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UHRIG,R.E. FLORIDA POWER & LIGHT CO.
RECIP.NAME RECIPIENT AFFILIATION
REID,R.W. OPERATING REACTORS BRANCH 4

SUBJECT: PROVIDES STATUS OF VERIFICATION PROGRAM FOR TECHNIQUE OF MEASURING RESISTANCE TEMP DETECTORS TIME CONSTANTS.

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FLORIDA POWER & LIGHT COMPANY

May 1, 1979
L-79-107

Office of Nuclear Reactor Regulation
Attention: Mr. R. W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Reid:

Re: St. Lucie Unit 1
Docket No. 50-335
Resistance Temperature Detectors

The purpose of this report is to inform you of the status of the St. Lucie Unit 1 verification program for the Loop Current Step Response (LCSR) technique of measuring Resistance Temperature Detector (RTD) time constants. During the period of March 20 through March 22, 1979, LCSR tests were performed on the sixteen (16) protection channel RTDs while at steady-state full power conditions. The results of these tests compared with the earlier surveillance of October, 1978 are tabulated below:

TIME CONSTANT (SECONDS)

Tag No.	October 1978	March 1979
TE-1112CA	4.0 ∓ 0.4	4.1 + 1.2/-0.7
TE-1112HA	4.4 ∓ 0.2	4.5 ± 0.3
TE-1122CA	6.0 ∓ 0.6	6.0 ∓ 0.7
TE-1122HA	5.3 ∓ 0.5	5.7 ∓ 0.7/-0.5
TE-1112CB	5.0 ∓ 0.5	4.8 + 0.6/-0.4
TE-1112HB	5.0 ∓ 0.9	5.3 ± 0.6
TE-1122CB	5.9 ∓ 0.3	5.4 ∓ 0.2
TE-1122HB	5.8 ∓ 0.3	5.6 ∓ 0.4
TE-1112CC	4.5 ∓ 0.7	4.3 ∓ 0.8/-0.5
TE-1112HC	5.4 ∓ 0.4	5.4 + 0.7/-0.5
TE-1122CC	5.4 ± 0.3	5.7 ± 0.5
TE-1122HC	5.4 ∓ 0.4	5.0 ∓ 0.7/-0.5
TE-1112CD	4.8 ∓ 0.3	4.9 ± 0.5
TE-1112HD	4.9 ∓ 0.5	5.7 ∓ 1.0/-0.7
TE-1122CD	5.7 ∓ 0.5	5.6 + 0.9/-0.7
TE-1122HD	4.3 ∓ 0.5	4.8 + 1.6/-0.9

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Analysis of the test data continues to confirm that the time constant of each RPS-RTD is less than the 8.0 second limit of Technical Specification Table 3.3-2. Comparison of the results of the current surveillance with the October, 1978 tests shows an average time constant of 5.2 seconds versus 5.1 seconds.

In summary, the results of LCSR Surveillance testing at the St. Lucie Plant in October, 1978 and March, 1979 indicate the following:

1.) The time constant of each protection channel RTD is less than the specified limit of 8.0 seconds,

2.) There is no evidence of a generic increasing trend in the time constant of these sensors.

3.) Replacement of additional RTD's to preclude degradation is not needed at this time.

Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/MAS/paf

cc: Mr. James P. O'Reilly, Region II
Harold F. Reis, Esquire