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October 9, 2002
IPN-02-082

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

SUBJECT: Indian Point Nuclear Generating Unit No. 3
Docket No. 50-286
Response to Request for Additional Information
Regarding Relief Requests for
Second 10-Year Inservice Inspection Closeout (TAC No. MB2535)

Reference:
1. NRC Letter, "Request for Additional Information Regarding Relief Requests Associated with Second 10-Year Inservice Inspection closeout, Indian Point Nuclear Generating Unit No. 3 (TAC No. MB2535)", dated July 16, 2002
2. Entergy letter to USNRC, IPN-01-053, "Second 10-Year ISI Interval Closeout and Associated Relief Requests", dated July 16, 2001

Dear Sir:

This letter provides the additional information (Attachment 1) requested by the NRC in Reference 1 regarding two relief requests (RR) submitted by Entergy Nuclear Operations, Inc. (ENO) in Reference 2. ENO has revised relief requests RR 2-Closeout 1 and RR 2-Closeout 5 to address the NRC staff's comments. The revised relief requests provided in Attachment 2, supersede the Revision 0 version, except for the Section H attachments, transmitted in Reference 2.

There are no new commitments made in this letter. If you have any questions, please contact Ms. Charlene Faison at 914-272-3378.

Very truly yours,

John Herron
Senior Vice President
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cc: Next page

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Recd 10/16/02

cc:

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ATTACHMENT 1 TO IPN-02-082

Response to Request for Additional Information Regarding Relief Requests Associated with Second 10-Year Inservice Inspection Closeout

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3
DOCKET NO. 50-286
DPR-64

Response to Request for Additional Information Regarding Relief Requests for Second 10-Year Inservice Inspection Interval Closeout Indian Point Nuclear Generating Unit No. 3 (IP3)

1. Request for Relief RR 2-Closeout-1, Rev. 0, Examination Category B-A, Pressure Retaining Welds in Reactor Vessel

In accordance with 10 CFR 50.55a(g)(5)(iii), the licensee requested relief from 100% volumetric examination of reactor pressure vessel (RPV) longitudinal shell weld no. 5. Upon review of the licensee's submittal, clarifications to the request were required. During a conference call with representatives from the licensee on July 03, 2002, it was determined that the subject request was intended to satisfy the augmented examination of reactor pressure vessel (RPV) welds as specified in 10 CFR 50.55a(g)(6)(ii)(A), not the Code-required examination of one longitudinal core region weld. Longitudinal weld no. 5, is in fact, outside of the core region, but nonetheless a longitudinal shell weld where volumetric examination coverage is impacted by the geometry of an outlet nozzle.

The *Code of Federal Regulations* (CFR), specifically Title 10 Section 50.55a(g)(6)(ii)(A), requires licensees of operating commercial nuclear power reactors to implement a one-time augmented examination of all RPV shell welds. This regulation, which became effective on September 8, 1992, requires that licensees perform volumetric examinations of "essentially 100%" of RPV shell welds in accordance with the 1989 Edition of the ASME Section XI. "Essentially 100%" is defined as more than 90% of the examination volume of each weld, where the reduction is due to component geometry or interference with another component. In addition, 10 CFR 50.55a(g)(6)(ii)(A)(5) states that, when licensees determine they are unable to meet the augmented examination requirements, they shall submit information to the NRC staff to support this determination and propose an alternative that would provide an acceptable level of quality and safety.

Therefore, the licensee should revise this request to propose an alternative in accordance with 10 CFR 50.55a(g)(6)(ii)(A)(5). Describe the limitations to the examination, results of the limited examination, and a basis to conclude that your proposed alternative provides an acceptable level of quality and safety.

Entergy Response:

Relief Request RR 2-Closeout-1 is being resubmitted (Attachment 2), for reactor vessel longitudinal shell weld no. 5 due to design structural discontinuity around the nozzle area which prevented essentially 100% inspection of weld no. 5, in accordance with 10 CFR 50.55a(g)(6)(ii)(A)(5). Additional information as requested is included in the revised relief request.

