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November 17, 1995

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

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US Nuclear Regulatory Commission  
Mail Station P1-137  
Washington, DC 20555

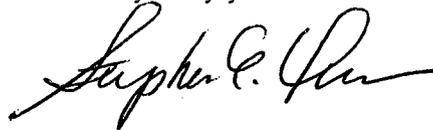
SUBJECT: Response to NRC Generic Letter 92-01, Revision 1,  
Supplement 1: Reactor Vessel Structural Integrity

On August 17, 1995, Con Edison responded to item (1) of the subject generic letter. As requested, responses to items (2), (3), and (4) for Indian Point Unit 2 are contained in the enclosure to this letter.

The responses provided herein, to the best of our knowledge represent adequate assurance that Indian Point Unit 2 is in compliance with the requirements of 10 CFR 50.60, 10 CFR 50.61, and Appendix G and H to CFR Part 50.

Should you have any questions regarding this matter, please contact Mr. Charles W. Jackson, Manager, Nuclear Safety and Licensing.

Very truly yours,



Subscribed and sworn to  
before me this 17<sup>th</sup> day  
of November, 1995.

  
Notary Public

KAREN L. LANCASTER  
Notary Public, State of New York  
No. 60-4643659  
Westchester County

KAREN L. LANCASTER  
Notary Public, State of New York  
No. 60-4643659  
Qualified In Westchester County  
Term Expires 9/30/97

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ADD

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ENCLOSURE

RESPONSE TO GENERIC LETTER 92-01 REV. 1, SUPPLEMENT 1,  
ITEMS (2), (3) AND (4)

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT UNIT NO. 2  
DOCKET NO. 50-247  
NOVEMBER, 1995

Item (2) An assessment of any change in best-estimate chemistry based on consideration of all relevant data.

Response: Con Edison has reviewed potential sources of data currently available (the vessel manufacturer (Combustion Engineering), the Westinghouse Owners Group, and other utilities). Attachment 1 provides an assessment of the data relevant to Indian Point 2 and recommended change to best-estimate chemistry. Should additional relevant data be found in the future as a result of on-going industry activities, it will be evaluated, and results provided if necessary, in a subsequent response.

Item (3) A determination of the need for use of the ratio procedure in accordance with the established Position 2.1 of Regulatory Guide 1.99, Revision 2, for those licensees that use surveillance data to provide a basis for the RPV integrity evaluation

Response: The Regulatory Guide ratio procedure is only to be used if there is clear evidence that the copper or nickel content of the surveillance weld differs from that of the vessel weld. At Indian Point 2 there is no clear indication of this from the available data. Nevertheless, we have reevaluated the Adjusted Reference Temperature based on the ratio and reevaluated the effect on heatup and cooldown curves and PTS limits. There will be no effect on heatup and cooldown limits: the limiting material for the heatup and cooldown curves for Indian Point 2 is the base metal not the weld metal. Also in the calculation of the heatup and cooldown curves a conservative value of Cu and Ni is assumed for the welds which are greater than the reported values for Indian Point 2 and the Industry average reported in the response to Item (2). Lastly, that even using the ratio does not make the welds the limiting material for heatup and cooldown curves. A recalculation of the RTPTS based on the chemistry values provided in response to item (2) shows that the screening criteria are not exceeded.

Item (4)

A written report providing any newly acquired data as specified above and (1) the results of any necessary revisions to the evaluation of RPV integrity in accordance with the requirement of 10 CFR 50.60, 10 CFR 50.61, Appendices G and H to 10 CFR Part 50, and any potential impact on the LTOP or P-T limits in the technical specifications or (2) a certification that previously submitted evaluations remain valid. Revised evaluations and certifications should include consideration of Position 2.1 of Regulatory Guide 1.99, Revision 2, as applicable, and any new data.

Response:

Attachment 1 (to response (2)) provides a written report of newly acquired data. As detailed in the response to item (3), no revisions to the evaluations of RPV integrity are required. That is, no revisions to the heatup and cooldown curves are required. Therefore, no changes to the LTOP or the results of the PTS screening are required.

