



Carolina Power & Light Company

P. O. Box 101, New Hill, N. C. 27562
June 1, 1983

Mr. James P. O'Reilly
United States Nuclear Regulatory Commission
Region II
101 Marietta Street, Northwest (Suite 3100)
Atlanta, Georgia 30303

NRC-81

50-400
50-401

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT
1986-90 - 900,000 KW - UNITS 1 & 2
SAFETY INJECTION (CHARGING) PUMP OPERATION
FOLLOWING A SECONDARY SIDE HIGH ENERGY LINE RUPTURE - ITEM 38

Dear Mr. O'Reilly:

Attached is our third interim report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) on July 7, 1980. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by January 31, 1985.

Thank you for your consideration in this matter.

Yours very truly,

R. M. Parsons
Project General Manager
Shearon Harris Nuclear Power Plant

RMP/dh

Attachment

cc: Mr. G. Maxwell (NRC-SHNPP)
Mr. R. Prevatte (NRC-SHNPP)
Mr. V. Stello (NRC)

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CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

UNITS 1 AND 2

INTERIM REPORT #3

SAFETY INJECTION PUMP OPERATION
FOLLOWING A SECONDARY SIDE
HIGH ENERGY LINE RUPTURE
ITEM 38

JUNE 1, 1983

REPORTABLE UNDER 10CFR50.55(e)

SUBJECT: 10CFR50.55(e) Reportable Item
Shearon Harris Nuclear Power Plant
Potential Safety Injection Pump Damage

ITEM: Safety Injection Pumps for SHNPP Units 1 and 2

SUPPLIED BY: Westinghouse Water Reactor Division (Pacific Pump Company,
Subvendor)

NATURE OF DEFICIENCY: Following a secondary side high energy line rupture, the safety injection pumps will automatically come on line and inject cooling water into the reactor coolant system. However, if during a safety actuation incident (when the miniflow valves are closed) the reactor backpressure increases to a value below the safety valve set pressure but above the pump shutoff head, the high head safety injection pumps could reach a deadhead condition. There is a potential for the pumps to be damaged while operating in a deadhead condition.

DATE PROBLEM WAS CONFIRMED TO EXIST: Westinghouse Letter CQL-5888 dated May 22, 1980, received June 2, 1980.

PROBLEM REPORTED: Westinghouse Letter NS-TMA-2245 dated May 8, 1980 (T. Anderson to V. Stello) - 10CFR21 notification.

N. J. Chiangi notified the NRC that this item was potentially reportable under 10CFR50.55(e) on June 6, 1980.

N. J. Chiangi notified the NRC (J. Bryant) that this item was reportable under 10CFR50.55(e) on July 7, 1980.

N. J. Chiangi notified the NRC (J. P. O'Reilly) with an interim report on this item.

SCOPE OF PROBLEM: Three Unit 1 and three Unit 2 charging pumps.

SAFETY

IMPLICATION:

A potential to damage the high head safety injection pumps before the safety injection termination criteria is satisfied may adversely impact long-term recovery operations for the initiating event.

REASON PROBLEM

IS REPORTABLE:

The impact of long-term recovery could lead to a degraded safety condition.

CORRECTIVE

ACTION:

The proposed corrective action currently intended for SHNPP is to utilize the existing high head safety injection pump miniflow return lines in conjunction with operator action. More specifically, the corrective action would consist of removing the safety injection initiation automatic closure signal from the high head safety injection miniflow isolation valves and to modify plant emergency operating procedures to instruct the operator to close these miniflow isolation valves when the reactor coolant reaches saturation conditions and to reopen these valves should the wide range RCS pressure subsequently rise to greater than 2,000 psig. However, discussions with Westinghouse are continuing for an alternate solution to the deficiency. The anticipated date of completion of corrective action is January 31, 1985.