



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

Stephen J. Bethay  
Director, Nuclear Assessment

August 28, 2006

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

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

Changes to the Pilgrim Fourth Ten-Year In service Inspection Program  
Plan Related to the Snubber Inspection Program

REFERENCE: 1. Entergy Letter No. 2.05.045, Pilgrim Fourth Ten-Year Inservice  
Inspection Program Plan and the Associated Relief Requests for  
NRC Approval, dated June 29, 2005

LETTER NUMBER: 2.06.077

Dear Sir or Madam:

This letter replaces six (6) pages of Pilgrim Fourth Ten-Year Inservice Inspection Program Plan submitted by Reference 1 with the attached six pages to implement the snubber inservice inspection requirements in accordance with 1998/2000 ASME OM Code, pursuant to 10 CFR 50.55a(g)(4).

This letter contains no commitments.

If you have any questions or require additional information, please contact Mr. Bryan Ford, Licensing Manager, at (508) 830-8403.

Sincerely,

A handwritten signature in black ink that reads "Stephen J. Bethay".

Stephen J. Bethay  
Director, Nuclear Safety Assurance

WGL/dm

Attachment: Revised Pilgrim Fourth Ten-Year ISI Program Plan Pages (6 pages)

A047

Entergy Nuclear Operations, Inc  
Pilgrim Nuclear Station

Letter Number 2.06.077  
Page 2

cc: Mr. James Shea, Project Manager  
Plant Licensing Branch I-1  
Division of Operator Reactor Licensing  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
One White Flint North O-8C2  
11555 Rockville Pike  
Rockville, MD 20852

Regional Administrator, Region 1  
U.S. Nuclear Regulator Commission  
475 Allendale Road  
King of Prussia, PA 19406

Senior Resident Inspector  
Pilgrim Nuclear Power Station

Attachment to Entergy Letter 2.06.077

Revised Pilgrim Fourth Ten-Year ISI Program Plan Pages

(6 pages)



20607001.PDF

INSTRUCTIONS FOR REPLACING PAGES

REMOVE

Page iii  
Page v  
Page 1-13  
Page 1-22  
Page 1-23  
Page Table 3.1-5, page 17 of 17

REPLACE

Page iii  
Page v  
Page 1-13  
Page 1-22  
Page 1-23  
Page, Table 3.1-5, page 17 of 17

	Pilgrim Nuclear Power Station	PNPS-RPT-05-001 Rev. 0
	ASME SECTION XI FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN	

REVISION SUMMARY SHEET

SECTION	EFFECTIVE PAGE(S)	REVISION	DATE
<b>MAIN SECTIONS</b>			
1.0	1-1 through 1-12	0	07/01/05
	1-13	0	08/11/06
	1-14 through 1-21	0	07/01/05
	1-22 through 1-24	0	08/11/06
	1-25 through 1-36	0	07/01/05
2.0	2-1 through 2-41	0	07/01/05
3.0	3-1 through 3-5	0	07/01/05
	Table 3.1-1: 1 through 23	0	07/01/05
	Table 3.1-2: 1 through 19	0	07/01/05
	Table 3.1-3: 1 through 5	0	07/01/05
	Table 3.1-4: 1 through 3	0	07/01/05
	Table 3.1-5: 1 through 16	0	07/01/05
	Table 3.1-5: 17	0	08/11/06
	Table 3.1-6: 1 through 5	0	07/01/05
	Table 3.1-7: 1 through 3	0	07/01/05
4.0	4-1 through 4-4	0	07/01/05
	Table 4.1-1: 1 through 4	0	07/01/05
	Table 4.1-2: 1 through 7	0	07/01/05
	Table 4.1-3: 1 through 6	0	07/01/05
	Table 4.1-4: 1 through 27	0	07/01/05
	Table 4.1-5: 1 through 1	0	07/01/05
	Table 4.1-6: 1 through 9	0	07/01/05
	Table 4.1-7: 1 through 24	0	07/01/05
	Table 4.1-8: 1 through 1	0	07/01/05
	Table 4.1-9: 1 through 14	0	07/01/05
	Table 4.1-10: 1 through 1	0	07/01/05
	Table 4.1-11: 1 through 41	0	07/01/05
	Table 4.1-12: 1 through 15	0	07/01/05
	Table 4.1-13: 1 through 16	0	07/01/05
	Table 4.1-14: 1 through 87	0	07/01/05
	Table 4.1-15: 1 through 20	0	07/01/05
	Table 4.1-16: 1 through 16	0	07/01/05
	Table 4.1-17: 1 through 8	0	07/01/05
Table 4.1-18: 1 through 6	0	07/01/05	

