NRR-PMDAPEm Resource

From: Lingam, Siva
Sent: Thursday, August 31, 2017 11:09 AM
To: Michael.Dilorenzo@aps.com; Matthew.Cox@aps.com
Cc: Pascarelli, Robert; Alley, David; Wolfgang, Robert; Bedi, Gurjendra; Thomas.N.Weber@aps.com; Carl.Stephenson@aps.com
Subject: Palo Verde 1, 2, and 3 - final RAI for RRs PRR-03, PRR-04 and PRR-05, Pump Testing (CAC Nos. MF9317, MF9318, MF9319, MF9324, MF9325, MF9326, MF9331, MF9332, and MF9333)

By letter dated February 23, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17054D687), as supplemented by letters dated March 10 and August 16, 2017 (ADAMS Accession Nos. ML17069A319 and ML17228A795), Arizona Public Service Company, (the licensee) requested relief from the requirements of the 2012 edition of American Society of Mechanical Engineers Operation and Maintenance Code (ASME OM Code) specifically related to fourth 10-year interval pump and valve inservice testing program at Palo Verde Nuclear Generating Station, Units 1, 2, and 3. The licensee submitted the relief requests (RRs) PRR-01, PRR-03, PRR-04, and PRR-05 pursuant to Section 50.55a(z)(2) of Title 10 of the *Code of Federal Regulations*(10 CFR), which requires the applicant to demonstrate that the proposed alternative would be acceptable on the basis that complying with the specified requirement would result in hardship or unusual difficulty, without a compensating increase in the level of quality and safety. Similarly, the licensee submitted RR PRR-02 pursuant to 10 CFR 50.55a(f)(5)(iii) based on impracticality, and RR PRR-06 in accordance with 10 CFR 50.55a(z)(1) based on an acceptable level of quality and safety.

Please note the following **official** requests for additional information (RAIs) from the U.S. Nuclear Regulatory Commission (NRC) staff for RRs PRR-03, PRR-04 and PRR-05, and provide your responses by September 30, 2017, as mutually agreed during the clarification call this morning. Your timely responses will allow the NRC staff to complete its review on schedule. The NRC staff has no RAIs for RRs PRR-01, PRR-02 and PRR-06.

RAI PRR-03-1

It is stated in the alternative request that the design flow for the Low Pressure Safety Injection (LPSI) pumps is 4,200 gallons per minute (gpm). The proposed alternative is to conduct the Group A test for the LPSI pumps at mini-flow conditions using the minimum flow recirculation line fixed resistance of approximately 180 gpm to establish the specified reference point. Please confirm that the flow rate of 180 gpm is above the manufacturer's minimum continuous stable flow for the LPSI pumps.

RAI PRR-04-1

It is stated in the alternative request that the design flow for the High Pressure Safety Injection (HPSI) pumps is 815 gpm. The proposed alternative is to conduct the Group B test for the HPSI pumps at mini-flow conditions using the minimum flow recirculation line fixed resistance of approximately 170 gpm to establish the specified reference point. Please confirm that the flow rate of 170 gpm is above the manufacturer's minimum continuous stable flow for the HPSI pumps.

RAI PRR-05-1

It is stated in the alternative request that the design flow for the containment spray (CS) pumps is 3890 gpm. The proposed alternative is to conduct the Group A test for the CS pumps at mini-flow conditions using the minimum flow recirculation line fixed resistance of approximately 190 gpm to establish the specified

reference point. Please confirm that the flow rate of 190 gpm is above the manufacturer's minimum continuous stable flow for the CS pumps.

Siva P. Lingam
U.S. Nuclear Regulatory Commission
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