Weight Percent Copper in Heat 34B009 Welds

Sample Description	Cu %	Weight	Cu% * Weight
ML1 surv.	0.184	1	0.184
PAL SG, region 3	0.185	2	0.37
HBR2 torus-dome	0.187	1	0.374
PAL SG, region 2	0.190	2	0.38
PAL SG, region 1	0.190	2	0.38
	Sum =	8	1.688
MEAN		0.188	
MEDIAN		0.187	

Weight Percent Nickel in Heat 34B009 Welds

Identification	Average % Ni
ML1 surv. weld	1.05
HBR2 torus-dome weld	0.80
Palisades SG	<u>1.09</u>
Mean Value	0.98

Attachment 1  
To Item (2)

NRC GL 92-01, Revision 1, Supplement 1  
Additional Data on Copper and Nickel Content

Plate Material

No new material data has been obtained for the plate material. The information has previously been submitted in reply to GL 92-01, Revision 1.

Weld Material

The beltline welds of the IP2 reactor vessel were made with RACO 3 and Ni200 weld wire, using Linde 1092 flux. Primary electrodes were used in tandem.

Heat W5214 is used in intermediate shell vertical seams 2-042 A, B, & C, and the lower shell weld vertical seams 3-042 A & B.

Heat 34B009 is used in the intermediate to lower shell weld circumferential seam, 9-042.

Additional weld material information has been collected, primarily by Palisades. Communication has taken place among utilities having the same weld materials. Pages 2 & 3 of this attachment identify the current total material information available for the two heats used in the reactor vessel belt line. The Indian Point Data indicated as reported below is as previously submitted and as it appears in the NRC RVID database.

	Cu	Ni
Heat W5214		
Industry mean, (median) wt %	0.208 (0.19)	1.01
IP2 mean, wt % reported	0.19	1.03
Heat 34B009		
Industry mean, (median) wt %	0.188 (0.187)	0.98
IP2 mean, wt % reported	0.19	0.92

For heat W5214 our previous mean values should be used. Palisades has used the mean as a conservative analysis, although the median value was considered to be more applicable since the Cu distribution of the samples tested was not normal, but skewed to the low end.

Since we do not have IP specific data for heat 34B009, the industry mean should be used for Cu and Ni values.

Weight Percent Copper in Heat W5214 Welds

Sample Description	Cu %	Weight	Cu% * Weight
IP3 nozzle cutout	0.15	2	0.3
IP3 nozzle cutout	0.15	2	0.3
IP3 surv.	0.158	2	0.316
HBR2 torus-flange	0.159	2	0.318
IP3 nozzle cutout	0.16	2	0.32
IP2 surv., region 3	0.19	2	0.38
IP2 surv., region 1	0.20	2	0.40
IP2 surv., region 2	0.215	2	0.43
PAL SG, region 3	0.225	2	0.45
PAL SG, region 2	0.268	2	0.536
Oyster Creek 1 surv.	0.285	1	0.285
PAL SG, region 1	0.311	2	0.622
HBR2 surv.	0.335	1	0.335
	Sum =	24	4.992
	MEAN	0.208	
	MEDIAN	0.19	

Weight Percent Nickel in Heat W5214 Welds

Identification	Average % Ni
D4494 IP2 1-042	0.94
D4541	1.20
D4577 IP2	1.00
D4673 Millstone seam C	1.05
D4674 IP2 3-0428 weld	1.12
D4686 ML1 2-072A	0.97
D4687 IP2 1-042A weld	0.92
D4688 PAL SG 5-943	0.99
D4690	1.13
HBR2 torus-flange weld	0.99
IP2 surv. weld	1.03
IP3 surv. weld	1.12
IP3 nozzle cutout	1.09
HBR2 surv. weld	0.66
Palisades SG	0.99
Mean Value	1.01