2. Request for Relief RR 2-Closeout-5, Rev. 0, Examination Category B-K-1, Integral Attachments for Piping, Pumps, and Valves

In accordance with 10 CFR 50.55a(g)(5)(iii), the licensee requested relief from performing the Code-required 100% surface or volumetric examination of three integrally welded supports on reactor coolant pump (RCP) no. 32. Due to their design, only limited examinations can be performed on the attachment welds of these supports. The licensee invoked ASME Code Case N-509, which allows a 10% sampling in lieu of the 1983 Code requirement to examine all Class 1 integrally welded attachments. Code Case N-509 also requires that 100% of the sampled items be examined. The NRC staff has determined that N-509 provides an acceptable alternative when adopted in it's entirety. However, the staff has concluded that granting relief from a Code Case, which of itself, is an alternative to Code requirements, is not appropriate. This was discussed with the licensee during the July 3, 2002, conference call.

The licensee should revise this request to propose an alternative in accordance with 10 CFR 50.55a(a)(3)(i) for all Class 1 RCP integrally welded attachments. The alternative should technically support any reduction in population sampling of components in lieu of the 1983 Code requirement to examine all Class 1 integrally welded attachments, as well as, describe the licensee's approach to limited examinations for these items. The licensee should include current industry inspection practices, state-of-the-art nondestructive examination methods, or any other factors that would influence a determination that reasonable assurance of the continued structural integrity of the welded attachments has been provided.

Entergy Response:

Relief Request RR 2-Closeout-5 is being resubmitted (Attachment 2), to propose an alternative in accordance with 10 CFR 50.55a(a)(3)(i). Additional information as requested is included in the revised relief request.

ATTACHMENT 2 TO IPN-02-082

Second 10-Year Inservice Inspection Interval Closeout

REVISED RELIEF REQUESTS

Relief Request RR 2-Closeout 1, Revision 1 (2 pages)

Relief Request RR 2-Closeout 5, Revision 1 (3 pages)

(Note: These relief requests supersede the Revision 0 versions, except for the Section H attachments, previously submitted by IPN-01-053, dated July 16, 2001)

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3
DOCKET NO. 50-286
DPR-64

Relief Request RR 2 - Closeout 1, Rev. 1

A. COMPONENT INDENTIFICATION

Code Class:	1
Examination Category:	B-A
Item Number:	B1.10, B1.12
Description:	Pressure Retaining Welds in Reactor Vessel - Longitudinal Shell Welds

B. CODE REQUIREMENT

10 CFR 50.55a(g)(6)(ii)(A) requires licensees to augment their reactor vessel examination by implementing once, as part of the inservice inspection interval in effect on September 9, 1992, the examination requirements for reactor vessel shell welds specified in Item B1.10 of Examination Category B-A, "Pressure Retaining Welds in Reactor Vessel, " in Table IWB-2500-1 of subsection IWB of the 1989 Edition of section XI of the ASME Boiler and Pressure Vessel Code. The requirement examination for the reactor vessel shell welds is a volumetric examination on essentially 100% of the welds.

C. RELIEF REQUESTED

Relief is requested in accordance with the provisions of 10 CFR 50.55a (g)(6)(ii)(A)(5) from the requirements of 10 CFR 50.55a (g)(6)(ii)(A), which requires licensees to implement a one-time augmented examination of all RPV shell welds.

