

January 29, 2001

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**Indian Point 2 Response to Violation
50-247/2000-10
Con Ed Letter, Appendix B**

	Ref.	Licensee Statement	Comment
1	Sec A para1 pg19	SG tube in service examinations were conducted in accordance with industry guideline and requirements applicable at the time of examination	EPRI Guidelines
2	para1 pg 19	1997 inspections used conservative approaches in both selection of inspection sample, and in the analysis guidelines and reporting requirements	EPRI Guidelines
3	para1 pg 19	Data were analyzed by experienced and qualified personnel who received site specific training in accordance with Revision 4 of the EPRI PWR Steam Generator NDE Guidelines	EPRI Guidelines
4	para1 pg19	Probes, techniques and procedures were the most advanced qualified technology available at the time	10 CFR 50 App B
5	para2 pg19	Although not required, the licensee hired an independent eddy current expert to provide oversight of the principal contractor	10 CFR 50 App B
6	para3 pg19	Failure to detect instances of PWSCC in 1997 was associated with the inherent subjectively-based limitation of eddy current testing at that time, and was acknowledged by the NRC through Info. Notice 97-26, (5/19/97)	10 CFR 50 App B
7	para1 pg 20	Ease of detection of the indication was questionable, and it is supported by various NRC consultant opinions in TAC No. MA9163, dtd 10/23/2000, p 9)	10 CFR 50 App B
8	para2&3 pg20	Current inspection capability and standards should not be applied retroactively to 1997. This is supported by several affidavits of SG inspection and eddy current experts	10 CFR 50 App B

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9	State-ment1 para1 pg2	During 1997 inspection a single U-bend PWSCC indication was detected; the indication did not leak at the EOC-13, and the tube R2C67 was plugged consistent with industry practice	10 CFR 50 App B
10	para2&3 pg21	The EPRI PWR Steam Generator Guidelines, Revision 4, Volume 1, recommended SG tube inspection frequency and sample size. The requirement for U-Bend IGA/ODSCC/PWSCC is 100% of Row 1 & 2. The 100% inspection of Row 2 & 3 U-Bends with a qualified, rotating +Point coil met this requirement.	EPRI Guidelines
11	para4 pg21	The indication found in 1997 was based on the first +Point inspection of the IP 2 low row U-Bends; it was reasonable to conclude that the detection of U-Bend PWSCC in R2C67 was due to enhanced detection capabilities of the +Point probe than to accelerated tube deterioration during Cycle 13	10 CFR 50 App B
12	para2 pg22	The appearance of a single Row-2 U-Bend PWSCC indication was not an unusual event, and the characteristics of the indication were consistent with the data included in the SSPD training and testing materials. The plugging of tube R2C67 was an appropriate response	10 CFR 50 App B
13	para4&5 pg23	The +Point probe was qualified and added to the EPRI performance demonstration data base in May 1996. The NRC IN 97-26 described this test as qualified for detecting indications in small radius U-Bends " <u>in accordance with enhanced qualification criteria developed by EPRI</u> "	EPRI Guidelines
14	para1 pg24	PWSCC in the R2C67 tube was not an unexpected finding thus no modification to the inspection program was needed, and the program covered 100% examination using the most sophisticated qualified probe available	10 CFR 50 App B
15	State-ment2 para2 pg25	1997 low-row U-Bend probe restriction should be evaluated in light of historical experience. In 1997, 19 tubes had restriction that prevented a 0.610-inch +point probe from passing through the tube. This was specifically discussed in the RAI response to Question 11	10 CFR 50 App B

16	para4 pg25	The significant factor in 1997 examination was that the +point probe was of different physical geometry. All previous U-Bend examinations had been performed with very flexible ball joint bobbin coil probes of different mech.	10 CFR 50 App B
17	para3&6 pg26	Because of the different probe geometry, the licensee concluded that the most of the probe restrictions encountered in 1997 were due to conditions existing before 1989	10 CFR 50 App B
18	State-m ent 3 para4 pg27 para2&3 pg29	In 1997, no formal criteria existed in the industry for quantitative evaluation of noise, and it should be noted that EDM notches typically yield larger signal amplitude for a given depth than PWSCC	10 CFR 50 App B