

Colt Industries



DMB

**Fairbanks Morse
Engine Division**
701 Lawton Avenue
Beloit, Wisconsin 53511
608/364-4411

March 28, 1984

Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Ill. 60137

Attention: Mr. James G. Keppler, Director, Region III

Subject: Colt Industries-Fairbanks Morse Engine Division
Emergency Diesel Generators
Long Island Lighting Co.
Shoreham Nuclear Plant
Fuel Oil Filter Differential Pressure Switch
Part 21 Report

Gentlemen:

During factory tests of the first LILCO Colt-Pielstick PC-2 Diesel Generator Set, two fuel oil filter differential pressure switches failed, permitting fuel oil to escape through the electrical conduit onto the shop floor. The particulars are as follows:

1. The differential pressure switch is installed in the fuel oil system and senses fuel pressure before and after the fuel filter.
2. The switch is identified as a United Electric Controls Company (Watertown, Mass.) Stock No. J27KB, Model No. 232.
3. On March 17, 1984, while the engine was running, fuel was noted running from electrical conduit fittings. Investigation revealed it to be originating from the electrical enclosure box of the above switch. The switch was then removed and replaced. There was a total of 11.8 hours on the engine.
4. Our investigation determined that there was a pin hole in the pressure sensing bellows on the low pressure, or engine side, of the switch. It was considered to be an isolated incident as there were no other failures of this switch known. Therefore, the switch was replaced and no further investigation conducted.
5. On March 25, 1984, with only 12.8 running hours on the new switch, it too failed, allowing fuel to spill from the conduit onto the floor. Examination showed that the low pressure bellows had failed.

Because of the two recent failures, Colt concluded that the probable cause is related to pressure pulsation on the low pressure, or engine, side of this switch. Accordingly, the shop was directed to put pressure pulsation dampers on both the high and low pressure side of this switch.

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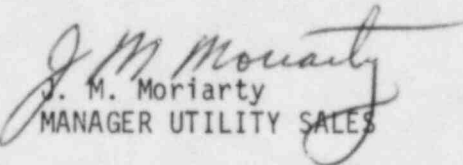
We will evaluate during further shop testing whether the pulsation dampers eliminate repetitions of the bellows failure.

The only units shipped using the same device are four (4) D.G. sets for Public Service Electric & Gas Co., Hope Creek Unit No. 1, which is not an operating nuclear facility.

We will keep you advised of our investigation of the effectiveness of the pulsation dampers and our intended course of action.

A copy of this report is being sent to the utilities involved and to the switch vendor.

Very truly yours,


J. M. Moriarty
MANAGER UTILITY SALES

JMM:jc

cc: Stone & Webster Engineering Corp.
P. O. Box 2325
Boston, Mass. 02107
Attention: Mr. Mike Mirza
Project Engineer

Bechtel Power Corp.
P. O. Box 3965
San Francisco, CA 94119
Attention: Hope Creek Project Engineer

United Electric Controls
85 School Street
Watertown, Mass. 02172
Attention: Sales Manager

U. S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D. C. 20555