DRN-06-02923

DRN-06-02923

	<b>Pilgrim Nuclear Power Station</b>	<b>PNPS-RPT-05-001</b> <b>Rev. 0</b>
	<b>ASME SECTION XI FOURTH TEN-YEAR              INTERVAL INSERVICE INSPECTION              PROGRAM PLAN</b>	

**SUMMARY OF CHANGES**

REVISION	DATE	SUMMARY OF CHANGES
Rev. 0 (DRN-06-02923)	08/11/06	(1) Updated Sections 1.4, 1.5.2.2, and Table 3.1-5 related to snubber inspection and testing requirements as the result of a NRC RAI. (2) Administrative only change to page 1-24 to correct document imaging in MERLIN.
Rev. 0	07/01/05	N/A – initial revision.

DRN-06-02923

	<b>Pilgrim Nuclear Power Station</b>	<b>PNPS-RPT-05-001</b> <b>Rev. 0</b>
	<b>ASME SECTION XI FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN</b>	

The ISI P&IDs are marked with included alphanumeric characters designating the class break boundaries. The flags are not, however, shown at all boundary valves and boundary barriers. Typically, the flag symbol is shown at the major boundary valves, and may not be shown at all small bore valves such as vents, drains, test valves, etc. Class breaks in all cases may nevertheless be identified by the class designation embedded in the pipe line symbols.

Class 1, 2, and 3 boundary breaks at valves wholly within a particular plant system, or class breaks between two different plant systems, are taken to classify the valve at the higher of the two classifications. The first weld after the class break on the side of the valve with the lower classification is designated at the lower classification.

ISI Class I Pressure Boundary Only (PBO) components are shown on the ISI P&IDs with the designation of "P" in the triangular shaped flags and pipe line symbols. The visual examination and system pressure testing requirements for PBO classified components are addressed under the augmented Class I PBO Program discussed in Section 1.5.1.3, formerly governed by Specification M593.

Appendix E provides a list of the flow diagrams applicable to this program. Copies of these flow diagrams are available through the drawing control system.

#### **1.4 ASME Section XI Code Items Not Controlled By this Plan**

The following items that are to be examined under ASME Boiler and Pressure Vessel Code Section XI, 1998 Edition, 2000 Addenda, are not included in this plan to the extent indicated below. They are controlled and covered under PNPS Technical Specifications, PNPS FSAR, or applicable Entergy reports and procedures as follows:

- 1.4.1 Periodic System Pressure Tests for Class 1, 2, and 3 components will be scheduled and controlled in accordance with Pilgrim site procedures. Test records will be in accordance with IWA-5300. Reports of test results will be included in each inservice inspection summary report. See Section 1.11.2 for further information on periodic system pressure testing.
- 1.4.2 The Snubber Inservice Inspection Requirements of Article IWF-5000 are discussed in Section 1.5.2.2 of this Inservice Inspection Plan. The snubber attachments to piping and structures will be inspected under this ISI Program Plan in accordance with ASME XI Code requirements. These requirements incorporate ASME Code Case N-491-2. "Pin-to-pin" snubber visual examinations and snubber functional testing will be in accordance with the ASME OM Code.
- 1.4.3 The pump and valve testing requirements of Subsections IWP and IWV (Inservice Testing of Pumps and Valves) are not included in this Inservice Inspection Plan. Pump and valve testing is under ASME/ANSI OM, Part 6 and Part 10, respectively. PNPS compliance with Subsections IWP and IWV is addressed in a separate submittal to the NRC staff. The PNPS IST Program is a controlled document that identifies the scope of pumps and valves with their testing requirements for compliance with 10CFR50.55a(f) and NRC Generic Letter 89-04. The program includes valve cold shutdown justifications, refuel outage justifications, O&M Code justifications, and impractical Code requirements (relief requests) in accordance with 10CFR50.55a(f)(5), as applicable.

