Flow Control Division

Anchor/Darling Valves
BW/IP Valves
Edward Valves
Valtek Control Products
Worcester Valves

November 13, 2014

US Nuclear Regulatory Commission
Document Control Desk
11545 Rockville Pike
Rockville, MD 20852-2746

Subject: Palisades Nuclear Plant - Miller Air Cylinder Seals Dedication Issue
Assembly Drawing C06-42515-01 and C06-42515-04

This is to notify the US Nuclear Regulatory Commission that, in accordance with the provisions of 10CFR Part 21, we have identified a potential issue and are submitting our evaluation of the event.

Description: Flowserve supplied a quantity of two Size 6 Class 900 Anchor Darling Double Disc gate valves with tag numbers CV-3027 and CV-3056 to Palisades Nuclear Plant in 2007. The valves are actuated by Miller air cylinders and have a safety function to maintain the system pressure boundary by remaining fully open during injection and to subsequently move to the fully closed position upon receipt of a recirculation actuation signal. This Miller air cylinder is not spring-assisted and thus uses air to perform the safety-related function. As such, the air cylinder, any tubing, and seals associated with the air system would also be considered safety related. When the valve was tested prior to shipment, the actuator was dedicated as an assembly and performed adequately. However, the seals containing the air system in the Miller Air Cylinder and Flow Control Valve were not individually dedicated as a basic component – that is, the seal material was not verified. There is no indication that the material is defective, but in addition to the functional testing at the Flowserve facility, the material of the seals should have been checked and verified. The Flow Control Valve was ordered with Nitrile (Buna-N) seals while the Air Cylinder was ordered with Viton seals. While the seal materials were not verified, the only possible seal material for these items would have been Viton, Buna-N, or EPR.

Scope: Flowserve has performed a review of all other air cylinders provided from the Raleigh facility over the last 12 years and found no other instances of this issue. Therefore, the scope of this notification is limited to only the two tag numbers CV-3027 and CV-3056 at Palisades Nuclear Plant.

Proposed Action: Flowserve will provide safety-related replacement seal kits for all seals containing the air system for the CV-3027 and CV-3056 valves. This will be sent on a zero dollar purchase order to Palisades Nuclear plant and will be completed as soon as Flowserve receives the purchase order.

Palisades Nuclear is already aware of this issue. Please do not hesitate to contact me if you have any questions or require additional information.

Respectfully submitted,

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