



November 15, 1982  
L-82-50E

Mr. James P. O'Reilly  
Regional Administrator, Region II  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

Re: St. Lucie Unit 2  
Docket No. 50-389, 10 CFR 50.55(e); 82-022  
ESFAS Pressurizer Pressure Signal - Wrong Polarity

On October 13, 1982, Florida Power & Light Company (FPL) notified the Region II Office of Inspection and Enforcement in accordance with the requirements of 10 CFR 50.55(e) of a potential deficiency regarding the ESFAS pressurizer pressure signal polarity. Attached please find our final resolution of this issue.

Very truly yours,

Robert E. Uhrig  
Vice President  
Advanced Systems and Technology

REU/jea

Attachment

cc: Director of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

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## I. Summary

Due to a Control Wiring Diagram (CWD) drafting error, resistor polarities have been interchanged, so that the minus polarity of the Engineering Safeguard Actuator System (ESFAS) was shown connected to the resistor's plus and the plus polarity of the ESFAS to the minus of the resistor.

Per the requirements of 10 CFR 50.55(e) this concern was evaluated and has been deemed reportable. This final report is submitted to provide NRC with a description of the deficiency and the corrective actions which have been implemented.

## II. Description

The Safety Injection Actuation Signal (SIAS) automatically initiates the Safety Injection System, the supporting systems and the Containment Isolation System. The SIAS is initiated by a coincidence of either two-out-of-three low pressurizer pressure signals or two-out-of-three high containment pressure signals. The pressurizer low pressure signals are generated by pressure transmitters and conditioned to obtain 4 - 20 mA in the instrument current loop. The input signal to the ESFAS cabinets is 1 - 5V generated across the 250 ohm precision resistor in the pressurizer current loop.

The Control Wiring Diagram 2998-B-327 sheets 372 through 375 indicate cables terminated at the wrong polarity terminal blocks, as indicated above.

An engineering review of Control Wiring Diagrams 2998-B-327 sheets 372 through 375 has identified the drawing error after the equipment was released for installation.

## III. Corrective Action

The CWD 2998-B-327 sheets 372 through 375 were revised to correct the cable connections on the ESFAS cabinets to the right polarity and on site the cables were reconnected to the correct terminal points at the ESFAS cabinets.

## IV. Safety Implications

We have evaluated this concern and determined that a design deficiency exists which if left uncorrected could affect plant safety. Failure to detect the wrong connections at the ESFAS cabinets for the pressurizer pressure input would inhibit the reinstatement of the automatic SIAS feature during the reactor start-up when the pressure has risen above the SIAS automatic reset value of 1808 psia. This drawing error would have been detected, however, during the actual pre-operational ESFAS testing.

The SIAS actuation by the high containment pressure would however, remain unaffected by this wiring error. Corrective action as identified has been undertaken.

## V. Conclusion

With the above mentioned corrective actions, this item is resolved and closed regarding 10 CFR 50.55(e) reporting requirements.