

From: Marc Ferdas
To: David Lew
Date: Wed, Jan 31, 2001 10:12 AM
Subject: NRC Response to NOV denial

Dave,
See attached, I used cross-out for parts I think we don't need and additions I made from Dan's letter is in red.

I tried to keep big picture with little details as necessary.

If you need anything else let me know
-Marc

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A/132

EA-00-179, EA-01-033

Mr. John Groth
Senior Vice President - Nuclear Operations
Consolidated Edison Company of
New York, Inc.
Indian Point 2 Station
Broadway and Bleakley Avenue
Buchanan, NY 10511

SUBJECT: CON ED RESPONSE, DATED JANUARY 19, 2001 TO THE NOTICE OF
VIOLATION ISSUED BY THE NRC ON NOVEMBER 20, 2000, FOR A VIOLATION
THAT OCCURRED AT INDIAN POINT 2

This refers to your letter, dated January 19, 2001, from Mr. J. Baumstark, in response to the Notice of Violation issued by the NRC on November 20, 2000 for a violation that occurred at Indian Point 2. The violation involved the failure, in 1997, to fully identify and correct a significant condition adverse to quality involving the steam generators at your facility, despite opportunities during the 1997 steam generator inspections to do so. The significant condition adverse to quality entailed the presence of primary water stress corrosion cracking (PWSCC) flaws in four Row 2 steam generator tubes, in the small radius low-row U-bend apex area. This significant condition adverse to quality was not identified and corrected during the 1997 steam generator inservice inspection, because of the failure to adequately account for conditions that adversely affected the detectability of, and increased the susceptibility to, tube flaws.

In your January 19 response, you denied that the violation occurred. As a basis for the denial, you contended that the 1997 steam generator tube inservice examination at Indian Point 2 was conducted in accordance with industry guidelines and requirements applicable at the time. You noted that the NRC inspection report, upon which the Notice of Violation was based, does not reference any requirement, industry standard, benchmark, or guidance that was not met in 1997 which could have led to a failure to detect PWSCC tube defects. The NRC has stated previously that adherence to industry guidelines, even endorsed guidelines does not necessarily satisfy the requirements of meeting the intent of Appendix B, Criterion XVI. ~~You further stated that the failure to detect instances of PWSCC in 1997 was associated with the inherent, subjectively-based limitations of eddy current testing methodology at that time.~~

In your denial, you also indicated that the ease of discovery should be fully considered in evaluating licensee problem identification and resolution. While acknowledging that it is clear that the PWSCC indication was not identified in the case of tube RC25 of steam generator 24, you maintained that the ease of discovery regarding the subject indication was questionable. You also provided several affidavits prepared by individuals with experience in steam generator inspection and eddy current testing, which you attest found your performance to be acceptable. As documented in NRC inspection report 247-010, specific opportunities and conditions existed to recognize degraded tubes during your 1997 steam generator inspections. Specifically,

1. Significant eddy current test signal interference (i.e. high noise),
2. Indications of tube denting exhibited by "hour glassing" and tube restrictions, and
3. Industry information about recent degradation affecting small-radius (rows 1 and 2) U-bend regions of tubes in steam generators, such as NRC Information Notice 97-26, "Degradation in Small-Radius U-Bend Regions of Steam Generator Tubes"

Collectively, these conditions were not adequately evaluated and corrective actions were not adequate, and thus contributed to leaving tubes with PWSCC flaws in the low row tube in service.

The NRC has carefully reviewed and considered your entire response including, the bases that you have provided for denial of the violation. Based on our review, we have concluded that no additional information was presented that would alter the NRC's conclusion that a violation existed. The information in your letter was not substantially different than provided to the NRC during the NRC special inspection and subsequent meetings, including during the regulatory conference conducted on September 26, 2000. 10 CFR 50, Appendix B, Criterion XVI, requires in part, that significant conditions adverse to quality be evaluated and actions taken to prevent recurrence. This regulation recognizes that prescriptive requirements cannot be written for every condition that may be encountered, particularly in the case of plant specific conditions. Therefore, when such conditions are encountered, licensees must take actions that are commensurate with its significance. Such conditions were encountered during the 1997 steam generator inspections. Based on industry information that was available, these conditions indicated an increase susceptibility of the low row tubes to primary water stress corrosion cracking (PWSCC) and an adverse impact on detection of tube flaws.

While the NRC does not intend to prescribe what Con Edison should have done in response to the conditions encountered by Con Edison in 1997, the NRC believes that adequate evaluations and corrective actions in response to the significant conditions encountered during 1997 would reasonably have prevented leaving the flaws in the low row u-bends in service. The high signal noise in areas susceptible to PWSCC (i.e., the low row u-bends) could have been accounted for in the inspection program. Adjustments could have been made to closely interrogate those susceptible areas or simply plug the tube. Neither of these adjustments were considered in 1997, although the NRC considers that it was reasonable for you to have done so given these. Therefore, your evaluation of these conditions and corrective actions at the time were not adequate and contributed to leaving tubes with PWSCC flaws in the low row tube in service.

For these reasons, the NRC has concluded that the violation remains as cited in the Notice. Although you denied the violation, you have agreed that corrective actions were needed to improve your steam generator program in general, and the steam generator inspection program, in particular. We have reviewed the actions that you have taken and planned and have no further questions at this time. We will continue to review these programs during future inspections. Therefore, no response to this letter is required.

Additionally, your response, contains a number of statements concerning NRC positions that have been described in generic communications and inspection reports. We believe that some of these statements made in your response are erroneous and have compiled these issues, included with NRC staff responses in Attachment 1.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be

available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).