



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

Robert Walpole  
Licensing Manager  
Tel (914) 254-6710

May 23, 2012

NL-12-069

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

SUBJECT: Relief Request IP2-ISI-RR-15 - Proposed Alternative to the Use of a  
Weld Reference System  
Indian Point Unit Number 2  
Docket No. 50-247  
License No. DPR-26

Dear Sir or Madam:

Entergy Nuclear Operations, Inc. (Entergy) is submitting Relief Request No. 15 (IP2-ISI-RR-15) (Enclosure 1) for Indian Point Unit No. 2 (IP2). This relief request is for the Fourth 10-year Inservice Inspection (ISI) Interval. The purpose is to request relief from Subarticle IWA-2600 requirements to establish a weld reference system for all welds and areas subject to surface or volumetric examination. This request is made in accordance with 10 CFR 50.55a(a)(3)(i), an alternative which provides an acceptable level of quality and safety.

Entergy requests approval of the relief request within 12 months of docketing. There are no new commitments identified in this submittal. If you have any questions or require additional information, please contact Mr. Robert Walpole, Licensing Manager at 914-254-6710.

Sincerely,

A handwritten signature in black ink, appearing to read "RW/sp", written over a horizontal line.

RW/sp

Enclosure: 1. Relief Request No IP2-ISI-RR-15 – Proposed Alternative to the Use of a  
Weld Reference System

cc: Mr. Douglas Pickett, Senior Project Manager, NRC NRR DORL  
Mr. William M. Dean, Regional Administrator, NRC Region I  
NRC Resident Inspector's Office Indian Point  
Ms. Bridget Frymire, New York State Department of Public Service  
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA

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NRC

Enclosure 1 TO NL-12-069

RELIEF REQUEST NO: IP2-ISI-RR-15

PROPOSED ALTERNATIVE TO THE USE OF A WELD REFERENCE  
SYSTEM

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

**Indian Point Unit 2  
Fourth 10-year ISI Interval  
Relief Request No: IP2-ISI-RR-15  
Proposed Alternative to the Use of a Weld Reference System  
Proposed Alternative In Accordance with 10 CFR 50.55a(a)(3)(i)  
-Alternative Provides Acceptable Level of Quality and Safety-**

**1. ASME Code Component(s) Affected**

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

**2. Applicable Code Edition and Addenda**

The code of record for the Indian Point Unit 2 Inservice Inspection Fourth Interval is the ASME Section XI Code, 2001 Edition including the 2003 Addenda.

**3. Applicable Code Requirement**

Subarticle IWA-2600 requires 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.

**4. Reason for Request**

IP2 requests relief from the requirements of the weld reference system as specified in IWA-2600 and III-4300. Pursuant to 10 CFR 50.55a(a)(3)(i) relief is requested on the basis that the proposed alternative would provide an acceptable level of quality and safety.

**5. Proposed Alternative and Basis for Use**

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 first, second, and third inspection intervals.

#### Basis for Use

The current code requirements include the establishment of a weld reference system which includes the initial marking of weld joints. At the time of construction of 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.

A reference system for controlling the selection and documentation of datum points has been in effect since preservice 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 performing satisfactorily for the first, second, and third 10-Year Intervals. The locations of indications have been positively identified using the conventions identified above. Therefore, the marking of weld joints is not necessary.

## **6. Duration of Proposed Alternative**

Relief is requested for the Fourth Ten Year Interval (effective from March 2007 thru May 2016).

## **7. Precedents**

This request is similar to the previous IP2 Third 10-Year Inspection Interval Relief No. 3 which was approved October 29, 1996 (see TAC No. M88559) and the IP3 Fourth 10 –Year Inspection Interval Relief IP3-ISI-RR-02 which was approved on June 7, 2010 (see TAC No. ME1576).

## **8. References**

None