TECHNICAL SPECIFICATION, PAGE NO. 2.3-3 FOR DEFINITION OF COEFFICIENT)			
<u>Overtemperature ΔT, (1900 psia)</u>			
3-Loop Operation	<1.035 (ΔT_0 Coefficient)	=6%	1.09 (ΔT_0 Coefficient)
2-Loop Operation	<1.035 (ΔT_0 Coefficient)	=8%	1.11 (ΔT_0 Coefficient)

- NOTES:
- The allowed margin is always greater than, or equal to the overall channel accuracy.
 - These values were provided by the NSSS vendor and were derived from the safety analyses provided in Chapter 14.0 of the Turkey Point Unit Nos. 3 and 4 FSAR.

