

USNR  
**CP&L**  
ATLANTA, GEORGIA  
Carolina Power & Light Company

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P.O. Box 101, N.W. Hill N. C. 27562  
November 16, 1984

Mr. James P. O'Reilly  
United States Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Northwest (Suite 2900)  
Atlanta, Georgia 30323

NRC-293

50-400

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 Mr. O'Reilly:

Attached is our sixth interim report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) and 10CFR, Part 21, on September 9, 1982. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by April 15, 1985.

Thank you for your consideration in this matter.

Yours very truly,



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

RMP/rt

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 NO. 1

SIXTH INTERIM REPORT

NOVEMBER 16, 1984

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 contain an isoprene governor drive coupling and there is 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 involves the two diesel engines shipped on Purchase Order NY-435079. These engines have 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 isoprene element of the governor drive coupling will be replaced in accordance with the instructions attached to the Transamerica DeLaval to CP&L letter dated August 18, 1982 (FCR-M-1067, Revision 1). This work requires capability to "bar" the engine over.

**FINAL REPORT:**

The corrective action stated above has been delayed due to the time required to implement the TDI owners group inspection program. A final report will be issued once the corrective action has been completed. It is currently projected that the submittal date will be April 15, 1985.