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Craver, Patti

From: Thorp, John NRR
Sent: Saturday, April 10, 2010 9:28 AM
To: King, Mark
Subject: FW: Update On Salem AFW Condition (Buried Piping)

FYI Mark

John

From: Conte, Richard NRR R1
Sent: Friday, April 09, 2010 10:45 AM
To: Ennis, Rick
Cc: Lupold, Timothy; Hardies, Robert; Burritt, Arthur; Schroeder, Daniel; Balian, Harry; Hoffman, Keith; Ashley, Donnie; Modes, Michael; OHara, Timothy; Pelton, David; Brown, Michael; Thorp, John
Subject: RE: Update On Salem AFW Condition (Buried Piping)

There are a number of interested parties here on the technical issue, DORL, DLR, Component Intergrity, in addition to region I DRS/DRP and OpE. Sidebar stakeholders interested in results and next actions are PAO, SLO.

I think there is still interest in technical stakeholder call and strategizing session for the next move or questions based on licensee decisions. By Monday morning we hope to know how they are proceeding on the repair or redesign. The OpE summary today will attempt to summarize the week.

Any interest in a getting together Monday 1 or 2 or 3pm or later in the week? Stretegizing will be needed on extent of conditions. And, of course the issue relates to a "technical first" I believe - degradation of buried safety related piping that appears to be exempt from visual or volumetric examination based on being not accessible in Part 50 space. From Friday's summary there may be a ton of questions on Monday.

I am sure Tim Lupold is lead for Component Integrity, Rick Ennis, DORL, not sure DLR, Pelton or someone else in DLR such as Ashley or his branch chief and off course Art and myself for DRP and DRS.

From: OHara, Timothy R1
Sent: Thursday, April 08, 2010 7:46 AM
To: Ennis, Rick
Cc: Chernoff, Harold; Lupold, Timothy; Hardies, Robert; Burritt, Arthur; Schroeder, Daniel; Balian, Harry; Nelson, Robert; Hoffman, Keith; Ashley, Donnie; Conte, Richard; Modes, Michael
Subject: RE: Update On Salem AFW Condition (Buried Piping)

Rick,

Mike Modes from the Region will be contacting Tim Lupold to discuss position and any needed assistance. Thanks.

Tim OHara

From: Ennis, Rick NRR
Sent: Thursday, April 08, 2010 7:14 AM
To: OHara, Timothy
Cc: Chernoff, Harold; Lupold, Timothy; Hardies, Robert; Burritt, Arthur; Schroeder, Daniel; Balian, Harry; Nelson, Robert; Hoffman, Keith; Ashley, Donnie
Subject: RE: Update On Salem AFW Condition (Buried Piping)

C123

Tim,

Since this buried piping issue is a current license issue (as well as license renewal issue), please let me know if you need NRR tech staff assistance.

thanks,

Rick

From: OHara, Timothy , R1
Sent: Thursday, April 08, 2010 6:57 AM
To: Ennis, Rick
Subject: RE: Update On Salem AFW Condition

Rick,

Because of License Renewal they need to have an Aging Management Program to address aging management of Buried Piping. PSEG has had issues with corrosion on buried piping but it has not been strictly maintained and it was not required by Code.

This inspection was being done as part of license renewal - we have a 71002 inspection here in June. However, now that the condition has been discovered they need to address the issue under Part 50 and their existing license. Biggest concern right now is the operability of the piping until the next opportunity to replace. I don't see how they can convince us it's operable without digging up all the buried pipe and UT testing it for the required min wall.

Right now we want to get some dialogue going to try and avoid a last minute startup issue.

Donnie Ashley is the Lic. Renewal PM. I haven't kept him in the loop on this but I believe Mike Modes from Region 1 may have been talking to the LR people.

Tim OHara

From: Ennis, Rick , NRR
Sent: Thursday, April 08, 2010 6:47 AM
To: OHara, Timothy
Subject: RE: Update On Salem AFW Condition

Tim,

What initiated PSEG's effort to inspect the buried pipe? Is it required ISI or just licensee being pro-active in light of the recent buried piping issues?

If you are going to be on 7:30 am call we can discuss then.

thanks,

Rick

From: OHara, Timothy , R1
Sent: Thursday, April 08, 2010 6:44 AM
To: Ennis, Rick
Subject: FW: Update On Salem AFW Condition

Rick,

More info on the developing AFW issue.

