



May 5, 1987  
IPN-87-023

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

Subject: Indian Point 3 Nuclear Power Plant  
Docket No. 50-286  
Steam Generator Girth Weld Inspection

Reference 1. Letter from Mr. J. D. Neighbors to Mr. J. C. Brons, dated February 17, 1987 regarding the safety evaluation report on the No. 6 girth weld inspection report for steam generators 31, 32, 33 and 34.

Dear Sir:

Reference 1 transmitted the NRC Safety Evaluation Report (SER) on the 1985 Indian Point 3 steam generator girth weld inspection report. The Attachment to this letter provides the Authority's position on certain "Conclusions and Recommendations" provided in the SER. Additionally, the Attachment provides the Authority's comments on statements contained in the "Discussion" section of the SER. In summary, the Authority believes its inspection approach for the 1985 inspection was technically justified and complete.

Based upon our evaluation that there is no indication of cracking occurring similar to that which necessitated the 1982 girth weld repair effort, the Authority intends to perform the following inspections during the Cycle 5/6 Refueling outage:

- o The augmented inspection required by Technical Specification Table 4.2-1 and
- o Inspection of those Table IWB 3511-1 rejectables in steam generators 31 and 34 identified during the 1985 inspection not covered by Technical Specification Table 4.2-1.

The basis of this position is supported by the NRC SER which was transmitted by Reference 1.

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Should you or your staff have any questions regarding this matter, please contact Mr. P. Kokolakis of my staff.

Very truly yours,



John C. Brons  
Executive Vice President  
Nuclear Generation

cc: U. S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Resident Inspector's Office  
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Attachment to IPN-87-023  
Authority's Position on Steam Generator  
Girth Weld Safety Evaluation Report

New York Power Authority  
Indian Point 3 Nuclear Power Plant  
Docket No. 50-286

A. Authority's Position on NRC Conclusions and Recommendations in the SER

1. NRC Conclusion and Recommendation

In future inspections the licensee should follow in its entirety the ASME Code requirements to which he is committed and perform all analyses accordingly or request NRC approval to follow a later edition of the code in its entirety.

Authority Position

During the 1985 refueling outage, the Authority performed the augmented steam generator girth weld inspection in accordance with ASME Section XI (1974 Edition through Summer, 1975 Addenda) requirements to which it is committed. Prior to the inspection, the Authority contracted Westinghouse to develop the Flaw Evaluation Handbook which is contained in Section E of Reference 2. The handbook is based upon calculations performed using the criteria of Appendix A to Section XI. The handbook provides evaluation charts which are used to determine the acceptability of ultrasonic examination (UT) indications which are rejectable to Table IWB 3511-1 of Section XI.

The requirements of the 1974 Edition (including the Summer, 1975 Addendum) were also used in the development of the Flaw Evaluation Handbook. However, our application of the Appendix A criteria incorporated two (2) detailed aspects of flaw evaluation from later editions of the Code as follows:

1. The 1980 ASME Code proximity rules were used to evaluate indications that were unacceptable to Table IWB 3511-1. The 1980 rules were adopted by the Code in order to provide a consistent set of safety margins for both surface and embedded flaws. The revised calculations, for the first time, distinguished near surface indications from other embedded indications. The 1975 rules had actually made the acceptance standards for embedded near surface flaws more restrictive than those for surface flaws, whereas the calculations have shown the opposite to be true.
2. The Winter, 1981 Addendum fatigue crack growth rate curves which are based upon improved material property information with no changes in safety margin were also used.

It is the Authority's position that the inspection and subsequent evaluation of the results were performed in accordance with the Section XI requirements of the 1974 Edition (including Summer, 1975 Addendum) of the Code. The guidance of the later editions of the Code that was used as discussed above is ancillary in nature and recognizes advances in fracture mechanics technology. Item "B.2" of this attachment specifically addresses the use of the 1980 surface proximity rules.

The Authority is planning to use the same approach for the inspection to be performed during the Cycle 5/6 refueling outage. Following this outage, inservice inspections of the existing steam generator girth welds, if necessary, will be performed to the 1983 version of the ASME code as required by 10 CFR 50.55a. The 1980 and 1981 changes identified above are also included in the 1983 version.

2. NRC Conclusion and Recommendation

The licensee has not demonstrated that all of the reportable and rejectable UT indications are reflections due to geometric features of grind outs. Accordingly, during the Cycle 5/6 refueling outage these indications must all be demonstrated to be acceptable to the Code and the ultrasonic inspection of the augmented inspection area should be performed at every outage until these steam generators are replaced. Indications not meeting the Code shall be repaired.

