Ziev, Tracey

From: Conte, Richard RJ
Sent: Friday, April 30, 2010 9:22 AM
To: Burritt, Arthur; Schroeder, Daniel; OHara, Timothy
Subject: Summary of Call April 28 - Potential PSEG Conf. Call Items
Attachments: SL1 AFW Degradation Coating Failure Rev3.doc

See attached - open for discuss to day any time but 1230 and 4 each for an hour on midyears.

Conf. call issues are in red.

C/127

Attachment 1 – Factual Development

Week of 4/5/10:

Two of four AFW lines are buried on each Salem Unit. On Unit 1, approximately 150' of piping between the pumps in the Auxiliary building to SG #12 and to SG #14 are buried. Only the buried portions are in question here because they are inaccessible for inspection per the Code. The remainder of the non-buried piping in the AFW system is included in the ISI Program and is inspected via code qualified UT. The 150' is an estimate from several prints and several of the PSEG engineers - 2 runs of 4", schedule 80, carbon steel pipe of about 150' each - total of about 300'.

Licensee was using guided wave technology for initial characterization and need to dig additional pits – turned out they needed to dig the whole area up. The inspector explained agency position that the ASME code does not recognize the Guided Wave readings and they cannot be credited for dimensions as part of a repair. The ISI Program Manager acknowledges this and understands the concern.

Engineers have alluded to visual inspections conducted in 1998 which said the coating was in good shape - however that have not been able to present those reports. Those inspections should be documented or they did not occur.

Regarding the min wall situation, not all of the limited Code UT are below calculated min wall of 0.278" (nominal is .337") for a rated pressure of 1950 psi.

PSEG had ordered replacement pipe.

Week of 4/12/10:

Update - Salem Unit 1 Outage – AFW (headers 12 and 14) buried piping Issues
Based on UT results from the shallow section of the Unit 1 buried AFW piping for headers 12 and 14 (headers 11 and 13 are not buried), the licensee currently plans to replace a combined total of approximately 50' of piping on the shallow buried portion of these two headers (depth of approx 4 ft). The licensee is using a contractor to perform a finite element analysis to confirm the structural integrity of the rest of the shallow piping. These results will then be used to finalize the licensee's determination of past operability for the shallow piping and to identify the need for additional corrective actions related to any extent of condition on the operating unit, Unit 2.

To this point the licensee has confirmed reasonable assurance of operability for the Unit 2 AFW system based on historical information and photographs from 1994 that provided indication of intact pipe coating and the fact that Unit 2 is about 2 years younger than Unit 1.

The operability evaluation for the shallow section of piping that will be based on the finite element analysis is expected to be completed by Monday, 4/19.

On the deep section of piping for headers 12 and 14, the licensee has excavated a small portion of the down comer that leads to the deeper piping. They performed ultrasonic testing (UT) around the elbow at the top of this down comer (depth of approx 4 ft), which was completely submerged in groundwater. The minimum wall thickness measured in this area was ~0.226",

which was greater than the minimum required wall thickness of 0.200". In addition the licensee performed a guided wave pipe inspection on a portion of the straight run of the deep section of piping (approximately 20 ft in length at a depth of approx. 17 ft). The results indicated less wall thinning on this section of piping than the guided wave results indicated for the shallow section of piping. The licensee has also confirmed that the deep section of AFW piping was coated similar to the shallow section of piping.

Based on the results of the UT around the elbow and the results of the guided wave in the 20 ft section of deep piping, the licensee plans no further excavation of the deep section of piping. The licensee's current plans are to recoat all of the piping exposed during excavation that will not be replaced, in both the shallow and deep sections, and then following the completion of pipe replacements for the significantly degraded exposed pipe sections, hydro the entire line, both the shallow and deep sections. The licensee will use these hydro results to support operability of the deep section of piping for the next operating cycle.

To facilitate completion of the operability determinations for both the shallow and deep section of piping, the licensee will also be reducing the design pressure of the AFW piping from a very conservative 1900 psig down to a more realistic 1275 psig through a plant modification package.

Example picture