



Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360

January 8, 2015

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

SUBJECT: Response to Request for Additional Information Regarding Relief Request PRR-24, Nozzle-to-Vessel Welds and Nozzle Inner Radii Examinations (TAC No. MF4187)

Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
Docket No. 50-293
License No. DPR-35

REFERENCE: NRC Letter to Energy, "Pilgrim Nuclear Power Station - Request for Additional Information Regarding Relief Request PRR-24, Nozzle-to-Vessel Welds and Nozzle Inner Radii Examinations (TAC No. MF4187), dated December 17, 2014 (NRC Letter 1.14.085)

LETTER NUMBER: 2.15.001

Dear Sir or Madam:

Pursuant to the request by the U.S. Nuclear Regulatory Commission for additional information contained in the Reference, please find attached the Pilgrim Nuclear Power Station response.

Please contact me at (508) 830-8323 or Murray Williams at (508) 830-8275 if you have any questions.

Sincerely,

Everett P. (Chip) Perkins
Regulatory Assurance Manager

EPP/pjm

Attachment 1: Response to Request for Additional Information Regarding Relief Request PRR-24, Nozzle-to-Vessel Welds and Nozzle Inner Radii Examinations (TAC No. MF4187)

A047
NRR



cc: Mr. Daniel Dorman
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-1415

Ms. Nadiyah Morgan, Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
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NRC Senior Resident Inspector
Pilgrim Nuclear Power Station

Attachment 1

To PNPS Letter 2.15.001

**Response to Request for Additional Information Regarding Relief Request PRR-24,
Nozzle-to-Vessel Welds and Nozzle Inner Radii Examinations (TAC No. MF4187)**

**Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
Request for Alternative In Accordance with 10 CFR 50.55a(a)(3)(i)
PNPS 4th Interval ISI Program Request No. PRR-24
Response to Request for Additional Information – Attachment 1**

NRC Request 1

Please verify and state the specific values for the RPV inner radius and wall thickness provided in proposed alternative PRR-24. Also, explain why there is an inconsistency between the values provided in the BWRVIP-108 and BWRVIP-241 reports, and those provided in your March 12, 2014, letter. If the current submission is based on incorrect geometry information, please revise it.

Response

The value provided in proposed alternative PRR-24 and Table 2-1 of BWRVIP-241 for the RPV wall thickness is [6.5] inches. The value provided in BWRVIP-108, Table 3-1 for the RPV wall thickness is [5.531] inches. The value provided in BWRVIP-241 Section 4.1 on page 4-1 for the RPV wall thickness is [7] inches.

The March 12, 2014 Request for Alternative is based on correct geometry information. The specific values for the RPV inner radius [113.4063] inches and wall thickness [6.5] inches that were provided in the proposed alternative PRR-24 are the values that were used in the calculations in BWRVIP-241 as well as PRR-24. The value of [6.5] inches is the minimum wall thickness of the lower shell course where the recirculation inlet nozzles are located.

The inconsistency in the reported values is in the BWRVIP-241 report on page 4-1 section 4.1 and figure 4-1, on page 4-12 which lists the wall thickness as [7] inches is a typographic error. The value provided in BWRVIP-108 of [5.531] inches was taken from upper and lower intermediate shell course values, when it should have been the lower shell course. The value used in the calculations was the correct value [6.5] inches as shown on Pilgrim Nuclear Power Station design drawings.

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NRC Request 2

Please provide a list of what inspections have already been performed on the Recirculation Inlet nozzle-to-vessel welds and inner radius sections listed in Attachment 1 of PRR-24, for which this alternative is requested. Also, describe any indications that were found and how these indications were dispositioned.

Response

Table of ASME Code Components Affected at PNPS					
Component ID	Description	Code Category	Code Item	Inspections	Indications (see notes below)
RPV-N2A-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1977, 1984, 1999, 2009	1977 (note 1), 1984 (note 6)
RPV-N2A-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1977, 1984, 1999, 2009	NRI
RPV-N2B-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1980, 1984, 1999, 2009	1984 (note 7)
RPV-N2B-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1980, 1984, 1999, 2009	NRI
RPV-N2C-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1974, 1984, 1999, 2009	NRI
RPV-N2C-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1974, 1984, 1999, 2009	NRI
RPV-N2D-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1974, 1995, 2003	NRI
RPV-N2D-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1974, 1995, 2003	NRI
RPV-N2E-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1980, 1995, 2003	1980 (note 3)
RPV-N2E-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1980, 1995 2003	NRI
RPV-N2F-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1977, 1982, 1995, 2003	1977 (note 2)

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RPV-N2F-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1977, 1982, 1995, 2003	NRI
RPV-N2G-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1977, 1993, 2005	2005 (note 8)
RPV-N2G-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1977, 1993, 2005	NRI
RPV-N2H-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1980, 1993, 2005	1980 (note 4), 2005 (note 9)
RPV-N2H-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1980, 1993, 2005	NRI
RPV-N2K-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.90	1981, 1993, 2005	2005 (note10)
RPV-N2K-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.100	1981, 1993, 2005	NRI
RPV-N2J-NIR	12" Recirc Inlet Nozzle to Inner Radius	B-D	B3.90	1980, 1995, 2003	NRI
RPV-N2J-NV	12" Recirc Inlet Nozzle to Vessel Weld	B-D	B3.100	1980, 1995, 2003	1980 (note 5)

Notes:

1. N2A (NV) – 1977, Code acceptable slag inclusions – acceptable.
2. N2F (NV) – 1977, Code acceptable reflectors were observed – acceptable.
3. N2E (NV) – 1980, Geometric reflectors – acceptable.
4. N2H (NV) – 1980, Indications are geometric reflectors from the nozzle ID surface – acceptable.
5. N2J (NV) – 1980, Indications are geometric reflectors from the nozzle ID surface – acceptable.
6. N2A (NV) – 1984, Reflectors were seen, same inclusion as 1977 no change in size – acceptable.
7. N2B (NV) – 1984, Indications found but are allowable and not recordable – acceptable.
8. N2G (NV) – 2005, (3) indications, were acceptable per requirements of ASME Section XI.
9. N2H (NV) – 2005, (4) indications, were acceptable per requirements of ASME Section XI
10. N2K (NV) – 2005, (3) indications were acceptable per the requirements of ASME Section XI