D. BASIS FOR RELIEF

Entergy Nuclear Operations, Inc. (ENO) performed augmented volumetric examination of all the reactor vessel shell welds as required per 10 CFR 50.55a(g)(6)(ii)(A). However, for reactor vessel shell longitudinal weld #5, essentially 100% inspection was not achievable due to a design structural discontinuity that restricted access. The discontinuity was due to the cutout for the outlet nozzle, centered at 22 degrees. The effective length of the long seam weld #5 is 70 inches. Scanning of the portions of the long seam weld #5 near the nozzle is limited due to interference from the nozzle boss. Inspection coverage is estimated at 76%. (Ref. Technique drawings sheets 1, 14, & 15 attached). All other reactor vessel shell welds were examined as required per 10 CFR 50.55a(g)(6)(ii)(A). No reportable indications were found. Therefore, in accordance with 10 CFR 50.55a (g)(6)(ii)(A)(5), ENO determined that complete inspection of reactor vessel shell weld #5 is not achievable and request relief from the requirements of 10 CFR 50.55a (g)(6)(ii)(A).

Relief Request RR 2 - Closeout 1, Rev. 1

E. PROPOSED ALTERNATE EXAMINATION

1. The RPV Shell Longitudinal Weld #5 has been examined to the maximum extent practical from the inside surface. No additional volumetric examinations will be performed on this weld.

2. A visual examination (VT-2) has been performed in conjunction with the pressure testing conducted on these components in every refuel outage in accordance with IWA-5000 and IWB-5000, no evidence of leakage detected. This provides additional reasonable assurance of component integrity.

Table 1

Code Category B-A / Item No. B1.12				
Component ID	**System**	**Extent Examined**	**Limitation**	**Remarks**
Weld #5	RPV Shell Weld – Longitudinal	70" (about 76% coverage)	Restricted Access due to interference from the nozzle boss.	None

F. JUSTIFICATION FOR RELIEF

Augmented inspection of all reactor vessel shell welds was performed in accordance with the requirements of 10 CFR 50.55a (g)(6)(ii)(A). Essentially 100% coverage for reactor vessel shell weld #5 is not achievable due to structural discontinuity limitation. Weld #5 was inspected to the maximum extent achievable, with an approximate coverage of 76%.

G. PERIOD FOR WHICH RELIEF IS REQUESTED

Relief is requested for the second inspection interval, which ended on July 20, 2000.

H. ATTACHMENTS

- R.V. Coverage Estimate Breakdowns for Weld No. 5
- Technique drawings sheets 1, 14, & 15

[See Relief Request Rev 0 for attachments; IPN-01-053 dated July 16, 2001]

Relief Request RR 2 - Closeout 5, Rev. 1

A. COMPONENT INDENTIFICATION

Code Class:	1
Examination Category:	B-K-1
Item Number:	B10.20
Description:	Pump Integrally Welded Attachments

B. CODE REQUIREMENT

ASME Code Section XI, 1983 Edition through Summer 1983 Addenda requires examinations to include the welded attachment of pumps to be examined by Examination Category B-K-1, and includes essentially 100% of the weld length.

C. RELIEF REQUESTED

Relief is requested from the ASME Boiler and Pressure Vessel Code Section XI requirement to examine, by surface or volumetric examination, 100% of the weld length or volume. Also, relief is requested from examining all of the pump integrally welded attachments.

D. BASIS FOR RELIEF

The 1983 Section XI Code, Examination Category B-K-1 requires that all welded pump attachments be examined for essentially 100% of the length or volume of each attachment. Since there are four Reactor Coolant Pumps (RCPs) in this examination category, with three integrally welded attachments on each pump, the 1983 Code requires the examination of 12 integrally welded attachments.

During the second interval, Code Case N-509 was approved by the NRC as an acceptable alternative to the 1983 Section XI Code requirements at stated, which allows for a 10% sample inspection of the applicable integrally welded attachments under Category B-K-1. This minimum 10% sample requirement also has been adopted into later editions of the Section XI Code (1995 Code with the 1995 Addenda, Examination Category B-K, Note (5), and later editions). Under the 10% sample, only two integrally welded attachments would be required. Both the Code Case and later editions of the Section XI Code require examination of essentially 100% of the weld length or volume.

