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 SAGER, D.A. Florida Power & Light Co.
 RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Special rept: on 940504, non-valid failure of EDG 1A occurred due to spurious actuation of high water jacket temp switch (designated TS-59-003A). Subj switch replaced w/new model 9025G & EDG 1A declared back in svc on 940505.

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IA-2



June 2, 1994

L-94-136
10 CFR 50.36

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

Re: St. Lucie Unit 1
Docket No. 50-335
Special Report
Date of Event: May 4, 1994
Emergency Diesel Generator Failure

The attached Special Report is being submitted pursuant to the requirements of St. Lucie Technical Specifications. This report provides notification of one non-valid failure of the 1A Diesel Generator.

Should there be any question on this information, please contact us.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'D. A. Sager', is written over the typed name.

D. A. Sager
Vice President
St. Lucie Plant

DAS/JWH/kw

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, USNRC Region II
Senior Resident Inspector, USNRC, St. Lucie Plant

DAS/PSL #1132-94

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Handwritten initials 'IEZ' with a vertical line through them, possibly indicating a date or a specific reference.

NRC SPECIAL REPORT
DIESEL GENERATOR NON-VALID FAILURE
SPECIAL REPORT

I. TITLE

1A Emergency Diesel Generator non-valid failure due to a spurious actuation of a high water jacket temperature switch.

II. INITIAL CONDITIONS

St. Lucie Unit 1 and Unit 2 were at 100% power.

III. EVENT SEQUENCE

On 5/4/94, the 1A Emergency Diesel Generator (EDG) was started to perform a surveillance in accordance with Technical Specifications Table 4.8-1. Surveillance testing of the 1A EDG is required every 31 days. The 1A EDG surveillance began at 1228. The 1A EDG automatically tripped at 1305 on high water jacket temperature. An operator was recording the EDG parameters at the time of the trip and the water temperatures were below the 205 degrees Fahrenheit design trip setpoint of the temperature switch (designated TS-59-003A). The temperature switch was replaced, the surveillance was successfully performed and the 1A EDG was declared back in service at 0245 on 5/5/94. The 1A EDG was out of service for approximately 14 hours to replace the temperature switch.

IV. CAUSE OF THE EVENT

The 1A EDG tripped due to a non-valid water jacket high temperature caused by a setpoint drift of the temperature switch. At the time of the trip the recorded water temperature was 172 degrees Fahrenheit as read from installed thermometers in the water piping (the accuracy of the thermometers was verified).

NRC SPECIAL REPORT
DIESEL GENERATOR NON-VALID FAILURE
SPECIAL REPORT

V. CORRECTIVE ACTIONS

- 1) TS-59-003A (model 9025B) was replaced with the new model 9025G temperature switch. The temperature switch manufacturer (Square D) has replaced the model 9025B switch with the 9025G switch because it is less susceptible to setpoint drift and repeatability problems.
- 2) The 1A Emergency Diesel Generator was declared back in service at 0245 on 5/5/94 following the successful completion of the surveillance run.
- 3) The Instrumentation and Control Department performed a detailed inspection and root cause analysis on the temperature switch.
- 4) Nuclear Plant Work Orders (NPWO's) have been generated to replace temperature switches of this model number (9025B).

VI. SUPPORTING INFORMATION

- This problem was evaluated to be a non-valid failure per Reg. Guide 1.108 C.2.e.2 because the high water jacket temperature shutdown is overridden during the presence of a Safety Injection Actuation Signal and an undervoltage condition on the safety related 4.16KV AC buses. Additionally, actual water jacket temperature never exceeded 172 degrees Fahrenheit. Thus, the unsuccessful run was attributed to the spurious operation of a trip that is bypassed in the emergency operating mode.
- The 1A EDG was out of service for approximately 14 hours until the switch replacement could be completed and a successful surveillance test performed.
- The surveillance schedule required because of this non-valid failure remains at 31 days. The last valid failure of the 1A EDG was on 7/5/91 and remains the single valid failure since 6/12/90 (EDG run counts started at this time when Reg. Guide 1.108 was implemented into the St. Lucie Unit 1 Technical Specifications). The current number of valid tests for the 1A EDG is now 56.