Entergy

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Fred Dacimo
Vice President, Operations

August 19, 2003

Re: Indian Point Unit No. 3
Docket No. 50-286
NL-03-134

Document Control Desk
U.S. Nuclear Regulatory Commission
Mail Stop O-P1-17
Washington, D.C. 20555-0001

Subject: **Steam Generator Tube Inspection – Revision to Technical Specification 5.6.8 Report on Tubes Plugged**

Reference: 1) Entergy letter (NL-03-069) to NRC, "Steam Generator Tube Inspection – Technical Specification 5.6.8 Report on Tubes Plugged," dated April 25, 2003.

Dear Sir:

By letter dated April 25, 2003 (Reference 1), Entergy Nuclear Operations, Inc. (Entergy) reported twelve Steam Generator (SG) tubes plugged following the Inservice Inspection (ISI) of Steam Generators in Refueling Outage 12 at Indian Point 3 Nuclear Power Plant. This letter revises the calculated depth of flaw reported in Reference 1 for eight of the twelve tubes.

The eight tubes had wear scars attributed to contact with sludge lance equipment used in Refueling Outage 11. The wear scars were not identified during Refueling Outage 11 because sludge lancing occurred after the ISI. The cause of the wear of the eight tubes was identified from the location of the indication. Visual inspection of two of the wear scars confirmed that the scars faced the tube lane and were about 1.1 inches long by 0.2 inches wide. During the recent SG inspection, the sludge lance wear indications were sized with EPRI eddy current technique 21998.1. This technique over-estimates the depth of volumetric indications greater than 0.25 inches long because the amplitude of a flaw is related to its volume, and this technique uses a standard with very low volume holes. Entergy has re-evaluated the sludge lance wear scar depths using an amplitude-based curve constructed using as-built depths. This is essentially the methodology of EPRI ETSS-21998.1, with a more representative flaw volume from the ASME flat bottom hole standard. Using this technique, the depth of the largest Indian Point 3 wear scar was reduced from 47 to 26% through wall. Virginia Electric & Power Company identified similar sludge lance equipment wear scars at Surry 1 during that station's 2001 inspection, and sized the depth of those indications using an amplitude curve based on the ASME flat bottom hole standard.

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The revised calculated depth of flaw data for Indian Point 3 is as follows:

SG	Tube	Location	Indication*	Flaw Depth Percent TW*
31	R28 C29	-4.96 to 5.04	PVN	n/a
32	R41 C28	TSH +0.15	VOL	34%
32	R40 C29	TSH +0.0	VOL	32%
32	R41 C29	TSH +0.05	VOL	24%
32	R1 C85	TSH +16.70	VOL	11%**
32	R1 C9	TSC +16.01	VOL	8%**
32	R1 C66	TSC +18.16	VOL	13%**
33	R1 C66	TSH +15.62	VOL	26%**
33	R1 C27	TSH +18.04	VOL	16%**
		TSC +17.86	VOL	12%**
33	R1 C8	TSC +16.51	VOL	9%**
34	R1 C8	TSH +16.69	VOL	10%**
34	R1 C84	TSC +16.92	VOL	11%**

*PVN is permeability variation, VOL is volumetric wear and TW is through wall wear for the plugged tubes.
**These volumetric indications were attributed to wear from sludge lance equipment and were evaluated using an amplitude-based curve constructed from as-built depths developed using the ASME flat bottom hole standard.

There are no commitments contained in the correspondence. If you have any questions regarding this submittal, please contact Mr. John McCann, Manager, Licensing, at (914) 734-5074.

Sincerely,

Fred R. Dacimo
Vice President, Operations
Indian Point Energy Center

cc: see next page

cc: Mr. Hubert J. Miller
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