

# CP&L

Carolina Power & Light Company

P. O. Box 101, New Hill, N. C. 27562  
May 22, 1985

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

NRC-365

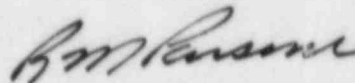
CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT  
1986 - 900,000 KW - UNIT 1  
DEFECTIVE GOVERNOR DRIVE COUPLING  
PURCHASE ORDER NY-435079, ITEM 101

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 September 9, 1982. With this report, Carolina Power and Light Company considers this matter closed.

If you have any questions regarding 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:mh

Attachment

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

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Mr. N. J. Chiangi  
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File: HI/A-2D  
File: H-X-0544  
INPO: Records Center

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT

UNIT NO. 1

FINAL REPORT

May 22, 1985

DEFECTIVE GOVERNOR DRIVE COUPLING

ITEM 101  
(DDR-1056)

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

**SUBJECT:** Shearon Harris Nuclear Power Plant - Unit No. 1 10CFR50.55(e) and 10CFR21 Reportable Deficiency. Defective governor drive coupling installed in the emergency diesel engine-generator sets under Purchase Order NY-435079 from Transamerica DeLaval, Inc.

**ITEM:** Isoprene governor drive coupling located in the engine's gear case. Part No. AK-007-000

**SUPPLIED BY:** Transamerica DeLaval, Inc., Oakland, California. The governor drive coupling is manufactured by Koppers Co., Inc.

**NATURE OF DEFICIENCY:** Transamerica DeLaval, Inc. shipped two diesel engines to the Shearon Harris site on Purchase Order NY-435079 in May and June, 1981.

In June, 1982, Transamerica DeLaval notified CP&L that the engines contained an isoprene governor drive coupling and there was a potential problem since the material, isoprene, is designed for atmospheric use and it is not suitable for use in the high temperature, oil atmosphere encountered in the engine's gear case.

**DATE PROBLEM OCCURRED:** Refer to section above.

**DATE PROBLEM REPORTED:** September 9, 1982 - CP&L (N. J. Chiangi) notified the NRC Region II (A. Hardin) that this item was reportable under 10CFR50.55(e) and 10CFR21.

**SCOPE OF PROBLEM:** The problem involved the two diesel engines shipped on Purchase Order NY-435079. These engines had isoprene governor drive couplings installed.

**SAFETY IMPLICATION:** The diesel-generator sets supply power to the ESF buses in case of a loss of both normal on-site and off-site power sources. In the high temperature, oil atmosphere encountered in the engine's gear case, the rubber deteriorates rapidly and ultimately fails. While the coupling is "fail safe" and will mechanically lock up when the element fails, sufficient frequency instability could be induced that would result in the engine's tripping off line, thereby affecting engine availability.

**REASON DEFICIENCY IS REPORTABLE:** If left uncorrected, failure of the governor drive coupling could result in the loss of the emergency on-site AC power supply.

**CORRECTIVE ACTION:** The defective coupling drive elements in 1A-SA and 1B-SB engine governors have been replaced with new elements. The required rework has now been verified by inspection personnel in accordance with appropriate site procedures. With this action, CP&L considers this matter resolved.