



Carolina Power & Light Company

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APR 9 1984

P. O. Box 101, New Hill, N. C. 27562  
April 2, 1984

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

NRC-203

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT  
1986 - 900,000 KW - UNIT 1  
DEFECTIVE VALVE SPRINGS ON DIESEL ENGINES,  
PURCHASE ORDER NY-435079, ITEM 61

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 August 23, 1981. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by September 8, 1984.

Thank you for your consideration in this matter.

Yours very truly,

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

RMP/bk

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

DEFECTIVE VALVE SPRINGS ON DIESEL GENERATOR ENGINES

ITEM NO. 61  
(DDR 656)

MARCH 30, 1984

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

SUBJECT: Shearon Harris Nuclear Power Plant, Unit No. 1  
10CFR50.55(c) and 10CFR21, reportable deficiency. Valve  
springs for emergency diesel-engine generator units  
purchased from Transamerica DeLaval, Inc. under Purchase  
Order NY-435079.

ITEM: Intake and exhaust valve springs installed in engine  
cylinder head assemblies. Total of 128 springs in two  
diesel engines.

SUPPLIED BY: Transamerica DeLaval, Inc., Oakland, California. Springs  
manufactured by Melrose Spring and Tool Works, Oakland,  
California, as subvender to Transamerica DeLaval.

NATURE OF  
DEFICIENCY Transamerica DeLaval, Inc., shipped two diesel engines to  
the CP&L site on Purchase Order Ny-435079 in May and  
June, 1981.

In August 1981, Transamerica DeLaval advised CP&L that  
the engines may contain valve springs which were not  
shot-peened properly. The shot-peening is necessary to  
relieve external stresses incurred in cold working the  
spring wire. The lack of shot-peening could lead to  
fatigue failure, which then would affect engine  
availability.

Telephone conversations with Transamerica DeLaval and a  
visual inspection confirmed that the defective valve  
springs had been installed in the two engines shipped to  
the Shearon Harris plant site.

DATE PROBLEM  
OCCURRED: Refer to section above.

DATE PROBLEM  
REPORTED: August 28, 1981 - CP&L (L. E. Jones) notified the NRC  
Region II (R. Butcher) that this item was reportable  
under 10CFR50.55(e) and 10CFR, Part 21.

SCOPE OF  
PROBLEM: The deficiency involves the two diesel engines shipped on  
Purchase Order NY-435079. These engines have defective  
valve springs installed.

SAFETY

IMPLICATION:

The diesel-engine generator units supply power to the ESF buses in case of a loss of both the normal on-site and off-site power sources.

The improper shot-peening of the valve spring could lead to failure of the spring. If the valve spring fails, engine availability could be affected.

REASON DEFICIENCY

IS REPORTED:

If left uncorrected, failure of the valve spring could result in loss of the emergency on-site AC power supply.

CORRECTIVE

ACTION:

Although the diesel engines are installed, the Diesel Generator Building is not ready to be cleaned and sealed. Due to construction schedule slippage, major work in the areas around the engines is still in progress. Upon completion of cleaning and sealing of the Generator Building, the valve springs will be changed out.

Transamerica DeLaval has removed all defective springs from stock and has taken extra receiving inspection measures to assure this problem does not reoccur.

FINAL REPORT:

Due to construction schedule changes, it is estimated that the installation of the equipment will be completed September 8, 1984. A final report is projected to be issued at that time.