During the second interval, six integrally welded attachments (three each on the 31 and 32 Reactor Coolant Pumps) were examined using the liquid penetrant method. The examinations were performed, in accordance with ASME Section V, 1983 and 1986 Code requirements respectively, by qualified inspectors using approved procedures. Minor indications were reported, and had been evaluated and determined as acceptable. None of the inspections indicated any deformation of the attachments. Due to restrictions from the lower support structure, a portion of the Reactor Coolant Pump support weld (about 15" on each welded support) could not be examined by either volumetric or surface examination method. This restriction exists at all the integrally welded attachments on the RCPs. Based on the attached "Limitation To Examination" sketches, it is estimated about 75% of the length of each welded attachment was examined. The weld length examined, on an individual weld basis, did not meet the minimum 90% of the weld length examined requirement.

Relief Request RR 2 - Closeout 5, Rev. 1

Examination was performed on six (6) integrally welded attachments for two pumps (RCPs 31 and 32) with 75% of coverage. While this does not meet the 1983 Code requirements, the number of attachments examined (6 out of 12) exceeded the minimum of a 10% sample as required in Code Case N-509 and the later editions of the Section XI Code (1995 Code with the 1995 Addenda, and later editions) which have been approved by the NRC. ENO believes this reduction in population sample meets the intent of having at least 10% of the population examined as required. The minor indications were evaluated and found to be acceptable. Therefore, pursuant to 10 CFR 50.55a(a)3(i), ENO believes the proposed alternative examination performed provides an acceptable level of quality and safety.

E. PROPOSED ALTERNATE EXAMINATION

1. Surface examinations were performed on 31 and 32 Reactor Coolant Pumps to the maximum extent possible. No additional volumetric examinations will be performed.

Table 5

Code Category B-K-1 / Item No. B10.20					
INT No.	**Weld ID**	**System / Component**	**Extent Examined**	**Limitation**	**Remarks**
1-5100	31-1SC	Reactor Coolant	At least 75% (1)	Lower support structure limits exam on bottom of weld	31 RCP
1-5100	31-2SC	Reactor Coolant	At least 75% (1)	Lower support structure limits exam on bottom of weld	31 RCP
1-5100	31-3SC	Reactor Coolant	At least 75% (1)	Lower support structure limits exam on bottom of weld	31 RCP
1-5100	32-1SC	Reactor Coolant	At least 75% (1)	Lower support structure limits exam on bottom of weld	32 RCP
1-5100	32-2SC	Reactor Coolant	At least 75% (1)	Lower support structure limits exam on bottom of weld	32 RCP
1-5100	32-3SC	Reactor Coolant	At least 75% (1)	Lower support structure limits exam on bottom of weld	32 RCP

Note 1: Surface examination was limited by the lower support structure which limits access to about 15" of the bottom of the weld. Examination was performed to the maximum extent possible. It is estimated that more than 75% of the weld length was examined.

Relief Request RR 2 - Closeout 5, Rev. 1

2. A visual inspection (VT-2) was performed in conjunction with the pressure testing conducted on these components every refuel outage (with no leakage detected) in accordance with IWA-5000 and IWB-5000, which provides reasonable assurance of component integrity.

F. JUSTIFICATION FOR RELIEF

The examination was performed on 6 integrally welded attachments to the maximum extent possible (greater than 75%). Minor indications were identified and evaluated to be acceptable. This exceeds the 10% inspection sample as required by Code Case N-509, and the later edition of the Section XI Code (1995 edition, 1995 Addenda, and later), which have been approved by the NRC.

G. PERIOD FOR WHICH RELIEF IS REQUESTED

Relief is requested for the second inspection interval, which ended on July 20, 2000.

H. ATTACHMENTS

- "Limitation to Examination" sheets for RCP 32 (restriction is typical for all 4 RCP's)

  [See Relief Request Rev 0 for attachments; IPN-01-053 dated July 16, 2001]