Tim OHara

From: OHara, Timothy 1 R1
Sent: Wednesday, April 07, 2010 8:01 PM
To: Roberts, Darrell; Modes, Michael; Conte, Richard; Wilson, Peter
Cc: Schroeder, Daniel; Balian, Harry; Burritt, Arthur; Cline, Leonard
Subject: RE: Update On Salem AFW Condition

Darrell,

2 of the 4 AFW lines are burried on each Salem Unit. On Unit 1 which we are talking about here, about approximately 150' of piping between the pumps (4?) in the Auxiliary building to SG #12 and to SG #14 are buried. Only the buried portions are in question here because they are inaccessable 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 my estimate from several prints and several of the PSEG engineers have thrown around this value for the length of the buried portion of the piping. Direct answer: 2 runs of 4", schedule 80, carbon steel pipe of about 150' each - total of about 300'.

So far about 56' has been GW examined. Other problems will soon come to light - it looks like there are sections which cannot be GW tested. Both pipes are within about 5' of the surface in the area examined so far - so excavating these portions have been/would be relatively easy. Both pipes go deeper and pass under the Fuel Transfer Canal and will present a challenge to examine with either GW or a Code UT.

I've discussed with the engineers what the condition of the coating is in all areas. They have been saying that the conditions are different where they haven't been able to examine with either GW or UT(?). I've asked them to present any soil or environmental info or data they may have which could convince someone that the coating may be intact in some areas. Remember this really is a coatings inspection. Once the coating has been known to fail, then the condition needs to be characterized, all loose (exfoliated) material must be removed and a valid, qualified UT needs to be performed to know the condition of the remaining pipe.

I did ask the licensee today to initiate a Notification saying that the coating had failed. It has been 3 days and that defficiency has not been identified in their system - but the engineers admit that that is the case.

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, in my opinion, they did not occur.

I have asked what their plans were for inspecting the 2 buried pipes on Unit 2 but haven't heard an answer or seen inspection reports which show the condition of the coating sometime in the past.

Regarding the min wall situation, not all of the limited Code UT are below calculated min wall of 0.278". The difficulty with the GW reported value of 35% wall degradation is we have no idea how accurate it is or ins't. There is no calibration standard to compare readings to. The licensee and GW vendor have not provided any procedures for review, the vendor has not provided any written reports with any values. So, I hope you can see we would have no basis for believing and/or accepting any of the GW data. There is no basis for the NRC to make any judgements. BTW the licensee readily admits this.

I think I've answered your questions without rambling too much. If not let me know what other details you need.

Tim OHara

From: Roberts, Darrell
Sent: Wednesday, April 07, 2010 2:43 PM
To: OHara, Timothy; Modes, Michael; Conte, Richard; Wilson, Peter
Cc: Schroeder, Daniel; Balian, Harry; Burritt, Arthur; Cline, Leonard
Subject: RE: Update On Salem AFW Condition

Tim, I'd like to further understand the scope of what we're talking about here. How much of the affected AFW system piping is buried? What length of piping was determined by GW to be less than min-wall? Given the implications you've described, and the likelihood that the licensee would want to "dig up all of the AFW piping," we may need to have a call with the folks here in the region (and maybe NRR experts) to determine to what level and extent we need to engage licensee senior management.

thx,
DJR

From: OHara, Timothy
Sent: Wednesday, April 07, 2010 5:32 PM
To: Modes, Michael; Conte, Richard; Roberts, Darrell; Wilson, Peter
Cc: Schroeder, Daniel; Balian, Harry; Burritt, Arthur; Cline, Leonard
Subject: Update On Salem AFW Condition

Gentlemen,

PSEG has completed excavating 2 additional areas and they plan on performing additional Guided Wave (GW) readings on the AFW pipes. The condition of the AFW (#12,#14), Plant Air headers (2) and Control Air pipe (1) have seen the same environmental conditions and appear to be degraded. At present, PSEG is concentrating only on the AFW piping. Some additional code UT data will be collected tonight and tomorrow.

I have explained to several people (Engineering, Licensisng and License Renewal) here on site that the NRC will place no credibility on the GW readings due to it being an unqualified process. I've communicated our position that the entire pipe has experienced a coating failure and that a qualified code UT should be completed on the pipes after all exfoliation has been removed from the pipes. Of course, this would mean digging up all of the AFW piping. I've explained that the failed coating potentially affects the entire pipe, however, they are continuing to take additional GW readings.

I've also explained our position that the code does not recognize the GW readings and they cannot be credited for dimensions as part of a repair. The ISI Program Manager acknowledges this and understands the concern.

I believe they are working on an operability document which does less than I've explained above based, at least, partially on GW readings. I will look at their proposal(s) when it is completed. I can't forecast a date for this at this time and their strategy may change.

As a back up strategy, I did hear today that PSEG had ordered replacement pipe.

Many questions remain to be answered and understood, however, this outage is just 24 days in duration and the pressure will increase the closer they get to the end, on approximately 4/28/10.

More to follow,

Tim OHara