

December 18, 2017

Greg Krueger
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SUBJECT: RESPONSE FROM THE U.S. NUCLEAR REGULATORY COMMISSION
ABOUT THE ANCHOR DARLING DOUBLE DISC GATE VALVE INDUSTRY
RESOLUTION PLAN

Dear Mr. Krueger:

This letter is in response to your letter dated November 17, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17345A494), and it also addresses topics discussed at the U.S. Nuclear Regulatory Commission's (NRC's) public meeting on November 3, 2017. Further, this letter discusses the NRC's planned issuance of a Temporary Instruction (TI).

Your letter responded to the six technical issues raised by the NRC staff in a letter dated October 31, 2017 (ADAMS Accession No. ML17304A238), related to the industry guidance document TP16-1-112, Revision 4, "Recommendations to Resolve Flowserve 10 CFR [Title 10 of the *Code of Federal Regulations*] Part 21 Notification Affecting Anchor Darling [A/D] Double Disc Gate Valve [DDGV] Wedge Pin Failures," issued August 2017 (ADAMS Accession No. ML17243A137). The staff notes that the industry has made significant progress in resolving the A/D DDGV failures and appreciates the response to the technical issues. We have some initial feedback on some areas where we have not fully evaluated all of your responses.

The NRC staff notes that your letter states that the stem rotation checks and diagnostics provide "assurance that the stem-upper wedge joint integrity has been maintained and the threads are not compromised." The staff does not fully agree with this statement. As discussed in the public meeting on November 3, 2017, the staff expects that the new guidance can provide reasonable assurance that the stem-to-wedge joint has not failed, but the staff does not believe the testing can identify whether degradation has begun. Specifically, we note that during the special inspection at LaSalle County Station, Unit 2, completed on June 9, 2017, the inspection team determined that then-current methods of stem rotation checks and valve diagnostic testing were not reliable indicators to determine whether stem-to-wedge joint degradation had occurred (see the inspection report dated August 31, 2017 (ADAMS Accession No. ML17243A098)).

The NRC staff also notes that TP16-1-112, Revision 4, permits licensee to use judgement, with little direction, on factors that are important for determining whether a valve is susceptible to pin failure. For example, the guidance permits the licensee to use its judgment for determining the maximum actuator torque being applied to the joint, and to use its judgment for crediting stem-to-wedge thread friction to reduce the torque-induced shear. The determination of whether a valve is susceptible to the failure mechanism affects the testing and corrective

actions highlights the importance of the NRC verifying adequate resolution of the A/D DDGV issue through the inspections of licensee implementation.

The NRC staff is developing a TI to give specific guidance for inspecting licensees' responses to the A/D DDGV issue. The TI will allow the NRC staff to confirm that licensees have effectively evaluated and are correcting the issue to ensure reactor safety. The inspection will assess whether licensees have appropriately identified and screened valves for susceptibility to the failure mechanism. It will also verify that licensees have planned and implemented appropriate corrective actions. The NRC staff plans to make a draft of the TI available in January 2018 for a 30-day public comment period and to hold a public meeting on the draft TI during the comment period.

The Nuclear Energy Institute's (NEI's) letter dated October 26, 2017 (ADAMS Accession No. ML17303A030), indicated that each utility or site will provide, via letter to the NRC, a listing of the A/D DDGVs with the relevant valve information, including the results of the susceptibility evaluation and the repair status or repair schedule. The NRC understands that the industry plans to send these letters by December 31, 2017. Your November 17, 2017 letter, along with prior NEI communications and industry's submittals will inform the TI inspection effort. The NRC staff will use the industry's submittals and the TI inspection results to determine whether to pursue a generic communication to resolve the issue.

If you have questions about this letter, please contact Stewart Bailey of my staff at Stewart.Bailey@nrc.gov or 301-415-1321.

Sincerely,

/RA/

Eric J. Benner, Director
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: RESPONSE FROM THE NUCLEAR REGULATORY COMMISSION
REGARDING THE ANCHOR DARLING DOUBLE DISC GATE VALVE
INDUSTRY RESOLUTION PLAN DATED: December 18, 2017

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