Ziev, Tracey

From:	Tsao, John NIC
Sent:	Friday, April 23, 2010 9:57 AM
To:	OHara, Timothy
Cc:	Lupold, Timothy; Conte, Richard; Gray, Harold; Ennis, Rick; Burritt, Arthur; Schroeder, Daniel;
	Cline, Leonard
Subject:	RE: Scan from Salem/Hope Creek HP5035

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Tim,

Thanks for your information.

The minimum pipe wall thickness derived from Equation 4 in Code Case N-513-2 assumes that the wall thickness is for the entire length of the pipe, whereas in the field the wall thinning occurrs only in certain spots/regions of the pipe. Equation 4 does give a conservative value as compared to the finite element analysis.

John

-----Original Message-----From: OHara, Timothy Sent: Friday, April 23, 2010 9:50 AM To: Tsao, John Cc: Lupold, Timothy; Conte, Richard; Gray, Harold; Ennis, Rick; Burritt, Arthur; Schroeder, Daniel; Cline, Leonard Subject: RE: Scan from Salem/Hope Creek HP5035

Hello John,

I just did a quick read of your email and want to let you know that the piping in question is 4.00" ID schedule 80 which has been coroded in several, if not all areas. The thinest area measured was 0.077" thick. That's why they are using 0.077"

If this doesn't answer your question, let me know.

By the way, PSEG is struggling to get the final report from SAI. I'll sent it when I get it, or let you know by the end of the day what's happening.

Thanks for the help, John.

Tim OHara

NRN -----Original Message-----04 From: Tsao, John Sent: Friday, April 23, 2010 8:41 AM To: OHara, Timothy Cc: Lupold, Timothy; Conte, Richard; Gray, Harold; Ennis, Rick; Burritt, Arthur; Schroeder, Daniel; Cline, Leonard Subject: RE: Scan from Salem/Hope Creek HP5035

Tim,

Sugar

I reviewed the preliminary flaw evaluation that you forwarded yesterday.

The first page of the package is an email from Martin Romero (a licensee's consultant) to certain individuals (I suppose they are licensee's personnel). In that email, it appears that Mr. Romero concluded that a minimum wall thickness of 0.077 inches is acceptable under a design pressure of 1943 psi.

I am not sure what size of pipe he had analyzed.

I used Equation (4) of Code Case N-513-2 to estimate the minimum wall thickness.

Code Case N-513-2 is not acceptable for use for the high energy AFW line but as a back-of-the-envelope calculation, I am using Equation 4 in N-513-2 to estimate the minimum wall thickness.

I assume a 6 inch line (OD = 6.625").

Pressure = 1275 psi

1.1

yield strength = 15 ksi x 1.5 = 22.5 ksi (same as M. Romero used)

T min = p x Do / 2 (S + 0.4 x p)

I came up with a minimum wall thickness of 0.183 inches. I do not know why or how 0.077 inches is derived.

For low pressure piping such as service water line where the pressure is about 10 or 20 psi then a minimum wall thickness of 0.077 inches is reasonable based on equation 4 of N-513-2.

The licensee's finite element analysis may result a lower minimum wall thickness than Equation 4 of N-513-2.

I do not know if my calculation is correct. I will check the licensee's calculation more closely when it is available.

Thanks.

John

-----Original Message-----From: OHara, Timothy Sent: Thursday, April 22, 2010 3:00 PM To: Tsao, John Cc: Lupold, Timothy; Conte, Richard; Gray, Harold; Ennis, Rick; Burritt, Arthur; Schroeder, Daniel; Cline, Leonard Subject: FW: Scan from Salem/Hope Creek HP5035

Hello John,

PSEG has provided us with a preliminary letter (attached) from SAI describing the results of the finite element analysis performed on the old Salem Unit 1 AFW buried headers #12 and #14. I'm also attaching a copy of the information which PSEG gave SAI as input to the analysis.

We don't expect to receive the final copy of the analysis until tomorrow PM so I wanted to, at least, provide this information today.

The first attachment (the letter) describes how they feel they've met the Code requirements. I'm hoping this will give you some advanced information before we get the actual FEA. Let me now if you have any questions.

Tim OHara

6.20

-----Original Message-----From: R1Scan [mailto:R1Scan@nrc.gov] Sent: Thursday, April 22, 2010 2:25 PM To: OHara, Timothy Subject: Scan from Salem/Hope Creek HP5035

Please open the attached document. This document was digitally sent to you using an HP Digital Sending device.