ATTACHMENT 1

Steam Generator Cold Side Inspection Program and Results

1980/1981 Refueling
and Maintenance Outage

Consolidated Edison Company of NewYork, Inc.
Indian Point Unit No. 2
Docket No. 50-247
Facility Operating License No. DPR-26
April 1981

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STEAM GENERATOR INSPECTION PROGRAM AND RESULTS
April 1981 Inspection-Cold Side

By letter from Mr. J. D. O'Toole of Con Edison to Mr. S. A. Varga of the NRC dated March 13, 1981, the details of the steam generator hot side tube inspection program results for the Unit's fourth refueling outage were submitted. The present supplemental report discusses the results of the cold side inspection performed on April 13-22, subsequent to the detection of a leak in Steam Generator 23, row 2/cold side, during startup testing.

A total of 476 cold side tubes were eddy current inspected for both dents and defects; 304 tubes in row 2, 168 tubes in row 3 and 4 tubes in row 4. Table 1 lists the identification of the cold side tubes inspected.

The eddy current inspection for tube defects was performed nominally at 400 KHz at standard gain. The inspection to identify tube dents was performed nominally at 400 KHz at a reduced gain. A 610 mil eddy current probe was used to perform the eddy current testing. If any tube did not permit passage of this 610 mil probe, the tube was eddy current tested with a 540 mil probe. If a tube did not pass a 540 mil probe, then it was plugged. In addition, the tubes immediately adjacent to any tube that did not pass the 610 mil probe were also eddy current inspected.

A total of 17 steam generator tubes did not pass a 610 mil probe. All of the tubes were located in row 2, that is, 2 tubes in SG21, 6 in SG22, 9 in SG23 and none in SG24. Table 2 lists the identification of these tubes as well as the support plate location where the probe was restricted. No tube defects were detected.

A total of 6 steam generator tubes did not pass a 540 mil probe and, therefore, were mechanically plugged. SG22 had 1 tube plugged and SG23 had 5 tubes plugged, including the suspected leaking tube(s) R2C46 and R2C47. The percentage of tubes plugged is well within the license limitations. Table 3 lists the identification of these tubes as well as the support plate location where the probe was restricted.

After review of the inspection results we have concluded that the leak in Steam Generator 23 can probably be attributed to denting of a tube at its support plate location. Also, the conclusions in our March 13, 1981 submittal on the hot side steam generator inspection remain unchanged. As part of our future steam generator eddy current inspection program cold side examinations will be performed.

Table 1-Cold Side Eddy Current Examination April 1981

S/G	Row	Column	No. of Tubes
21	2	1-3, 5-11, 13-21, 23-33, 35-43, 49-83 85-90, 92	81
	3	1,5,9,13-15,17,21,25,29,33,37,41,44,49, 52,56,60,64,68,72,76,80,84,88,92	26
22	2	2-6,8-15,18,21-28,34-44, 50-59,61-74,76-92	74
	3	1,5,9,13,14,16,17,21,25,29,33, 37,38,41,44,49-52,54,56,60,64, 68,72,76,79,80,84,88,92	31
23	2	14-32,34-43,45-48,50-92	76
	3	2-34,36-48,50-92	89
	4	45-48	4
24	2	1,3-33,43,49-53,55-56, 58-78,80-82,84-92	73
	3	1,5,9,13,17,21,25,29,33,37,41, 52,56,60,64,68,72,76,80, 84,88,92	22
		Total No. of Tubes	
			476

Table 2-Tubes Not Passing 610 Probe

SG	Total	Tube Coordinate (Support Plant Restriction)
21	2	R2C14(2), R2C15(3)
22	6	R2C14(1), R2C38(4), R2C50(1), R2C51(4), R2C54(4), R2C79(3)
23	9	R2C18(4), R2C31(3), R2C32(3), R2C46(2), R2C47(2), R2C61(3), R2C62(3), R2C63(3), R2C81(4)
24	0	

Table 3-Tubes Not Passing 540 Probe (Plugged)

SG	Total	Tube Coordinate (Support Plant Restriction)
21	0	
22	1	R2C14(1)
23	5	R2C32(3), R2C46(1), R2C47(1), R2C61(4), R2C81(4)
24	0	