

Poehler, Jeffrey

24

From: Poehler, Jeffrey *NRK*
Sent: Thursday, April 05, 2012 5:41 PM
To: Wiebe, Joel; Purtscher, Patrick; Wldrevitz, Dan
Cc: Rosenberg, Stacey; Mozafari, Brenda; Shaikh, Atif; McGhee, James
Subject: RE: Quad Cities Unit 2 Instrument Line Repair Relief Request Information
Attachments: image001.jpg

(b)(6)

here are possible questions for the call tomorrow:

Description of the event – circumstances of the leak.

What is the extent of condition and what actions did they take (e.g. inspections of similar nozzles) to establish?

Characterization of flaw that caused leak- Apparently they will be requesting relief from the requirement of IWB-3420 that they must characterize the flaw by NDE. Their basis will probably be the assumption of a worst-case flaw in the nozzle or J-groove weld and a flaw growth analysis. How do they know the flaw is only in the nozzle and J-groove weld now and not in the vessel steel?

Repair plan

- What are the original nozzle and weld materials?
- What are the repair weld and nozzle materials?
- What code case(s) – N-638-4 (Conditionally approved in Rev. 16 of RG 1.147)?
- Any deviations from approved Code Case?
- Meeting NRC conditions for use of Code Case?
- Joel mentioned a plate being involved, which would be different than the ANO example and other similar repairs I've seen.

Why do they need to use this alternative versus doing a repair that is fully compliant with ASME Section XI? (would require removing reactor vessel head and welding from inside?)

Is there any industry experience with similar nozzle leaks in BWRs with similar materials and configurations? (If it is an Alloy 600 nozzle with 82/182 weld, there is lots of experience in PWRs. not sure about BWRs) In other words, does the BWR experience support the assumption that the flaw causing the leak is confined to the Alloy 82/182 J-weld or Alloy 600 nozzle material?

Corrosion evaluation of low-alloy steel exposed to coolant/steam between remnant of old nozzle and new nozzle.

A couple other similar half-nozzle relief requests using N-638 I found:

ML053620021
ML040060475

Jeffrey C. Poehler
Sr. Materials Engineer
NRR/DE/EVIB
(301) 415-8353

From: Wiebe, Joel *NRK*
Sent: Thursday, April 05, 2012 4:52 PM

C/18

To: Poehler, Jeffrey; Purtscher, Patrick; Widrevitz, Dan
Cc: Rosenberg, Stacey; Mozafari, Brenda; Shaikh, Atif; McGhee, James
Subject: Quad Cities Unit 2 Instrument Line Repair Relief Request Information

The licensee currently is using the below authorized relief as a precedent.

The current timeline is as follows:

Tomorrow morning (time to be determined) there will be a teleconference at which the licensee will go over what they intend to submit. I am working at home tomorrow, so there will be a conference line and we will all call in. Since we won't have their submittal, we obviously will not be able to foresee all our questions, but if something obvious comes to mind, be sure and ask. You may want to have the below precedent in front of you.

The licensee intends to submit the relief request before c.o.b. tomorrow. The licensee will have firmer information tomorrow, but at this point they think they have about a weeks worth of prep work (procedures, procedure qualification, etc.) to do before they can do the repair. Based on that I think we may need to give verbal approval near the end of next week. In order to do that, everything we use must be on the docket and our review must be complete.

We will have a firmer timeline from the licensee tomorrow.

[View ADAMS P8 Properties ML103430156](#)

[Open ADAMS P8 Document \(Arkansas Nuclear One, Unit No. 1 - Relief Request ANO1-R&R-013, Proposed Alternative to Requirements Associated with Repair of Components, for Duration of ANO-1 Spring 2010 Refueling Outage 1R22 \(TAC ME3701\).\)](#)

