

Wilson, Peter

From: Clifford, James *CT*
Sent: Wednesday, April 21, 2010 6:56 PM
To: Lew, David
Cc: Wilson, Peter
Subject: RE: Notes from Fricker call

Here are my notes from the 4/21/2010 5:00 p.m. call with Carl Fricker. Please modify them as you see fit.

Jim Clifford and I called Carl Fricker to share our concerns regarding the operability of the Unit 2 auxiliary feedwater (AFW) system given their discovery that a potentially required ASME test had not been performed, and the current understanding of the degraded condition of the Unit 1 AFW system buried piping. The required test that was missed was a pressure drop test for the buried portions of the Unit 2 AFW piping. The licensee had enter Technical Specification (TS) 4.0.3 for missed surveillance test at about 11:32 a.m. this morning after discovering the surveillance had not been performed. The licensee is assessing whether entering TS 4.0.3 is actually required since the test is only required for piping that is isolable at both ends (NRC staff will need to verify this).

Carl Fricker stated that he has met with Bob Braun (Senior Site VP) and the Salem senior managers, who had laid out their next steps towards resolving the Unit 2 AFW operability. Carl indicated that this was a high priority for Salem. Salem is currently taking several actions to resolve this issue.

The licensee is evaluating whether the pressure drop test could be performed while Unit 2 is operating. This test may not be possible to be performed on-line if all trains of AFW need to be isolated as part of the test.

If the licensee affirms entering 4.0.3 was correct and the pressure drop test cannot be performed on-line, the licensee will be performing a risk evaluation (as allowed in TS 4.0.3) to extend the 24 hours up to the full surveillance interval (in this case 36 months). The staff will review this risk evaluation as soon as it is available.

The licensee is also performing a more detailed evaluation of their finite element analysis on the Unit 1 AFW piping after the most recent stage of the evaluation concluded that structural integrity could not be assured; the next stage of the evaluation would look at potential plastic deformation of the pipe, which would provide some measure of structural integrity of the pipe. The licensee expects their contractor to have the results of their latest analysis in about 24 - 48 hours.

The licensee has also decided to excavate a portion of the Unit 2 AFW piping in the near term (likely tonight) in the fuel handling building, and inspect the coating as well as perform UT inspections of portions of this buried pipe. The licensee is also considering excavating other portions of the buried section of Unit 2's AFW piping and conducting similar inspections to gain added assurance of the Unit 2 AFW pipe condition to support their operability assessment.

The licensee is also planning to conduct more extensive testing of the removed sections of the Unit 1 AFW pipe, including testing at full operating pressure, to further evaluate the structural integrity of the Unit 1 piping, and potential implications on the Unit 2 piping.

Our next steps will be to evaluate the results of the licensee's inspection of the Unit 2 buried piping; and to evaluate any risk assessment the licensee develops to extend TS 4.0.3. The licensee senior management appears appropriately focused on the operability of the Unit 2 AFW piping.

Conte, Richard

From: Roberts, Darrell
Sent: Wednesday, April 21, 2010 7:56 PM
To: White, John; Conte, Richard
Cc: Wilson, Peter; Doerflein, Lawrence
Subject: FW: Salem 2 LCO and Update on Salem 1 Degraded AFW Buried Piping

John, fyi, since you asked. Others for awareness...

DJR

From: Lew, David
Sent: Wednesday, April 21, 2010 7:39 PM
To: Mallett, Bruce; Leeds, Eric
Cc: Clifford, James; Collins, Sam; Dapas, Marc; Wilson, Peter; Roberts, Darrell
Subject: Salem 2 LCO and Update on Salem 1 Degraded AFW Buried Piping

Bruce/Eric,

Sam asked me to give you a heads up on a short term LCO for Salem Unit 2 AFW system, and an update on the degraded AFW buried piping identified on the Unit 1 (Unit 1 is currently in a refueling outage). The Region I staff has been coordinating with the NRR staff for support.

Salem 2 LCO

Salem Unit 2 is currently in a 24 hour LCO (as of 11:32 am) for a potentially missed surveillance test (a pressure drop test for the buried portions of the Unit 2 AFW piping). The licensee believes that this test is only required if both ends of the pipe are isolable, which they are in the process of verifying. Specifically, the licensee is determining whether a non-return check valve constitutes an isolable boundary.

The licensee's next steps are to verify the applicability of this test, and if required, determine if they can conduct the test at power. Otherwise, they expect to perform a risk analysis to determine if they can extend the LCO beyond 24 hours (out to the full surveillance interval, up to 36 months). Our next steps are to evaluate the licensee's resolution of this issue, including any risk assessment the licensee may develop to extend TS 4.0.3.

Salem 1 and 2 buried piping update

Regarding past operability, the licensee is performing a more detailed evaluation of their finite element analysis on the Unit 1 AFW piping after the most recent stage of the evaluation concluded that structural integrity could not be assured; the next stage of the evaluation would look at potential plastic deformation of the pipe, which would provide some measure of structural integrity of the pipe. The licensee expects their contractor to have the results of their latest analysis in about 24 - 48 hours.

The licensee is also planning to conduct more extensive testing of the removed sections of the Unit 1 AFW pipe, including testing at full operating pressure, to further evaluate the structural integrity of the Unit 1 piping, and potential implications on the Unit 2 piping.

Relative to the extent of condition on Unit 2, the licensee plans to excavate a portion of the Unit 2 AFW piping in the near term (likely tonight) in the fuel handling building, and inspect the pipe coating as well as perform UT inspections of portions of this buried pipe. The licensee is also considering excavating other portions of the buried section of Unit 2's AFW piping and conducting similar inspections to gain added assurance of the Unit 2 AFW pipe condition to support their operability assessment.

Our next steps will be to evaluate the results of the licensee's inspection of the Unit 2 buried piping; and review the licensee's FEA with NRR support.

Jim Clifford and Pete Wilson discussed the current situation of the Salem AFW piping with Carl Fricker (Salem VP) to better understand the licensee's focus and next steps, particularly with respect to the operability of Unit 2 AFW piping. The licensee senior management appears appropriately focused on the operability of the Unit 2 AFW piping.

Dave

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other specified conditions in the Applicability for individual Limiting Conditions for Operation, unless otherwise stated in the Surveillance Requirement. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the specified frequency shall be failure to meet the Limiting Condition for Operation, except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met and the applicable Actions must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met and the applicable Actions must be entered.

4.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 4.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g) (6) (i).
- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications: