



Carolina Power & Light Company

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P.O. Box 101, New Hill, N.C. 27562  
April 5, 1985

Dr. J. Nelson Grace  
United States Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Northwest (Suite 2900)  
Atlanta, Georgia 30323

NRC-343

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT  
1986 - 900,000 KW - UNIT 1  
G. H. BETTIS OPERATIONS ON RUSKIN - SUPPLIED  
HVAC DAMPERS, ITEM 157

Dear Dr. Grace:

Attached is our final report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) and 10CFR, Part 21, on May 22, 1984. With this report, Carolina Power and Light Company considers this matter closed.

If you have any questions concerning this matter, please do not hesitate to contact me.

Yours very truly,

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

RMP/bs

Attachment

cc: Messrs. G. Maxwell/R. Prevatte (NRC-SHNPP)  
Mr. R. C. DeYoung (NRC)

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CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT

UNIT 1

FINAL REPORT

G. H. BETTIS OPERATORS ON  
RUSKIN-SUPPLIED HVAC DAMPERS

NCR-83-103  
NCR-84-333

ITEM 157

March 29, 1985

REPORTABLE UNDER 10CFR21 AND 10CFR50.55(e)

SUBJECT: Shearon Harris Nuclear Power Plant Unit 1  
G. H. Bettis operators, Purchase Order NY-435205 on  
Ruskin-supplied HVAC dampers

ITEM: The following damper tag numbers are affected by this  
condition. Dampers with an asterisk (\*) were added  
later due to additional research by the vendor.

AR-D3-1	AV-D78SA-1	CV-D5SA-1*
AV-D15SA-1	CV-D7SB-1*	CV-D1SB-1*
FL-D35SA-1-4	AV-D79SB-1	CV-D4SA-1*
FL-D36SB-1-4	FL-D9SB-1-4	CV-D6SA-1*
FL-D37SA-1-4	FL-D11SA-1-4	CV-D8SA-1*
FL-D38SB-1-4	FL-D12SB-1-4	CV-D9-1*
AV-D82SA-1	FL-D21SA-1-4	CV-D10-1*
AV-D83SB-1	FL-D22SB-1-4	CV-D11-1*
AV-D86SA-1	FL-D5SB-1-4	CV-D12-1*
AV-D87SB-1	FL-D8SA-1-4	CV-D13-1*
AR-D4-1	FL-D4SA-1-4	CV-D14-1*
AV-D9SA-1	CV-D3SA-1*	CV-D1SA-1*
CB-D2SB-1	CV-D2SB-1*	

SUPPLIED BY: Ruskin Manufacturing Company

NATURE OF DEFICIENCY: The following condition was discovered as a result of  
some Bettis operators failing a vendor in-house  
operational test: According to Bettis, some of the  
internal seals (made of ethylene propylene) in the  
operators become swollen, apparently due to  
absorption of the internal lubricant (Mobil Grease  
28). This swelling increases friction within the  
operator. This increased friction may result in  
increased operator actuation time beyond that  
required for design conditions.

DATE PROBLEM WAS CONFIRMED TO EXIST: Based on a copy of a telex from Ruskin to Ebasco  
dated December 2, 1983 (received approximately  
December 5, 1983), which indicated a 10CFR21  
reportable condition concerning Bettis actuators, the  
condition was determined to be potentially reportable  
on December 20, 1983. Also, site-generated  
NCR-83-103 on December 28, 1983 and NCR-84-333 on  
February 10, 1984 were issued.

DATE PROBLEM REPORTED: Mr. K. V. Hate' notified the NRC (Mr. A. Hardin) on  
December 21, 1983 of a potentially reportable item  
per 10CFR21 and 10CFR50.55(e).

DATE PROBLEM  
REPORTED  
(CONT'D)

On May 22, 1984, CP&L (Mr. K. V. Hate') notified the NRC (Mr. D. Myers) that the December 21, 1983 potentially reportable item had been evaluated and found to be reportable per 10CFR21 and 10CFR50.55 (e).

SCOPE OF  
PROBLEM:

The following safety-related HVAC systems/areas are affected:

- A. RAB Electrical Penetration Area
- B. RAB RHR Heat Exchanger Area
- C. RAB Mechanical Penetration Area
- D. RAB H&B Penetration Area
- E. RAB Charging Pump Area
- F. RAB Valve Gallery
- G. RAB Pipe Tunnels and Charging Pump Areas Exh. System
- H. FHB Normal Exhaust System
- I. FHB Normal Supply System
- J. FHB Loading Area
- K. Containment Fan Cooler System

SAFETY  
IMPLICATION:

Should the dampers fail to operate within the required actuation time, areas may not properly isolate and airborne contaminants may not be controlled as intended.

REASON  
DEFICIENCY  
IS REPORTABLE:

Should the dampers fail to operate within the design time limit during anticipated accident conditions, the radiological releases may exceed the 10CFR100 guidelines.

CORRECTIVE  
ACTION:

Dampers affected have been reworked by replacing the seals and lubricant with the recommended replacement seals and lubricant (E. P. Seals and Molykote 44). Testing and documentation required to close this item is now complete.

PREVENTIVE  
MEASURES:

Ruskin, in conjunction with G. H. Bettis, recommends that future nuclear qualified actuators be built with Molykote 44 lubricant and EP seals.