



265 FIELD ROAD, P.O. BOX 1049, SOMERS, CT 06071 PHONE 860-749-0761 FAX 860-763-3557

February 16, 2007

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555
Fax: (301) 816-5151

Subject: 10CFR-Part 21,
Notification of Potential Safety Related Noncompliance Deviations

Dear Commissioners:

This letter serves to notify the Commission of three (3) potential safety-related, non-compliance deviations as defined in 10CFR-Part 21. These non-compliances involve two types of material control / material verification non-conformances and one issue, raised by Conval Engineering, of possible material strength inadequacy related to split rings used to secure valve discs to valve stems.

Possibly as high as 2,000 forged-body, globe valves generally for use on high temperature steam and hot water in sizes ranging from ½" to 4", possibly having one or more of these non-compliances, have been supplied by Conval to approximately 25 nuclear power plants over an estimated time period extending from the 1980's to the present. Probably over half of the valves suspected of non-conformances were procured as Commercial Grade valves.

- The first non-compliance involved the failure to source pressure boundary material through an NCA 3800 supply chain; this was applicable only for those customer purchase orders invoking ASME Section III, Class 1, 2 or 3, less N-Stamp.
- The second deviation was a failure to perform a chemical overcheck by an independent laboratory on material used to produce split rings—a safety related part. These non-compliances represent errors in material control practice and re-verification only. In all cases, through commercial material verification methods, using mill Certified Material Test Reports (CMTR's), Conval is confident that the material chemical composition and heat treatment condition of pressure boundary parts and safety-related parts, procured from U. S. suppliers, conformed to the alloy requirements of each customer. These two non-conformances were related to inadequate material control or re-verification per customer requirements.
- The third potential non-compliance was discovered by Conval Engineering during the technical evaluation of our split ring material.

The potential split ring strength non-conformance is only a concern for the following situations:

1. Only the rare valves installed in "flow-over-the-seat" applications are involved.
2. Only valve codes 8J and 8K (out of 29 different configurations), are at risk given the maximum temperature and pressure combinations of fluid services in nuclear power plants.

3. For codes 8J and 8K, rather elevated service conditions are still required to over stress the split rings—and that assumes minimum material yield strength, typically well below actual yield strength values per mill CMTR's.

It should be noted that never in over 40 years of manufacturing these valves has Conval been aware of any shear failure of split rings not caused by other factors, e.g. rare motorized actuator malfunction. This 40 year experience record of split ring integrity includes operation at temperatures and pressures, often on super-critical steam, well in excess of that encountered in nuclear power plants.

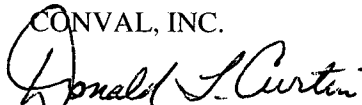
The material control non-conformances were revealed during a NUPIC audit of Conval which concluded on December 1, 2006. On December 11-12, 2006, Howard C. Smith II, Conval's Quality Assurance Manager, after a thorough review of the audit findings, suggested that the two material control non-conformances were reportable per 10 CFR-Part 21, and he forwarded his recommendations to Conval Engineering. On February 13, Charles A. Sumner, Engineering Manager concluded an extensive engineering analysis and issued a formal report to Conval's president, Donald L. Curtin, recommending notification of the NRC relative to the three non-conformances cited above, having added his concerns about worst-case split ring strength. On February 14, Donald Curtin called the NRC and made a verbal report of these non-conformances to Bill Huffman who initiated Report #43166.

Conval is in the process of gathering user plant information and officially notifying the individual plants of these issues. Resolution of the material verification non-conformances will be guided by input from users and appropriate regulatory officials; Conval will research all applicable customer orders and respond diligently to the user requirements for remedial action. Possibly over half of the valves suspected of non-conformances were procured as Commercial Grade valves.

Split ring strength will probably be considered adequate in all cases once user plants identify their flow modes (flow-over vs. flow-under) and service temperatures and pressures.

If you have any questions or need additional information concerning this notification, please contact me directly.

Very truly yours,

CONVAL, INC.

Donald L. Curtin
President

Cc: F. Siver, Chairman, CEO, Conval
D. Williams, Vice President Finance, Conval
M. Hendrick, Vice President Sales and Marketing, Conval
H. Smith II, Quality Assurance Manager, Conval
C. Sumner, Engineering Manager, Conval
I. Makuch, Nuclear Accounts Representative, Conval