



**Entergy Nuclear Northeast**  
Indian Point Energy Center  
450 Broadway, GSB  
P.O. Box 249  
Buchanan, NY 10511-0249  
Tel 914 254 6700

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Lawrence Coyle  
Site Vice President

NL-15-140

December 10, 2015

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

**SUBJECT:** Relief Request IP2-ISI-RR-3 Alternative To Weld Reference System Examination  
Required by Subarticle IWA-2600  
Indian Point Unit Number 2  
Docket No. 50-247  
License No. DPR-26

Dear Sir or Madam:

Pursuant to 10 CFR 50.55a(g)(5)(iii), Entergy Nuclear Operations, Inc. (Entergy) requests relief to use an alternative to the 2007 edition with the 2008 Addenda of ASME Section XI requirements in SubArticle IWA-2600 to establish a weld reference system and Appendix III, Subarticle III-4300 to have a weld identification plan showing weld identification. This relief request is for the Fifth 10-year ISI Interval that is scheduled to start June 1, 2016.

Entergy Nuclear Operations, Inc. (Entergy) is submitting, enclosed, Relief Request No. 3 (IP2-ISI-RR-3) for Indian Point Unit No. 2 (IP2). This relief request is for the Fifth 10-year Inservice Inspection (ISI) Interval made in accordance with 10 CFR 50.55a(z)(1)

*"Alternatives to codes and standards requirements. Alternatives to the requirements of paragraphs (b) through (h) of this section or portions thereof may be used when authorized by the Director, Office of Nuclear Reactor Regulation, or Director, Office of New Reactors, as appropriate. A proposed alternative must be submitted and authorized prior to implementation. The applicant or licensee must demonstrate that:*

(1) *Acceptable level of quality and safety. The proposed alternative would provide an acceptable level of quality and safety;"*

A047  
NRR

If you have any questions or require additional information, please contact Mr. Robert Walpole, Manager, Regulatory Assurance at (914) 254-6710.

Sincerely,

A handwritten signature in black ink that reads "D. Murray for LC". The signature is written in a cursive style.

LC/sp

Attachment: 10 CFR 50.55a Request No. IP2-ISI-RR-3 Proposed Alternative in Accordance  
With 10 CFR 50.55a(z)(1)

cc: Mr. Douglas Pickett, Senior Project Manager, NRC NRR DORL  
Mr. Daniel H. Dorman, Regional Administrator, NRC Region 1  
NRC Resident Inspectors Office  
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA  
Ms. Bridget Frymire, New York State Dept. of Public Service

ATTACHMENT TO NL-15-140

10 CFR 50.55a REQUEST NO. IP2-ISI-RR-3  
PROPOSED ALTERNATIVE IN ACCORDANCE  
WITH 10 CFR 50.55a(z)(1)

ENTERGY NUCLEAR OPERATIONS, INC.  
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2  
DOCKET NO. 50-247

**Indian Point Unit 2 Nuclear Plant  
10 CFR 50.55a Request No: IP2-ISI-RR-3  
Proposed Alternative in Accordance With 10 CFR 50.55a(z)(1)  
Requirement for a Weld Reference System**

**1. ASME COMPONENT IDENTIFICATION**

Code Class:	1 and 2
References:	IWA-2600
Examination Category:	Not Applicable
Item Number:	Not Applicable
Description:	Weld Reference System

**2. APPLICABLE ASME CODE REQUIREMENTS**

The 2007 edition with the 2008 Addenda of ASME Section XI requires in Subarticle IWA-2600 the establishment of a weld reference system for all welds and areas subject to surface or volumetric examination. Each such weld area shall be located and identified by a system of reference points.

Appendix III, Subarticle III-4300 - requires the identification of examination areas. Weld identification and location shall be shown on a weld identification plan. Welds shall be marked once before or during the preservice examination to establish a reference point.

**3. REASON FOR REQUEST**

At the time of construction of Indian Point Unit 2 (IP2), the application of a reference system which included the marking of welds before or during the preservice examination was not required by the code and, accordingly welds were not marked.

**4. PROPOSED ALTERNATIVE AND BASIS FOR USE**

IP2 requests to use an alternative to the requirements of the weld reference system as specified in IWA-2600. Pursuant to 10 CFR 50.55a(z)(1) an alternative is requested on the basis that the proposal would provide an acceptable level of quality and safety. The weld reference system described below shall be used for locating welds on existing piping and components and new installations.

Datum reference markings will be established in the event that recordable indications are to be reported. Such datum points shall either be marked on the component or have their locations adequately described in the inspection documentation so that subsequent relocation can be achieved. The method proposed for the identification of indication locations is identical to the one employed at IP2 during the previous inspection intervals.

A reference system for controlling the selection and documentation of datum points has been in effect at IP2 since pre-service inspections were performed in the early 1970's. The datum and conventions established at that time have been retained to promote consistency in the recording of data. The general conventions used at IP2 for establishing weld reference datum points include:

Reference system for pipe:

- The datum point for a circumferential weld on a horizontal pipe is the intersection of the top centerline of the pipe and the weld centerline. Dimensions are taken in a clockwise direction when viewing along the direction of system flow, *which is marked on the line isometric drawing.*
- The datum point for a circumferential weld on a vertical pipe is the intersection of the weld centerline and the centerline through the outside (extrados) of the elbow or bend that is in the direction of the lower weld number.
- The datum for a longitudinal weld is the weld centerline and the intersecting circumferential weld.

Reference system for vessels:

- The datum for circumferential welds is the intersection of the weld centerline and the centerline of the adjacent longitudinal weld. Dimensions are taken in a clockwise direction when viewed from the top.
- Where there is no intersecting weld, the datum point is drawn from an existing structural point (i.e., the centerline of hot leg manway). This is identified on the data sheet for the weld examination.
- The datum for longitudinal welds is the intersection of the weld centerline and the centerline of the intersecting upper circumferential weld.

The weld reference system currently in use at IP2 has been performed satisfactorily in all previous intervals. The locations of indications have been positively identified using the conventions identified above. Therefore, the marking of weld joints is not necessary considering this alternative proposal. It is our opinion that the proposal maintains the acceptable level of quality and safety expected.

## **5. DURATION OF PROPOSED ALTERNATIVE**

The proposed duration of this alternative is during the Fifth Inspection Interval starting June 1, 2016 and currently scheduled to end May 31, 2026.

## 6. PRECEDENT

- Indian Point Unit 2 Fourth Interval Relief Request, IP2-ISI-RR-15, dated May 23, 2012 requested the same relief and was approved by the NRC on December 3, 2012 (TAC NO. ME8753, ADAMS Accession NO. ML12334A317)