

**Waterford 3 Steam Electric Station
Request for Presubmittal Public Meeting
Relief Request from ASME Code Requirements for
High Pressure Safety Injection (HPSI) Pump AB Testing Requirements**

Entergy will be requesting relief from ASME OM Code Section ISTB-6200 to double the frequency of testing if a parameter value falls within the Alert range for High Pressure Safety Injection (HPSI) Pump AB. This request will be made pursuant to 50.55a(z)(2) on the basis that the ASME OM Code requirements present an undue hardship without a compensating increase in the level of quality and safety.

Background

During the performance of an IST Comprehensive Test of HPSI Pump AB during RF20 (November 2015), bearing vibration values were recorded in the Alert range. On July 6, 2016, the NRC authorized the use of the alternative in Relief Request PRR-WF3-2016-1 for Waterford 3 until the end of Operating Cycle 21 (ML16182A270). The alternative allowed for use of the Group A test during Operating Cycle 21 in lieu of the requirement to perform the comprehensive test at the increased frequency required by the corrective action of ISTB-6200 on the basis that the requirement would present an undue hardship without a compensating increase in the level of quality and safety. In this evaluation, Entergy stated that the cause for the increased vibrations was due to the fact that the pump is in the beginning stages of end of life, and that pump refurbishment was scheduled to be performed during the 21st refueling outage (RF21).

Issue with Refurbishment

It was identified just prior to RF21 that the shaft that was procured to refurbish the HPSI AB pump in RF21 was damaged by the fabricator and was deemed unusable by engineering evaluation. The pump is unique to WF3 and ANO and spare materials were not available. Lead time for a new shaft is beyond the start date of Operating Cycle 22. Prior to identification that the shaft was unusable, the pump was uncoupled from the motor. It was recoupled when it was identified that refurbishment could not be completed. No additional maintenance was performed.

HPSI AB Test Results

The HPSI AB comprehensive test was performed on April 21, 2017. The vibration points that previously were in the alert range are within IST acceptance limits and no longer within the Alert Range. . Engineering evaluation has determined that the uncoupling and recoupling have affected the vibration readings; however, this is not the most likely cause of the increased vibrations identified in November 2015 and therefore Waterford 3 cannot say that the original condition has been resolved. Per ISTB-6200, "the frequency of testing specified in ISTB-3400 shall be doubled until the cause of the deviation is determined and the condition is corrected."

Group A test results show that the HPSI AB pump continues to exhibit satisfactory hydraulic performance with no degrading trend. Elevated, yet acceptable, vibration measurements were observed during Operating Cycle 21. After the uncoupling and recoupling of the pump just prior to RF21, the vibrations were noted to have been reduced significantly, and are of the same magnitude as vibration measurements recorded during the comprehensive test of RF21.

Request

Due to the circumstances presented by the fact that the HPSI AB pump could not be refurbished, the original condition that caused the elevated vibration has not been resolved. ISTB-6200 requires that the comprehensive pump test be performed mid cycle. Waterford 3 will be requesting, similar to the request which was authorized for Operating Cycle 21, that the alternative to allow the Group A test be used in lieu of performance of the comprehensive test. This request will be made pursuant to 50.55a(z)(2) on the basis that the ASME OM Code requirements present an undue hardship without a compensating increase in the level of quality and safety. This request will be for the duration of Operating Cycle 22. The approval will be requested to be granted by February 3, 2018, to ensure that relief is obtained prior to the time that testing would need to be performed (39 weeks following the previous test). The pump is scheduled to be refurbished during RF22.