



Carolina Power & Light Company

34 MAY 31 11:41

P. O. Box 101, New Hill, N. C. 27562  
May 24, 1984

Mr. James P. O'Reilly  
United States Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Northwest (Suite 2900)  
Atlanta, Georgia 30303

NRC-219

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT  
1986 - 900,000 KW - UNIT 1  
**POTENTIAL DEFECT IN PISTON SKIRT CASTINGS  
ON THE EMERGENCY DIESEL-ENGINE GENERATOR SETS  
PURCHASE ORDER NY-435079, ITEM 110**

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) and 10CFR, Part 21, on December 16, 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 December 18, 1984.

Thank you for your consideration in this matter.

Yours very truly,

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

RMP/sh

Attachment

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

8406110266 840524  
PDR ADOCK 05000400  
S PDR

OFFICIAL COPY

TE 27

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT

UNIT NO. 1

THIRD INTERIM REPORT

EMERGENCY DIESEL-ENGINE GENERATOR SETS  
POTENTIALLY DEFECTIVE PISTON SKIRTS

MAY 22, 1984

ITEM - 110  
(DDR 1209)

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

SUBJECT: Shearon Harris Nuclear Power Plant Unit No. 1  
10CFR50.55(e) and 10CFR21 Reportable Deficiency.  
Potentially defective Piston Skirts for the Emergency  
Diesel-Engine Generator Sets. Purchase Order NY-435079.

ITEM: Piston skirts installed in the piston assembly of  
the emergency diesel-engine generator sets: S/N  
74046/47.

SUPPLIED  
BY: Transamerica DeLaval, Inc., Oakland, California under  
CP&L Purchase Order NY-435079.

NATURE OF  
DEFICIENCY: Transamerica DeLaval, Inc., shipped two diesel engines to  
Shearon Harris Site in May and June, 1981.

In November, 1982, Transamerica DeLaval notified CP&L  
that the engines have a potential problem with the piston  
skirts. Residual stress, caused by the method of heat  
treating, in combination with operating stress could  
cause cracking of the piston skirt during operation and  
if undetected could result in engine failure.

DATE PROBLEM  
OCCURRED: Refer to section above.

DATE PROBLEM  
REPORTED: December 16, 1982, CP&L (N. J. Chiangi) notified the NRC  
(C. Hehl) that this item is reportable under the  
provisions of 10CFR50.55(e) and 10CFR21.

SCOPE OF  
PROBLEM: This potential defect affects both emergency diesel  
engines purchased on NY-435079.

SAFETY  
IMPLICATION: The diesel-engine generator sets supply power to the ESF  
buses in the event that both normal on-site and off-site  
power sources are lost.

The potential defect in the piston skirts could affect  
engine operation and therefore affect the availability  
emergency on-site power.

REASON DEFICIENCY  
IS REPORTABLE:

If left uncorrected, cracking of the piston skirts could result in the loss of the emergency on-site AC power supply.

CORRECTIVE  
ACTION:

The potentially defective piston skirts will be removed from the engines and sent to Transamerica DeLaval for non-destructive testing and stress relieving as necessary and then returned to the site. Defective piston skirts will be replaced.

FINAL REPORT:

Due to the extensive work involved to remove piston skirts, ship them back to vendor, have each skirt tested, have skirts or replacements returned to the site, a projected date for work completion and final report is December 18, 1984.