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**From:** Jack Strosnider - JLL  
**To:** Brian Holian, Edmund Sullivan, Emmett Murphy R.I. NEA, JER  
**Date:** Mon, Mar 13, 2000 2:40 PM  
**Subject:** Re: IP2

Brian, et. al.

this morning Emmett and Stephanie briefed Sam Collins, Brian Sheron, Bill Bateman, Suzie Black and others on their visit to the site. At the end of the briefing Sam identified the same need to characterize their observations from a regulatory perspective. So, we recognize that this perspective needs to be developed, but note that it will continue to evolve as more information is developed.

With that intro, the following is the "big picture" that I got out of this mornings briefing - Emmett and Stephanie can modify as appropriate. This is the first outage in which the licensee is committed to follow the guidelines presented in NEI 97-06. However, licensees have, in general, been following for some time the sub-tier guideline documents that are referenced in 97-06. These include primarily EPRI guidelines on how to qualify inspection methods, ECT examiners, scope of inspection, leakage monitoring, etc. The eddy current methods used by the licensee for the U-bends were generically qualified. However, the guidelines described above indicate that the ECT examiners should be trained regarding the plant specific condition of the steam generators and particular tube inspection issues, and the inspection methods should be optimized for the plant specific conditions. In the case of Indian Point 2, there are significant copper and other deposits on the OD of the steam generator tubes that can mask indications. Higher frequency ECT probes can reduce the influence of these deposits by focusing the inspection toward the ID of the tube. In 1977 the licensee actually collected data at 400 khz, which is greater than the generic specification calls for, but did not analyze the data collected at this frequency. During the current outage, the licensee did, upon our request, go back and review the 400 khz data collected in 1997 and found indications in 4 row 2 tubes, including the one that failed. Emmett and Stephanie indicated that these indications might have been identified if the 400 khz data had been reviewed in 1997 (they noted that the indications were still small and that hindsight is always helpful).

In plain language, the licensee used appropriate inspection methods, but did not optimize them for the specific conditions in the steam generators a IP-2. Had the inspection methods been optimized, there's a possibility that degradation in the row 2 tubes would have been detected at a lower threshold.

RES review did not consider the above information, as this is fairly recent info. I believe their assessment is more along the lines that given an indication was found in a row 2 tube and considering the nature of stress corrosion cracking and industry experience with inner row tubes, this area could have been pursued in more detail. They had a similar observation regarding stress corrosion cracking in the sludge pile.

As I noted above, the perspective will continue to evolve as more data are generated through the licensees root cause evaluation, inspections, etc.

Jack

M/58

>>> Brian Holian 03/13 1:42 PM >>>

Jack, Ted, Emmett, and all... (tried calling... here goes...)  
we are prepping for tomorrow night's meeting at IP2...

Randy Blough asked me to follow up with you all... on our logic for answering one question...

We recognize NRR has the lead for IP2's SG program acceptability...

We have "heard" that RES had some questions about the acceptability of the previous data on this tube.

We understand the NRR team debriefed IP2 with a statement that they used "acceptable practices", however more advanced, and readily available techniques, should they have been used, should have enabled this degradation to be found.

1) Even with NRC accepting their "program" - is there some belief currently that the data from this tube might have been inadequate to conclude that the inspection of this tube was acceptable?

2) would we still today, term their "program" acceptable?

Answers to the above are not crucial by tomorrow... but we all want to get on the same page... and ensure we coordinate our responses.

thanks

Brian

**CC:** A. Randolph Blough, Bill Bateman, Brian Sheron, ...