

PHILADELPHIA ELECTRIC COMPANY

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FEB 3 1981

JOHN S. KEMPER
VICE-PRESIDENT
ENGINEERING AND RESEARCH

Mr. Boyce Grier, Director
Office of Inspection and Enforcement, Region I
United States Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Subject: Significant Deficiency Report No. 33
MDA Scientific, Inc. - Defective Pressure
Switches in Chlorine Monitors
Limerick Generating Station - Units 1 and 2
NRC Construction Permit Nos. CPFR-106, 107

Attachments: a) Letter, MDA Scientific, Inc. to Bechtel
Power Corp., July 23, 1980
b) Letter, MDA Scientific, Inc. to USNRC, July
20, 1980
c) Letter, Wyer Instruments Inc. to MDA
Scientific, Inc. July 22, 1980

Title: QUAL 2-10-2 (GDR #13)

Dear Mr. Grier:

The attachments have brought to our attention a deficiency in the subject pressure switches supplied by MDA Scientific, Inc. as part of the Limerick Generating Station Chlorine Monitor System. As indicated, this problem has been previously reported to the USNRC by the vendor under 10CFR21.

The deficiency consists of failure of the subject switches to perform in a consistent and repetitive manner, apparently due to diaphragm material problems.

We consider the deficiency described in the attachments to be a significant deficiency per 10CFR50.55(e) and are hereby notifying you as required.



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FEB 8 1981

We believe that the MDA Scientific report submitted under the provisions of 10CFR21 provides the information required for 10CFR50.55(e) reporting. Therefore, we anticipate that this letter will be our only report to you on the subject.

We will of course assure that the subject switches at Limerick are replaced or otherwise corrected in accordance with instructions received from MDA Scientific.

Sincerely,



RJL/gra

Attachments

Copy to: Director of Inspection & Enforcement
United States Nuclear Regulatory Commission
Washington, D.C. 20555

J. P. Durr, USNRC Resident Inspector, LGS



MDA SCIENTIFIC, INC.

1015 Elmdale Avenue • Glenview, Illinois 60025 • 312/633-1000

Telex: 72-0300 MDA-PRND



July 23, 1980

067242

Bechtel Power Corporation
San Francisco Division
P. O. Box 3965
San Francisco, CA 94119

Attention: Mr. R. Elias,
Project Engineer

Subject: The Philadelphia Electric
Limerick Nuclear Generating Station
Bechtel Job 0031-M-230
MDA Work Order 04321N
Chlorine Monitor System
Filing of 10CFR21

Dear Mr. Elias:

In order to comply with Section 206 of the Energy Reorganization Act of 1974, MDA has filed, with Region III of the N.R.C., a Title 10 CFR, Part 21, identifying a potential defect in a pressure switch manufactured by Dwyer Instruments of Michigan City, Indiana.

In your review of this document, you will find our corrective action is to replace these switches with a Fairchild switch. When we are certain that this switch is environmentally and seismically acceptable, we will be in contact with your project to make arrangements for replacement.

If you have any questions or comments, please do not hesitate to call.

Very truly yours,

Ronald L. Gutman
Ronald L. Gutman,
Quality Assurance Manager
MDA Scientific, Inc.

Enc
DLG:da

cc: Byron Denenberg, MDA
Limerick File



MDA SCIENTIFIC, INC.

