



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

LR

May 17, 1994

Mr. William T. Russell, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington D.C. 20555

Attn: Document Control Desk

Subject: Commonwealth Edison Company
10 CFR Part 21 Final Report
Secondary Containment Isolation Techno Dampers
Equipped with Parker Air Cylinders

Mr. Russell:

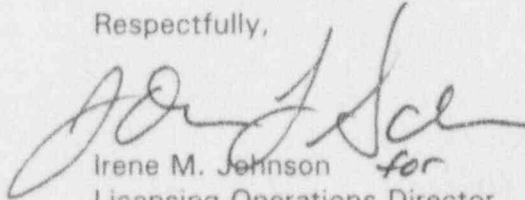
The purpose of this letter is to notify the NRC Staff of concerns by Commonwealth Edison Company (CECo) related to the failures of Secondary Containment Isolation Techno Dampers supplied by Techno Corporation with an air cylinder manufactured by Parker Hannifin. The affected dampers provide Secondary Containment Isolation upon an automatic isolation signal.

CECo has concluded that the problem resulted from an excessive amount of rust inhibitor in the pneumatic cylinder, which caused the internal components to stick over time and at high air flow temperatures. CECO has identified and replaced all Techno dampers equipped with Parker air cylinders.

The Attachment to this letter provides CECO's notification in accordance with the requirements of 10 CFR Part 21.

As stated in the attached report, the defective component was identified only at Commonwealth Edison's LaSalle County Station. If there are any questions regarding this notification, please direct them to Luke D. Kim at (708) 663-7457.

Respectfully,


Irene M. Johnson *for*
Licensing Operations Director

Attachment: 10 CFR Part 21 Final Report

cc: J. Martin, Regional Administrator - RIII
J.E. Dyer, Directorate III-2 Director, NRR

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Attachment

10 CFR Part 21 Final Report

Secondary Containment Isolation Techno Dampers Equipped with Parker Air Cylinders.

10 CFR Part 21 File No. 9406

May 12, 1994

Applicability

This notification is submitted in accordance with the requirements of 10 CFR 21, section 21.1(b), 21.3a(3), and 21.3.d(4).

Identification of Facility and Component

This notification concerns Secondary Containment Isolation Dampers equipped with Parker Air Cylinders which were supplied by Techno Corp. and installed for use in a safety-related application at LaSalle nuclear power plant.

No other Commonwealth Edison nuclear power plants are affected with this Part 21 notification.

Identification of Component Supplier/Manufacturer:

Techno Corporation
2709 West 10th St.
P.O. Box 1416
Erie, Pa. 16512
Phone: (814) 838-4561

Parker Hannifin Corporation
Cylinder Division
500 South Wolf Road
DesPlaines, IL 60016
Phone: (708) 298-2400

Nature of Defect

The damper 1VR05YB failed to fully close. The damper blade was obstructed from closing by the pneumatic cylinder which stuck in midstroke during the surveillance testing. The air cylinder was disassembled and inspected internally. CECO determined that an excessive amount of rust inhibitor was present in the pneumatic cylinder's and the internal components were sticking during testing.

CECO and manufacturer representatives identified the cause of the sticking as an excessive amount of rust inhibitor (anti-oxidant Techtyl 511M) in the pneumatic cylinder.

Parker Cylinder Division has indicated that the Anti-Oxidant Techtyl 511M was used on the piston cylinder and seals. An excessive amount of this anti-oxidant could cause the internal components to stick.

The Safety related function of these dampers is to automatically close on an ESF signal and remain closed to maintain secondary containment integrity. The failure of a damper to

close due to a sticking actuator would not affect the integrity of secondary containment as long as the other damper in series with it is closed. If one of the damper actuators stuck concurrent with a single active failure of the other damper, the result would be the loss of secondary containment integrity. Secondary containment integrity is required to ensure that 10 CFR 100 limits as well as the GDC 19 limits are not exceeded.

Date of Discovery

On March 22, 1994, an evaluation of this issue was initiated for Part 21 reportability. On May 12, 1994, CECo concluded that the Techno damper air cylinder failure was attributed to inadequate process control by the manufacturer Parker Cylinder Division. Additionally, CECo determined that, although the classification of the pneumatic cylinder was not safety related, the sticking of the cylinder could have adverse safety impact for certain applications.

Number and Location of All Defective Component

Within CECo, the Techno Dampers equipped with Parker air cylinders are only installed at LaSalle Nuclear Station. The dampers provide automatic Secondary Containment Isolation.

The affected Dampers are:

1VR04YA, 1VR04YB, 1VR05YA, 1VR05YB
2VR04YA, 2VR04YB, 2VR05YA, 2VR05YB

Corrective Actions

Commonwealth Edison's immediate corrective action was to identify the locations of all Techno dampers equipped with Parker air cylinders. It was determined that only LaSalle Station has the potentially defective air cylinders.

An operability determination of all Techno dampers equipped with Parker air cylinders was completed on February 25, 1994.

All the Unit 1 and 2 Techno dampers equipped with Parker cylinders were replaced between February 1 and May 1, 1994 with the same model cylinders without the rust inhibitor.

In the future, the air cylinders for these valves will be dedicated safety related. In addition to the standard dedication checklist, the dedication process will include a check for excessive rust inhibitor.

Contacts

Questions pertaining to this notification should be addressed to:

Luke Kim (708)663-7457
Nuclear Engineering and Technology Services
Commonwealth Edison Company
1400 Opus Place, Suite 400
Downers Grove, Ill. 60515.