DRN-06-02923

	Pilgrim Nuclear Power Station	PNPS-RPT-05-001 Rev. 0
	ASME SECTION XI FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN	

Existing ASME Section XI Code criteria requires that examinations be performed each interval on 100% of Examination Category B-F (i.e., dissimilar metal) piping welds, and 25% of Examination Category B-J (i.e., similar metal) piping welds in Code Class 1 piping greater than 1" in diameter. ASME Code Case N-578 reduces the number of required examinations to 25% of the high-risk elements, and 10% of the medium risk elements as determined by the risk-informed methodology. Elements can be piping welds or base metal locations, depending on the postulated degradation mechanism. Elements classified as low risk do not require surface or volumetric examinations, but they are still subject to periodic pressure testing as currently required by ASME Section XI.

Application of the RI-ISI Program at PNPS will result in 81 fewer Class 1 welds requiring examination during the interval when compared to existing ASME Section XI examination requirements. In addition, surface examinations have been eliminated on those welds that were selected for examination. The overall risk to the plant is reduced when the RI-ISI Program is applied. This is the case since the risk-informed process concentrates on examining welds that have the greatest risk in terms of consequences of failure and potential degradation. In addition, the RI-ISI examinations are focused on those examination volumes where flaws are most likely to be located, should they exist. As such, the RI-ISI Program does a better job in capturing risk than the existing ASME Section XI requirements, which are based on design stresses and random selection.

Application of the Risk-Informed ISI methodology to Class 1 welds at PNPS represents a favorable alternative to implementing the examination requirements that are currently established in ASME Section XI. Application of RI-ISI substantially reduces the number of weld examinations, which in turn reduces cost, radiation exposure, and possibly outage duration. At the same time, the RI-ISI Program captures an equivalent measure of risk when compared to the existing ASME Section XI criteria.

#### 1.5.2.2 Snubber Inspections and Functional Testing

IWF-5300(a) and (b) require VT-3 examinations and testing of snubbers in accordance with the ASME OM Code. IWF-5300(c) requires integral and non-integral attachments for snubbers to be examined in accordance with Subsection IWF. As a result, the snubber attachment, including: lugs, bolting, pins, and clamps, are examined in accordance with the requirements of ASME Section XI. Snubber attachments are therefore listed and scheduled in Section 2.5.3 and Table 3.1-5 of this ISI Plan under Categories F1.10(S), F1.20(S), and F1.30(S), for Class 1, 2, and 3 snubber attachments, respectively.

DRN-06-02923

	Pilgrim Nuclear Power Station	PNPS-RPT-05-001 Rev. 0
	ASME SECTION XI FOURTH TEN-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN	

This results in the snubber IWF components to be inspected at the same percentage as other support components, for example spring cans or rigid struts. The following are the Class 1, 2 and 3 IWF-5300(c) inspection frequencies:

- Class 1 Snubber Attachments [Item No. F1.10(S)]: 25% per 10 year ISI interval (approx. 1/3 per period).
- Class 2 Snubber Attachments [Item No. F1.20(S)]: 15% per 10 year ISI interval (approx. 1/3 per period).
- Class 3 Snubber Attachments [Item No. F1.30(S)]: 10% per 10 year ISI interval (approx. 1/3 per period).