1015 Elmdale Avenue • Glenview, Illinois 60025 • 312/666-1100 Telex: 72-0523 MDA-201

July 20, 1980

087242

Mr. James G. Keppler, Director, Region III
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Reporting of potential deficiency in accordance with Paragraph
21.21 of the Federal Register 10 CFR 21

Reported By: MDA Scientific, Inc.
1015 Elmdale Avenue
Glenview, IL 60025
Byron A. Denenberg, President and C.O.O.
Donald L. Gutman, Quality Assurance Manager

Supplied To: Bechtel Power Corporation
Arizona Public Service
Palo Verde Project
The Philadelphia Electric Company
Limerick Project

Components: Supplied by: Dwyer Instrument
Michigan City, IN
3" - 1" W. G. Minifactor Pressure Switch

Gentlemen:

In order to comply with Section 206 of the Energy Reorganization Act of 1974,
the following information is submitted:

1. MDA Scientific supplies a toxic gas monitor for chlorine to meet U. S. NRC Guide 1.95.
2. Included as a component in this instrument is 0" - 1" W. G. pressure switch.
3. The pressure switch is considered safety related.
4. The chlorine monitor has been environmentally and acoustically tested in accordance with IEEE 323-74 and 344-75 utilizing Dwyer Instruments pressure switch.

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5. The above testing was completed in July of 1979, without incident in regard to pressure switch functional failure.
6. In November of 1979, four (4) units were shipped to the Limerick jobsite, and December of 1979, four (4) units were shipped to the Palo Verde jobsite, with these pressure switches installed and functioning.
7. The remaining pressure switches of a (50) piece order was placed in MDA stock for future use.

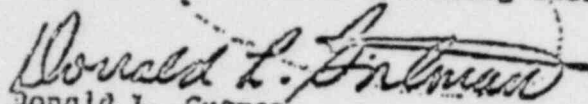
In March of 1980, four (4) pressure switches were requisitioned from stock for use. Two (2) of the four (4) switches failed to perform a repetitive functional test prior to installation. The remaining stock was requisitioned by Quality Control for testing, and seven (7) additional switches failed cyclic testing. The rejection rate was not significant and the switches were returned to stock.
8. Approximately thirty (30) days later, the switches were removed from stock by Quality Control and retested. Five (5) of the remaining switches failed cyclic test. The rejection rate became significant and the remaining stock was removed to a non-conforming area and all projects involved were notified.
9. Dwyer Instruments, Inc. was notified of the potential defect and a failure analysis was requested.
10. Dwyer is to provide failure analysis as soon as available.
11. Corrective action implemented to prevent the use of these switches by MDA Scientific is as follows:
 - a. The Bechtel Palo Verde and Limerick projects have been notified and the potential defect identified.
 - b. All pressure switches (Dwyer) have been returned to the manufacturer.
 - c. A new pressure switch, with a 0 - .5 W. G. activation point has been purchased from Fairchild, Long Island, New York.
 - d. Cyclic testing has been completed by MDA Scientific of the switches and are acceptable.
 - e. The Fairchild pressure switch shall be qualified by Dyle Laboratories, Norco, California.
 - f. On completion and qualification of the Fairchild switch, both Bechtel projects will be notified with instructions for replacement of these components.

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If additional information is required, we may be contacted between 8:30 a.m. and 5:00 p.m. at 312/992-1600.

Sincerely,


Byron A. Danenberg,
President and Chief Operating Officer


Donald L. Gutman,
Quality Assurance Manager

DLG/dn

cc: Nuclear File



DWYER INSTRUMENTS, INC.

P. O. BOX 372 • MICHIGAN IND 212 0 U.S. 12

MICHIGAN CITY, INDIANA 46300 U.S.A.

PHONE 310 072 041 OR CHICAGO 512 729-1811

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JUL 23 1980

July 22, 1980

M. D. A. Scientific Co.
1815 Elmdale
Elmhurst, Illinois 60025

Attention: Mr. D. L. Gutman
Quality Assurance Manager

Subject: Minitrac Differential Pressure Switches

Dear Mr. Gutman:

As you requested, we have tested and inspected the 39 switches returned to us on March 12, 1980.

We confirm your findings of various degrees of set-point drift, which we attribute to diaphragm material problems. These problems are presently being corrected.

Credit for the 39 units will be issued immediately. If there is any way I can be of further assistance, please let me know.

Very truly yours,

Ray Clemens

Ray Clemens
District Sales Manager