Authority Position

The ASME Code does not require any further evaluation of an indication if it is shown to be acceptable based upon the criteria in Appendix A of Section XI. Of the 13 indications found to be rejectable to Table IWB 3511-1 of Section XI, only two of these were also rejectable to Appendix A. Both of these indications were in steam generator 34. As a result, the Authority performed supplemental nondestructive examinations (NDE) including magnetic-particle testing (MT) and dampened ultrasonic inspection (UT) from the inside diameter of steam generator 34 in order to further evaluate these two indications. In doing that, the Authority selected an inspection area containing the Appendix A rejectables as well as other reportables and rejectables. Further inspection of the reportables and the rejectables other than the two Appendix A rejectables was not, however, required as described above. Therefore, supplemental NDE of the other reportables and rejectables by the aforementioned two methods also is not necessary in this upcoming outage. However, all previously identified indications which were rejectable to Table IWB 3511-1 will be re-inspected by UT from the outside diameter as required by the Code.

In addition, it should be noted that the supplemental NDE inspections did not identify any surface indications.

B. Authority's Comments to Statements in SER

1. Statement on Page 4 of SER:

"However, one of the indications which was rejectable to Section XI, Appendix A was not shown to be due to a grind out."

### Authority's Comment

Figure D-6 of Reference 2 identifies the 7 indications which were evaluated by the UT dampening technique and found to be due to grind outs. Indications No. 4 and 5 on that figure are the two Appendix A rejectables and are clearly in grind out areas.

### 2. Statements on Page 4 of SER:

"...the licensee used the liberalized 1980 ASME Code surface proximity rules... If the correct criteria had been used, the number of rejectable indications would have increased significantly.

### Authority's Comment

The Authority has evaluated the use of the 1980 Code and determined that had the Summer 1975 Addendum been used three additional indications (Nos. 9, 12, and 14 on Fig. 4-2 and 4-3 of Reference 2) would have been required to be evaluated as surface indications and would have been rejectable to Appendix A of Section XI. All of these indications, however, were located in the area inspected by MT. No indications were identified within this inspection area.

In addition, it should be noted that during the inspection, all indications were plotted on the aforementioned figures for information and evaluation to Appendix A, even if they were deemed acceptable to Table IWB-3511-1 of Section XI.

### C. References

1. Letter from Mr. J. D. Neighbors to Mr. J. C. Brons, dated February 17, 1987 regarding the Safety Evaluation Report on the No. 6 girth weld inspection report for steam generators 31, 32, 33 and 34.2.
2. 1985 Indian Point 3 Steam Generator Girth Weld Inspection Report.

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TO: NRC DOCUMENT CONTROL DESK

CONTROL COPY NO.: 25

FROM: TERRY RYAN

DATE: 04/30/87

SUBJECT: DISTRIBUTION OF THE INDIAN POINT #3 EMERGENCY PLAN REVISIONS

The enclosed sheets are revisions to your controlled copy of the IP-3 Emergency Plan. Please discard the old sheets, insert the attached sheets, initial/date this transmittal sheet, and return it to Ms. Terry Ryan, IP-3 Documents Supervisor.

VOLUME I - EMERGENCY PLAN - No Change.

OLD:

NEW:

VOLUME II - EMERGENCY RESPONSE ACTIVATION

OLD: (Discard)

NEW:

VOLUME II Cover Sheet, Rev. 19  
VOLUME II Table of Contents, Rev. 19  
Control Room Section (02/87) (all)  
EOF Section (all) (02/87)  
OSC Section (all) (02/87)  
TSC Section (all) (02/87)  
Security Section (all) (02/87)  
EP-FORM Index (03/87)  
EP-FORM #20 (02/87)

VOLUME II Cover Sheet, Rev. 20  
VOLUME II Table of Contents, Rev. 20  
Control Room Section (1-8) (04/87)  
EOF Section (1-20) (04/87)  
OSC Section (1-15) (04/87)  
TSC Section (1-10) (04/87)  
Security Section (1-4) (04/87)  
EP-FORM Index (04/87)  
EP-FORM #20 (04/87)

VOLUME III - EMERGENCY PLAN IMPLEMENTING PROCEDURES

OLD: (Discard)

NEW:

VOLUME III Index, Rev. 44  
IP-1021, Rev. 14 (Atts. 4.1 - 4.7)  
IP-1053, Rev. 3 (Atts. 4.1 & 4.2)  
IP-1070, Rev. 14 (Att. 5.1 all)

VOLUME III Index, Rev. 45  
IP-1021, Rev. 15 (Atts. 4.1 - 4.7)  
IP-1053, Rev. 4 (Atts. 4.1 & 4.2)  
IP-1070, Rev. 15 (Att. 5.1 - 12 pages,  
Att. 5.2 - 3 pages,  
Att. 5.3 - 1 page, and  
Att. 5.4 - 2 pages)  
IP-1076, Rev. 8 (Atts. 6.1 - 6.4)

IP-1076, Rev. 7 (Atts. 6.1 - 6.4)

I acknowledge the receipt of these revisions to the IP-3 Emergency Plan.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

Enclosures  
MAC:mm

AOAS  
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