



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

**Nuclear Business Unit**

**APR 6 2000**

LR-N00111

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Gentlemen:

**10 CFR 21 NOTIFICATION, FAIRBANKS MORSE ENGINE DIVISION  
EMERGENCY DIESEL GENERATOR AIR START MOTORS  
SALEM GENERATING STATION UNITS 1 AND 2  
FACILITY OPERATING LICENSE NO. DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311**

Pursuant to the notification requirements of 10 CFR 21.21(d)(3)(ii), Public Service Electric and Gas Company (PSE&G) is providing the attached written notification on the identification of a defect in Fairbanks Morse Engine Division Emergency Diesel Generator Air Start Motors. PSE&G made initial notification to the NRC Operations Center as required by 10 CFR 21.21(d)(3)(i) on March 9, 2000.

Should you have any questions regarding this report, please contact Paul Duke at (856) 339-1466.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. Garchow".

D. Garchow  
Vice President – Technical Support

IE19

Attachment (1)

C Mr. H. J. Miller, Administrator - Region I  
U. S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Mr. R. Fretz  
Licensing Project Manager - Salem  
U. S. Nuclear Regulatory Commission  
One White Flint North  
Mail Stop 4D3  
11555 Rockville Pike  
Rockville, MD 20852

USNRC Senior Resident Inspector - Salem (X24)

Mr. K. Tosch, Manager IV  
Bureau of Nuclear Engineering  
33 Arctic Parkway  
CN 415  
Trenton, NJ 08625

BFGoodrich Company  
Fairbanks Morse Engine Division  
701 White Ave.  
Beloit, Wisconsin 53511

**Attachment 1**  
**10 CFR 21 Notification**  
**Fairbanks Morse Engine Division Emergency Diesel Generator Air Start Motors**

I. NAME AND ADDRESS OF THE INDIVIDUAL(S) INFORMING THE COMMISSION.

NAME: D. Garchow  
Vice President – Technical Support

ADDRESS: Public Service Electric and Gas Company  
P.O. Box 236  
Hancock's Bridge, NJ 08038

II. IDENTIFICATION OF THE FACILITY, ACTIVITY OR COMPONENT WHICH FAILS TO COMPLY OR CONTAINS A DEFECT.

The basic components are emergency diesel generator (EDG) air start motors, Fairbanks Morse Engine Division (FMED) Part Nos. 21800136-1; 21800145; 21800146; and 21800147. The air start motors were purchased for use on Alco model 18-251 diesel engines.

III. IDENTIFICATION OF THE FIRM SUPPLYING THE BASIC COMPONENT WHICH FAILS TO COMPLY OR CONTAINS A DEFECT.

The air start motors were supplied by:

BFGoodrich Company (formerly Coltec Industries)  
Fairbanks Morse Engine Division  
701 White Ave.  
Beloit, Wisconsin 53511

IV. NATURE OF THE DEFECT OR FAILURE TO COMPLY AND THE SAFETY HAZARD WHICH IS CREATED OR COULD BE CREATED.

Replacement air start motors were supplied to PSE&G and were accepted with grease on the bendix drive shafts. This did not meet the requirements in PSE&G's purchase order which specified:

Do not grease the bendix drive: as per the vendor manual this is to be lubricated with SAE 10 oil.

Excessive grease on the bendix drive shaft can harden and prevent the drive pinion from engaging the ring gear on the emergency diesel generator flywheel during starting.

Each diesel generator is equipped with two pairs of start motors. If necessary, the diesel can be started within the required time by any one pair of air start motors. Failure of redundant air start motors could prevent EDGs from starting within the required time in response to a loss of all offsite power.

- V. THE DATE ON WHICH THE INFORMATION OF SUCH DEFECT OR FAILURE TO COMPLY WAS OBTAINED.

The information was obtained on January 28, 2000.

- VI. IN THE CASE OF A BASIC COMPONENT WHICH CONTAINS A DEFECT OR FAILS TO COMPLY, IDENTIFY THE NUMBER AND LOCATION OF ALL SUCH COMPONENTS IN USE AT OR SUPPLIED FOR PSE&G FACILITIES SUBJECT TO THE REGULATIONS OF 10 CFR 21.

Four air start motors are used on each emergency diesel generator. Salem Unit 1 and Unit 2 each have three emergency diesel generators.

- VII. THE CORRECTIVE ACTION WHICH HAS BEEN, IS BEING, OR WILL BE TAKEN; THE NAME OF THE RESPONSIBLE INDIVIDUAL OR ORGANIZATION; AND THE LENGTH OF TIME THAT HAS BEEN OR WILL BE TAKEN TO COMPLETE THE ACTION.

PSE&G removed the excess grease from the bendix drives on the replacement air start motors before installation. The air start motors installed in Salem Unit 1 and Unit 2 have been inspected, cleaned and lubricated.

PSE&G issued a corrective action request to FMED. The supplier stated to PSE&G that it has added an inspection step to the dedication process to verify the bendix drive does not contain excessive grease and the pinion turns freely by hand. The supplier has also taken action to revise the air start dedication packages for motors supplied to PSE&G to remove the grease from the bendix and lubricate with SAE 10W oil.

- VIII. ANY ADVICE RELATED TO THE DEFECT OR FAILURE TO COMPLY THAT HAS BEEN, IS BEING, OR WILL BE GIVEN TO PURCHASERS OR LICENSEES.

None.