#### 1.6 Repairs and Replacements

- 1.6.1 The Section XI Repair / Replacement Program is controlled and implemented by applicable PNPS site procedures (Nuclear Organization Procedure NOP83M1, *ASME Code Repairs And Replacements*) and provides requirements for repairs, modifications, an/or replacements of ISI Class 1, 2, and 3 piping systems and components, as shown on the Section XI ISI P&IDs.
- 1.6.2 Repairs, replacements and alterations/modifications to ISI Class 1, 2, and 3 components will be made in accordance with ASME Boiler and Pressure Vessel Code Section XI, 1998 Edition, including the 2000 Addenda, Subsection IWA-4000.
- 1.6.3 Repairs, replacements, and alterations/modifications to ISI Class MC structures and components will be made in accordance with ASME Boiler and Pressure Vessel Code Section XI, 1998 Edition, including the 2000 Addenda, Subsection IWA-4000. Note that Article IWE-4000 (*Repair Procedures*) and Article IWE -7000 (*Replacements*) were deleted in their entirety by the 2000 Addenda.
- 1.6.4 PNPS Specifications M300 (*Piping*) and M600 (*Piping - ASME Section III Classes 1 and 2*), provide design information applicable to all PNPS plant systems.
- 1.6.5 ASME Section XI Code Cases for Repair / Replacement activities at PNPS, including the use of Code Case N-600 under Relief Request PRR-7 for the sharing of welder qualifications with other licensees / sites, are within the scope of this Inservice Inspection Plan.
- 1.6.6 All design changes that affect ISI structures, systems, or components are evaluated by the site ISI Engineer as to the modification's effect on ISI activities and Section XI.

TABLE 3.1-5

ISI CLASS 1, 2, 3, AND MC COMPONENT SUPPORTS (IWF) SUMMARY TABLE

Exam Item	Item Description	Exam Method	System	Line or Component ID	ISO No.	No. Items	No. Sch'd	INSPECTION PERIODS			Ref Req	Remarks/ Comments
								1 <sup>ST</sup> Stat.	2 <sup>ND</sup> Stat.	3 <sup>RD</sup> Stat.		

Examination Category: F-A, SUPPORTS

Notes for Examination Category F-A:

- (1) Item numbers shall be categorized to identify support types by component support function (e.g., A = supports such as one-directional rod hangers; B = supports such as multidirectional restraints; and C = supports that allow thermal movement, such as springs).
- (2) The total percentage sample shall be comprised of supports from each system (e.g., Main Steam, Feedwater, or RHR), where the individual sample sizes are proportional to the total number of nonexempt supports of each type and function within each system.
- (3) For multiple components other than piping, within a system of similar design, function, and service, the supports of only one of the multiple components are required to be examined.
- (4) To the extent practical, the same supports selected for examination during the first inspection interval shall be examined during each successive inspection interval.
- (5) Relief Request PRR-7 applies to all Code Item Numbers and regards the Repair/Replacement Welding Program in accordance with ASME Section XI, Sub Article IWA-4150.
- (6) The total number of components under Item Nos. F1.10A, F1.10B, F1.10C, F1.20A, F1.20B, F1.20C, F1.30A, F1.30B, and F1.30C do not include counts of snubber attachments.
- (7) IWF Class 1, 2, and 3 snubber component attachments (e.g., clamps, attachments to buildings, bolting, fasteners, etc.) are included under this ISI Program Plan under new Item Nos. F1.10(S), F1.20(S), and F1.30(S). The complete snubber assemblies will be inspected "pin-to-pin" in accordance with the ASME OM Code. See Section 1.5.2.2 of this ISI Program Plan for further details.
- (8) Torus saddle supports: 25% of saddle supports examined during the inspection interval.  
Torus earthquake ties: 100% of Torus earthquake tie supports examined during the inspection interval.  
Drywell Stabilizers: 25% of supports examined during the inspection interval.

DRN-06-02923