

Conte, Richard

From: OHara, Timothy *RT*
Sent: Friday, June 11, 2010 6:33 PM
To: Wertz, Trent
Cc: Nguyen, Quynh; Conte, Richard
Subject: Notes For Jack Grobe's Region 2 Presentation

Trent,

I had some difficulty adding comments to the presentation on Quynh's email. So here are the comments which I think explain what happened at Salem Unit 1 in April. Please email me back if you need more information or description.

Notes for first picture:

(1) Licensee was performing a planned excavation and visual (VT) inspection of the buried Unit 1 AFW piping during the April 2010 Refueling Outage. This piping had not been excavated and inspected since construction was completed in 1977. Salem and Hope Creek are presently undergoing review for License Renewal.

(2) The excavation exposed the following piping:

(a) AFW headers #12 and #14 supplying feedwater to SG #12 and SG #14; each pipe is 4.0" ID, schedule 80, carbon steel which was specified to be coated for corrosion protection, approx. 680 ft. of buried piping (340 ft. in each header). Piping is ASME Class 3, Seismic Class 1, safety-related piping. AFW piping to #11 and #13 SGs are NOT buried.

(b) 2, 1.0" ID control air (CA) piping headers. Non-ASME, safety related piping

(c) 2, 2.0" ID station air (SA) piping headers. Non-ASME, non-safety piping

(3) The AFW piping headers #12 and #14 exhibited significant external corrosion upon excavation. Nominal wall thickness was 0.337", minimum wall thickness is 0.278" for the 1950 psi design pressure. In an effort to avoid replacement, the licensee began performing qualified UT wall thickness measurements. The lowest recorded wall thickness was 0.077". With the significant degradation, the licensee decided to replace the buried AFW piping. Note that there has been no indication of leaks from the original AFW piping.

(4) The AFW piping was replaced, retested (pressure), and coated with an epoxy coating per ASME Section XI Repair/Replacement requirements and 10 CFR 50.59. A portion of the previously buried piping was re-routed to remain above ground inside the fuel transfer building.

(5) It has been determined that the licensee had not been performing the pressure tests required by ASME Section XI, paragraph IWA-5244. The pressure testing is specified for Buried Components once each ISI interval.

(6) A leak was also discovered in one of the 1.0" CA headers. The pipe was repaired, tested and returned to service after rewrapping with a protective coating.

Notes for second picture:

Typical condition of old piping after excavation.

Notes for third picture:

Picture showing AFW pipe near a support (under pipe) and a hold down strap (over pipe). Significant corrosion was observed at the supports and straps.

Tim OHara