From: Rani Franovich
To: Bob Gill
Date: 5/24/02 8:14AM
Subject: Fwd: Open Items on Section 3.1

Open Items on Section 3.1.....

From: James Medoff
To: Rani Franovich
Date: 5/21/02 1:56PM
Subject: Fwd: Catawba and McGuire LRA, Potential open item

Forwarding BNL's potential open items of Duke Responses to RAIs.

BNL has three all dealing with the ability of the Duke Chemistry Program by itself to manage cracking or loss of materials in RCS components. I had the same question regarding Duke's response to the cracking issue on the ESF heat exchangers.

From: "Subudhi, Manomohan" <subudhi@bnl.gov>
To: "'jxm@nrc.gov'" <jxm@nrc.gov>
Date: 5/21/02 1:22PM
Subject: Catawba and McGuire LRA, Potential open item

Jim

I went over the draft SER and the RAI responses by the applicant. I have three RAI responses which may require further discussion with the applicant. As indicated in my attached file, all of them have the same concern. Please see whether you agree with me.

I am almost finalizing the draft SERs for the subject LRA. In a couple of days I shall be sending them to you for your comments. Thanks.

Mano <<open items.wpd>>

POTENTIAL OPEN ITEMS TO BE FURTHER DISCUSSED WITH THE APPLICANT

RAI 3.1.1-1: Per LRA Table 3.1-1, the loss of material and cracking in orifices are managed by the chemistry control program. Since these restricting orifices are relied upon to separate Class 1 portions from Class 2 portion of the reactor coolant system (RCS) piping in lieu of redundant valves, their continued functionality is extremely important to maintaining the current licensing basis (CLB). It is not evident to the staff how the effectiveness of the chemistry control program to manage loss of material and cracking is verified. No supplemental inservice inspection (ISI) or performance testing is identified. Clarify how the aging effects associated with orifices are adequately managed by the chemistry control program alone, and provide a description of supplemental activities which verify that the chemistry control program is effective.

Response to RAI 3.1.1-1: The Chemistry Control Program maintains the environment in the Reactor Coolant System by controlling contaminants that lead to loss of material and cracking. A review of the operating experience has not identified any failures of Reactor Coolant System components, including these orifices, due to inadequate chemistry control. This operating experience shows that the Chemistry Control Program is effective in managing loss of material and cracking, therefore supplemental activities are not necessary.

RAI 3.1.5-1: Per Table 3.1-1, the loss of material and cracking in the steam flow limiter, the feedwater thermal sleeves, the handhole diaphragm, and the auxiliary feedwater distribution system are managed by the Chemistry Control Program. No supplemental ISI or performance testing is identified for these SG components. Clarify how the Chemistry Control Program by itself is sufficient to manage loss of material and cracking in these components.

Response to RAI 3.1.5-1: The Chemistry Control Program maintains the environment in the steam generators by controlling contaminants that could lead to loss of material and cracking. A review of the operating experience has not identified any failures due to inadequate chemistry control. This operating experience shows that the Chemistry Control Program is effective in managing loss of material and cracking; therefore, supplemental activities are not necessary.

RAI 3.1.5-2: In accordance with UFSAR Section 5.4.2.4 for Catawba, the Unit 2 Westinghouse SGs are equipped with a preheater and feedwater flow restrictor with main feedwater delivered just above the tubesheet while the feedwater in the Unit 1 BWI RSGs delivered to the annulus area outside the top of the tube bundle and distributed by a feedring header. It is not clear if the feedwater delivery systems in BWI RSGs at Catawba 1, McGuire 1 and McGuire 2 have flow restrictors.

1. Clarify if the feedwater flow restrictors are present in all four subject plant SG units.

2. Table 3.1-1 identifies the Inservice Inspection Plan and the Chemistry Control Program to detect cracking and loss of material in the flow restrictors and steam flow limiters. Describe the types of inservice inspections performed on these components.

Response to RAI 3.1.5-2: Note: Table 3.3-1 of the Application (page 3.1-24 row 4) incorrectly includes the steam outlet nozzle for Catawba Unit 2(nickel based alloy material). The Catawba Unit 2 steam outlet nozzles are correctly shown in Table 3.3-1 of the Application (page 3.1-25 row 3).

For Item (1), feedwater flow restrictor as identified in the Catawba UFSAR and the "feedwater limiter" listed in Table 3.1-1 (page 3.1-24, row 4) of the Application are synonymous. The feedwater limiters are only present in the Catawba Unit 2 steam generators. The Chemistry Control Program provides aging management for the feedwater limiter.

For Item (2), the steam flow restrictor identified in Table 3.1-1 (page 3.1-25, row 1) of the Application as the "flow restrictor," incorrectly shows the Inservice Inspection Plan as an aging management program. The Chemistry Control Program provides aging management for the steam flow restrictor.

BNL COMMENTS ON ALL THREE RAI RESPONSES

All three RAI responses address the same concern: the chemistry control program alone is not adequate to manage loss of material and cracking in certain RCS parts. Another program such as inservice inspection and/or other condition monitoring activity is required to ensure that the chemistry control program is effectively managing the aging effects. The applicant, in its responses to the above three RAIs, uses the operating experience as the basis for managing the aging effects. In fact, for flow restrictors the applicant deleted the inservice inspection as an applicable AMP. Using operating experience for managing loss of materials and cracking in certain RCS parts throughout the period of extended operation is not an acceptable way of managing aging.

From: Rani Franovich
To: Robert L Gill Jr
Date: 5/30/02 9:14AM
Subject: Re: Waste Gas System Strainers

Bob,
This is very helpful and much appreciated.
Thank-you,
Rani

>>> "Robert L Gill Jr" <rlgill@duke-energy.com> 05/30/02 06:51AM >>>
Rani,
In response to your question yesterday afternoon concerning why Waste gas System strainers are Catawba only, the following is provided:

For Catawba - see drawing CN 1567-1.0, coordinates D-3 and D-12. The Y-strainers are located in Class F piping and therefore are within scope and subject to AMR.

For McGuire - see drawing MCFD-1567-01.00, coordiantes C-7 and K-7. The Y-strainers are located in Class E piping and therefore are NOT within scope.

Bob