

**From:** Peter Tam *NPR*  
**To:** Brian Holian, Pete Eselgroth *NPR*  
**Date:** Fri, Jul 14, 2000 3:36 PM  
**Subject:** Letter to Indian Point 2 -- going thru concurrence

*1 LL*  
*2*

**CC:** Marsha Gamberoni

*115*

*M/70*  
*115*

*(5)*

Mr. A. Alan Blind  
Vice President, Nuclear Power  
Consolidated Edison Company  
of New York, Inc.  
Broadway and Bleakley Avenue  
Buchanan, NY 10511

SUBJECT: STAFF CONCERNS REGARDING STEAM GENERATOR OPERATIONAL  
ASSESSMENT, INDIAN POINT NUCLEAR GENERATING UNIT NO. 2  
(TAC NO. MA9288)

Dear Mr. Blind:

Shortly after the February 15, 2000, steam generator tube failure at Indian Point Nuclear Generating Unit No. 2 (Indian Point 2) the U.S. Nuclear Regulatory Commission (NRC) began a detailed technical dialogue with Consolidated Edison Company of New York, Inc., (ConEd) to understand the root cause of the failure and the subsequent licensee corrective actions taken to prevent recurrence. ConEd provided the NRC with its root cause analysis of the February 15, 2000, tube failure in a letter dated April 14, 2000. Additionally, ConEd provided the NRC with a discussion of its corrective actions and justification for continued operation with the existing steam generators in its condition monitoring and operational assessment reports dated June 2, 2000.

Based upon our review to date, we continue to be concerned about the operability of the Indian Point 2 steam generators with the row 3 tubes unplugged. We acknowledge that the most susceptible tubes in row 2 can be expected to crack before the most susceptible tubes in row 3 by virtue of their higher stress level. This expectation is supported by the results of the 2000 inspection which identified eight row 2 U-bends with detectable primary water stress corrosion cracking (PWSCC) and none in row 3. These cracks have apparently been present for a number of years even before 1997. We believe it is possible that some of the most susceptible of the row 3 tubes may have initiated cracks in the meantime but which have not yet grown to detectable proportions. ConEd's analyses are intended to show that such tubes (in row 3) would be expected to maintain their integrity for the requested 4 effective-full-power-month (EFPM) operating period before replacing the steam generators. We are concerned that (1) ConEd's analysis is very sensitive to the assumed detection performance of the high frequency plus point probe and to the measurement error distributions assumed for the mid-range probe; and (2) that these assumptions have not been adequately validated. We also have other concerns relating to the analysis methodology. We will issue a Request for Additional Information next week concerning any additional information which would be useful in completing our review of the row 3 operability issue.

We have no concerns about the operability of row 4 tubes. The most susceptible row 3 tubes can be expected to develop cracks before the most susceptible row 4 tubes, just as the most susceptible row 2 tubes can be expected to crack before the most susceptible row 3 tubes. Given that no row 3 tubes contained detectable PWSCC indications during the 2000 inspection, there is reasonable assurance that any cracks in the row 4 U-bends would be inconsequential during the requested 4-EFPM operating period.

A. Blind - 2 -

In light of the above concerns, we are not able to reach a decision regarding the ability of the tubes to maintain their structural integrity for the period that ConEd requested until the start of the steam generator replacement outage. In this regard, we will need to better understand ConEd's overall approach to answer our concerns or, as an alternative, address our concerns through corrective actions (e.g., tube plugging). After your review and consideration, we will schedule a meeting to further discuss the details of your decisions and plans.

I appreciate the significant level of effort that has already been expended by your staff in addressing the issues to date and in evaluating the large volume of documentation and supporting analyses.

Sincerely,

John A. Zwolinski, Director  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-247

cc: See next page

A. Blind - 2 -

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John A. Zwolinski, Director  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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