

John D. O'Toole
Vice President

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, NY 10003
Telephone (212) 460-2533

August 13, 1984

Re: Indian Point Unit No. 2
Docket No. 50-247

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Denton:

On August 5, 1984, as a result of the planned ten year inservice inspection of the Unit No. 2 reactor vessel, an ultrasonic indication was identified in one of the two longitudinal weld seams in the lower shell course at the intersection of the lower shell course to middle shell course circumferential weld. Based on supplementary ultrasonic examinations, sensitivity evaluations and construction phase photographs, we have concluded that the indication is at or near the surface with a maximum wall reduction (depth) of less than 0.3 inches at the outside surface. A review of photographs taken at the time the vessel was installed shows a surface condition in the area of interest indicating a very shallow blending or buffing operation. We have concluded that this condition is acceptable under applicable ASME Code provisions and the reactor vessel can be returned to service as scheduled.

Using standard ASME Code pulse-echo ultrasonics, a detection technique that tends to overstate reflector characteristics, the indication was initially reported as within 0.25 inches of the surface approximately 2 inches vertically (along the weld) and 1.2 inches in the radial direction. Several efforts were initiated in parallel to further and more accurately evaluate the indication. These included a review of the original fabrication records, a review of fabrication and field installation photographs, an evaluation of the sensitivity of the ultrasonic technique and a fracture mechanics evaluation of the reported indication. In addition, a different ultrasonic technique was employed to further evaluate the indication.

The additional ultrasonic technique which was applied used a pitch-catch scanning sequence in lieu of the previously utilized pulse-echo technique. This technique showed that there were no structurally significant reflections in the area of interest.

8408200309 840813
PDR ADDCK 05000247
PDR
Q

A047
1/0

Sensitivity evaluations were undertaken by placing notches of various sizes and geometries on the outside surface of a calibration block and applying the standard pulse-echo techniques. The results demonstrated a significant amplification of the indications at the outside surface.

On August 11, 1984, your staff and their consultants, met with Con Edison and representatives from Westinghouse, who have performed the reactor vessel inspection, as well as our independent consultant from Combustion Engineering. At that meeting we presented the results of our efforts concluding that the indication noted in the ultrasonic inspection of the reactor vessel is of no structural significance with respect to the integrity of the Indian Point Unit 2 reactor vessel, according to ASME standards. Your staff generally agreed with our conclusions. We were advised that you plan to request further supporting information, most of which we have already completed, or have initiated efforts to obtain, as follows: (1) application of enhancement techniques to the original Combustion Engineering fabrication radiographs in the area of interest; (2) a fracture mechanics analysis relative to the indications noted on the reactor vessel; (3) a report of Con Edison's review of the original fabrication records; and (4) demonstration of the pitch-catch technique on the calibration block which contains the notches of various sizes and geometries.

Con Edison agreed to supply this information prior to return to power operation subsequent to the current refueling outage.

Very truly yours,



John D. O'Toole
Vice President

cc: Senior Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 38
Buchanan, New York 10511