



Flow Control Division

April 11, 2001

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: 10CFR Part 21 Report

Dear Sirs:

Entergy Operations, Waterford 3, advised Flowserve of a problem they experienced with two Model 70-18-9 DRTS Valves originally supplied by WKM. Flowserve now owns the designs for this line of WKM Valves and has therefore conducted an investigation of the problem.

The design permits a minimum of .002" diametrical clearance between the plug and cage. This may be reduced even further because of thermal growth, depending on the specific plug and cage materials and the specific service temperatures.

Analytically, the two valves in question did not have thermal binding problem but practically the margin to accommodate a slight misalignment of parts, contaminants, etc. is not adequate. Flowserve is modifying the design of the Model 70-18-9 and 70-19-9 to assure there is a minimum of .006" diametrical clearance between the cage and plug when the operating temperature is over 450°F.

To the best of our knowledge, based upon a review of the old WKM records, all the valves were 2" NPS and smaller. These valves have been furnished to a large number of utilities and most have been in service since initial construction. We have received very few customer complaints about the operation of these valves and therefore believe the extreme conditions necessary to cause thermal binding seldom, if ever, exists.

Attached is a sample of the letter being sent to utilities that have procured these valves from Flowserve. The domestic utilities are: Peco Energy – Peach Bottom, Entergy – Waterford 3, Wolf Creek Nuclear Operating Corp. and Florida Power Corp. – Crystal River. Please contact me at 570-327-4811 if there are any questions concerning the above.

FLOWSERVE CORPORATION
Flow Control Division

G.W. Knieser
Technical Manager

GWK/dc

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IE19



Flow Control Division

April 11, 2001

Entergy Operations, Inc.
17265 River Road
Killona, LA 70066

Attn: Robert J. Orgeron Sr., Purchasing

Subject: 10CFR21 Notification

Enclosure: Flowserve Letter to NRC dated 4/11/01

Dear Sir:

This letter is to advise you of a potential thermal binding problem that may exist with model 70-18-9 and 70-19-9 valves furnished by Flowserve. The condition is described in the enclosed letter to NRC. As described in the enclosure, it requires an extreme set of circumstances before a problem exists so it is unlikely that your valves are deficient. Flowserve does recommend that prior to installing any replacement plugs or cages presently in your inventory, check to confirm .006" diametrical clearance if operating in a safety related system at 450°F. or above. New parts furnished by Flowserve will meet this requirement.

Please contact us if there are any questions.

FLOWSERVE CORPORATION
Flow Control Division

A handwritten signature in black ink, appearing to read "T.P. Johnson", is written over the printed name and title.

T.P. Johnson
Contracts Administrator

TPJ/dc

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