Welling, Blake

From: Cline, Leonard RI
Sent: Thursday, April 22, 2010 4:27 PM
To: Lew, David; Clifford, James
Cc: Burritt, Arthur; Conte, Richard; OHara, Timothy; Schroeder, Daniel; Balian, Harry; Welling, Blake; Douglas, Christopher; Gray, Harold; Cahill, Christopher
Subject: Salem AFW status

Unit 2 AFW Missed Surveillance:

PSEG completed a risk analysis that determined delaying the completion of the required pressure drop test an additional seven days was acceptable. This gives PSEG time to determine the best method for performing the pressure drop test on the buried pipe at Unit 2 while at power. The SRAs have engaged PSEG risk analysts and have asked several questions such as whether there are flow restrictors in the AFW discharge lines upstream of the buried pipe, and whether site procedures require them to consider the risk of external events such as fire for the analysis.

PSEG completed limited excavation of Unit 2 piping in the fuel handling building area (similar to Unit 1) and discovered that the pipe coating condition was much better than what they had seen at the same location on Unit 1. EB1 has also observed the condition of the pipe coating and agreed with PSEG's assessment of its condition. PSEG plans to remove a portion of the coating in this area to perform UTs. The UTs will be performed on the pipe at the location that they believe has the most significant coating degradation. PB3/EB1 will monitor progress in this activity and EB1 will review the UT results when available.

Unit 1 AFW Pipe Condition

To support past operability of the Unit 1 piping, PSEG completed a technical evaluation that determined that the maximum pressure in the underground AFW piping was 1275 psig. The residents reviewed the evaluation, asked several questions, but currently do not have open concerns. In addition, PB3 has requested that OB review the evaluation to confirm that the most limiting AFW system configuration that PSEG assumed in the analysis was accurate. They will engage Salem operator training on this issue.

PSEG informed us that they will receive a copy of the FEA for the Unit 1 pipe condition from the contractor tomorrow. They expect to be able to provide us a copy of the analysis and an operability evaluation in time for our 1315 status update call tomorrow (4/23). We will also provide this information to Tim Lupold at NRR who will support our review of the analysis. It is important to note that PSEG will provide this information to us before they have completed their internal reviews and before their third party contractor (NPR) completes its review which could take up to seven days to complete.

C169

Welling, Blake

From: Lew, David
Sent: Tuesday, April 06, 2010 5:14 PM
To: Burritt, Arthur; Cline, Leonard; Schroeder, Daniel; Balian, Harry
Cc: Welling, Blake; Patel, Amar; Clifford, James
Subject: FW: Quick notes on the Salem 1 AFW piping situation reported by Michael Modes

FYI

From: Roberts, Darrell
Sent: Tuesday, April 06, 2010 4:28 PM
To: Wilson, Peter
Cc: Roberts, Darrell; Lew, David; Clifford, James; Conte, Richard
Subject: Quick notes on the Salem 1 AFW piping situation reported by Michael Modes

Pete, et. al.,

Salem Unit 1: AFW "buried" piping (Class 2 Carbon Steel coated piping, 10" diameter) preliminary guided wave inspection results indicate that buried piping is degraded below min wall. The affected 10" pipe comes out of an Auxiliary Storage Tank and ultimately splits into headers that feed SGs 12 and 14. Licensee is assembling teams, making plans for excavation to conduct UT (the official test method accepted by NRC). Tim O'hara (onsite for ISI inspections) informed the region. These are very preliminary results, so we should not react strongly until we understand better what the licensee's official UT results indicate. Conte is onsite as well monitoring the situation. (Need to confirm the following: Salem Unit 1 head detensioning was expected to start Monday, 4/5, so the plant should be in Refueling Mode (with S/Gs out of service). What is operating status of AFW, or TS requirement for it in this mode? Depending on UT results, this would be a restart issue for Salem.

Note: Per discussion with Michael Modes, guided wave is fine for long straight runs without valves and flanges and bends (e.g., natural gas pipelines). UT is still the methodology of record to meet Code inspection requirements. Industry (EPRI) is in the process of building future mockup test facility in NC to qualify the guided wave technique, but for now guided wave technique is not a reliable indicator for some pipes in nuclear applications.

However, if this is an indication of significant degradation of safety-related buried piping (i.e., below minimum wall thickness requirements for Class 2 AFW system), then it could have implications on the agency's buried piping regulatory footprint going forward, especially given that most - if not all - earlier issues have dealt with non-safety related leaks of buried/underground piping that have less to do with function than they do with radiological impact.

Jim/Dave, you may receive more information through separate channels via the resident inspectors/BC. DRS should have the technical lead for this given our onsite presence already.

DJR