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New York Power Authority

John C. Brons
Executive Vice President
Nuclear Generation

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

July 9, 1987
IPN-87-036

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Reactor Vessel Level Instrumentation
System Accuracy

Reference: 1. NYPA letter (J. C. Brons) to NRC (Document Control Desk), dated April 21, 1987, entitled "RVLIS Installation Update."

Dear Sir:

In Reference 1 the Authority informed the NRC that the Indian Point 3 (IP-3) Reactor Vessel Level Instrumentation System (RVLIS), which is being installed during the current (Cycle 5/6) refueling outage, will employ the Westinghouse Model-86 electronics in a redundant two differential pressure (2 d/p) cell configuration. Typical RVLIS accuracies were provided for a Westinghouse reference plant. Based on these values, it was shown that the increase in level measurement uncertainty is insignificant when the Upper Range cell is eliminated and the Full Range indication utilized.

Subsequent to the submittal of Reference 1, a plant specific review of RVLIS accuracies was conducted. The purpose of this letter is to provide the results of this review.

The enclosed Westinghouse letter contains plant specific accuracies. Only minimal differences are noted between the typical values previously reported and those currently evaluated for IP-3. These differences do not change the conclusion that the IP-3 design complies with the appropriate licensing requirements of NUREG-0737, Item II.F.2. and Regulatory Guide 1.97, Rev. 2. In addition, the Westinghouse Emergency Response Guidelines provisions are also met.

Should you or your staff have any questions regarding this matter, please do not hesitate to contact Mr. P. Kokolakis of my staff.

Very truly yours,

John C. Brons
Executive Vice President
Nuclear Generation

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Enclosure: Westinghouse letter, dated June 18, 1987 (INT-87-726) entitled "IP-3 RVLIS Accuracy Comparison."

cc: U.S. Nuclear Regulatory Commission
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INT-87-726

June 18, 1987

Ref: INT-87-571
dtd 2/25/87

Mr. N. Nielsen
New York Power Authority
Indian Point Unit 3
P. O. Box 215
Buchanan, NY 10511

NEW YORK POWER AUTHORITY
INDIAN POINT UNIT 3
RVLIS Accuracy Comparison

Dear Mr. Nielsen:

The referenced letter provided typical/generic numbers developed based upon typical vessel heights (estimated 40 ft.) and a 6% accuracy requirement by Westinghouse to address the possibility of Indian Point 3 eliminating the Upper Range RVLIS reading and use the "Full Range" reading for vessel head venting. A comparison of the accuracies was made to show the accuracy difference between the Upper Range and Full Range readings using typical elevations and temperatures to identify accuracy changes that would take place if a 2 d/p cell system were to be incorporated. As a result of the Westinghouse review of the New York Power Authority letter submitted to the Nuclear Regulatory Commission on RVLIS accuracy, a plant specific review was conducted. This review utilized a temperature consistent with the previously completed Emergency Response Guideline (ERG) evaluation, plant specific vessel elevations and RVLIS reading uncertainties specific for Indian Point 3.

It is noted that the accuracy of the d/p transmitter channel reading is defined as a percentage of the range of the d/p transmitter. For Indian Point 3, based on our available information, the Upper Range elevation is 180 inches. The Upper Range reading has an uncertainty of $\pm 7.01\%$ at 670^0F or ± 1.05 feet. For the Full Range, the elevation is 42.71 feet (from bottom of the vessel to the vessel head vent line). The Full Range has an uncertainty of $\pm 6.13\%$ at 670^0F or ± 2.62 feet. By removing the Upper Range device (whose purpose is for head venting), the uncertainty increases from ± 1.05 feet (Upper Range) to ± 2.62 feet (Full Range). The Full Range and Dynamic Head accuracies do not change with the elimination of the Upper Range reading.

The uncertainties are based on using Model 86 RVLIS electronics and a Reactor Coolant System temperature of 670°F which is consistent with the use of RVLIS in the ERG evaluation.

Westinghouse can support a 2 d/p cell configuration for Indian Point 3 since the ERG provisions, and the requirements of R.G. 1.97 and NUREG 0737 are met.

We believe that this clarifies the information supplied in the referenced letter.

Very truly yours,

John F. Hofscher, J

John F. Hofscher
Operating Plant Projects

/lz

cc: P. Kokolakis
J. Kern (W)
G. Fidler (W)