



BW/IP international, Inc.

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12 April, 1994

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Gentlemen:

This letter transmits a Notification of Defects and Nonconformance in accordance with the requirements of 10 CFR, Part 21. The attached Notification, CFRN 9401, reports a condition which was identified during the EPRI MOV Performance Prediction Program.

An Interim Notification of a Potentially Reportable Issue was initially transmitted to the NRC on 2 October 1992, with Supplements transmitted on 22 December 1992, 4 May 1993, and 9 October 1993.

This transmittal completes the notification requirements on this issue.

Very truly yours,

D.A. Gibson
Manager, Nuclear Products Operations

Attach.

cc: Mr. F.J. Costanzo, Manager of Engineering
Mr. R.D. Ham, Manager of Quality
Mr. K.A. Huber, Chairman, Part 21 Evaluation Board
Mr. W.A. Klenner, Product Manager
Mr. K.B. Lemmon, Manager, Field Service Operations

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NOTIFICATION OF A REPORTABLE
ISSUE PURSUANT TO 10 CFR 21

DATE: 12 April 1994

TO: U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

NAME AND ADDRESS OF INDIVIDUAL INFORMING THE COMMISSION:

Mr. David Gibson
BW/IP International, Inc.
Pump Division
2300 East Vernon Avenue
Vernon, CA 90058
(213) 587-6171

For Technical Information Contact: Dr. Kent Huber
BW/IP Evaluation No. CFR 92-006

IDENTIFICATION OF THE FACILITY, THE ACTIVITY, OR THE BASIC COMPONENT SUPPLIED FOR
SUCH FACILITY OR ACTIVITY WITHIN THE UNITED STATES WHICH FAILS TO COMPLY OR
CONTAINS A DEFECT:

Basic Component: 6-inch 150# Gate Valve (401KBB3-004)
S/N 62039

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

BW/IP International, Inc.
Successor to:

Borg-Warner Nuclear Valve Division
7500 Tyrone Avenue
Van Nuys, CA 91409

NATURE OF THE DEFECT OR FAILURE TO COMPLY AND THE SAFETY HAZARD WHICH IS CREATED OR COULD BE CREATED BY SUCH DEFECT OR FAILURE TO COMPLY:

Quantitative measurements of the referenced valve as part of the EPRI MOV Performance Prediction Program in response to NRC Generic Letter 89-10, showed the maximum valve friction factor to be between 0.79 and 0.88 for both valve opening and closing. These EPRI test results appear to indicate the industry accepted standard friction factor of 0.3, used to calculate the valve seating force, is not conservative.

The calculated forces are used to size the valve actuator and motor and to set the actuator torque switch. If the actual friction factor is higher than the design value, the valve actuator and motor may be undersized and the valve may not operate under all conditions.

THE DATE ON WHICH THE INFORMATION OF SUCH DEFECT OR FAILURE TO COMPLY WAS OBTAINED:

EPRI completed testing of the referenced valve on 20 July 1992 and notified BW/IP of the findings on 31 July 1992.

BW/IP initiated an evaluation to determine if a reportable deficiency existed. This evaluation involved significant re-testing of the valve used in the EPRI test as well as similar valves for comparison. These tests were completed in February 1994. Results show the actual valve friction factors to be in the range of 0.4 to 0.6.

IN THE CASE OF A BASIC COMPONENT WHICH CONTAINS A DEFECT OR FAILS TO COMPLY, THE NUMBER AND LOCATION OF ALL SUCH COMPONENTS IN USE AT, SUPPLIED FOR, OR BEING SUPPLIED FOR ONE OR MORE FACILITIES OR ACTIVITIES SUBJECT TO THE REGULATIONS:

This Notification applies to all sizes and classes of Borg-Warner gate valves.

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

If not already done, utilities should review the set-point calculations on all installed Borg-Warner gate valves and take corrective actions as appropriate.

ANY ADVICE RELATED TO THE DEFECT OF FAILURE TO COMPLY ABOUT THE FACILITY, ACTIVITY, OR BASIC COMPONENT THAT HAS BEEN, IS BEING, OR WILL BE GIVEN TO PURCHASERS:

BW/IP should be contacted for details and assistance.