



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

October 21, 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-50, Implementation of Code Case N-702 (TAC No. MF6362)

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

REFERENCE: NRC Email to Entergy, "Request for Information Regarding Pilgrim Relief Request (PRR)-50, Implementation of Code Case N-702 (TAC No. MF6362), dated September 23, 2015

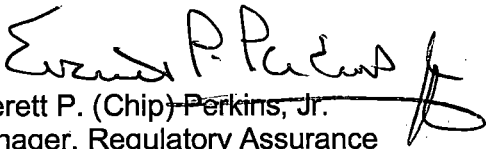
LETTER NUMBER: 2.15.073

Dear Sir or Madam:

Pursuant to the request by the U.S. Nuclear Regulatory Commission staff 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, Jr.  
Manager, Regulatory Assurance

EPP/mew

- Attachments:
1. Response to Request for Additional Information Regarding Relief Request PRR-50, Implementation of Code Case N-702 (TAC No. MF6362)
  2. Entergy Calculation M1396, Structural Integrity Associates, "Evaluation of Probability of Failure for Recirculation Inlet (N2) in the Nozzle-to-Shell Welds and Nozzle Blend Radii Regions at Pilgrim Nuclear Station," 1400071.301, Revision 0, February 2014

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. Booma Venkataraman, Project Manager  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
MS O-8C2A  
Washington, DC 20555

NRC Senior Resident Inspector  
Pilgrim Nuclear Power Station

**Attachment 1**

**To PNPS Letter 2.15.073**

**Response to Request for Additional Information Regarding Relief Request PRR-50,  
Implementation of Code Case N-702 (TAC No. MF6362)**

**(1 Page)**

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION  
REGARDING RELIEF REQUEST NO. PRR-50,  
IMPLEMENTATION OF CODE CASE N-702  
(TAC NO. MF6362)**

**NRC Request 1**

By letter dated June 4, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15166A037), Entergy Nuclear Operations, Inc. (the licensee) submitted pursuant to Title 10 *Code of Federal Regulations* (10 CFR) 50.55(z)(1) a request for an alternative to specific portions of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," on the basis that the proposed alternatives provide an acceptable level of quality and safety for the Pilgrim Nuclear Power Station (PNPS). Pursuant to 10 CFR 50.55a(z)(1), the licensee requested approval to implement the alternative of Code Case N-702 in lieu of the code required 100% examination of all nozzles identified in the request.

1. Attachment 1 to the licensee's letter, Section 4, Page 4, "Proposed Alternative and Basis for Use", states in relevant part:

Therefore, a plant specific probabilistic fracture mechanics evaluation was performed to supplement the criteria of Code Case N-702 and BWRVIP-241 in order to demonstrate that the probability of failure remains acceptable over this period of extended operation (to 60 years). This analysis was performed using the same methods as were used in BWRVIP-241, with PNPS specific fracture mechanics analyses\*. The results demonstrate that for the N2 nozzles at PNPS, the probability of failure was less than the NRC safety goal of  $5.0 \times 10^{-6}$  per year. Therefore, the probabilistic fracture mechanics criteria of BWRVIP-241 remain applicable to the PNPS N2 nozzles.

\*The PNPS specific reference document for this statement is cited as Structural Integrity Associates, "Evaluation of Probability of Failure for Recirculation Inlet (N2) in the Nozzle-to-Shell Welds and Nozzle Blend Radii Regions at Pilgrim Nuclear Station", 1400071.301, Revision 0, February 2014.

The above reference document was not provided with the submittal. Please provide the reference document in order for NRC to review the probabilistic fracture mechanics analysis of the N2 nozzles at PNPS under this relief request, PRR-50.

**Response**

The requested document is provided in Attachment 2 to this letter.