



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

Stephen J. Bethay  
Director, Nuclear Safety Assurance

July 27, 2011

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 2055

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

Pilgrim Refueling Outage (RFO)-18  
In-Service Inspection (ISI) Owner's Activity Report (OAR-1) Submittal

LETTER NUMBER: 2.11.049

Dear Sir or Madam,

By this letter Entergy submits to the NRC the attached Pilgrim Nuclear Power Station In-Service Inspection (ISI) Owner's Activity Report (OAR-1) for Operating Cycle 18 in accordance with ASME Section XI and NRC-approved Code Case N-532-4. PNPS is in the second period of the 4<sup>th</sup> ISI Interval.

The report contains a tabulation of all in-service examinations and Code repair/replacement activities performed at Pilgrim Station for the beginning of Operating Cycle 18 through the end of Refueling Outage 18. The attached report is required to be submitted to NRC within 90 days of the last inspections. Copies of the examination of vendor reports and data sheets are retained at Pilgrim Station for NRC review, if required.

The Pilgrim ISI Program conforms to the 1998 through 2000 addenda of the ASME Section XI code. ISI-related activities associated with repair/replacements, NDE and pressure testing, however, is performed in accordance with the 2001 edition through 2003 addenda of ASME Section XI in accordance with NRC-approved relief request ISI-2008-1 (TAC No. ME0238).

There are no new commitments made in this letter.

If you have any questions regarding the information contained in this letter, please contact Pilgrim Licensing Manager, Joseph R. Lynch at (508) 830-8403.

Sincerely,

Stephen J. Bethay  
Director, Nuclear Safety Assurance

Attachment: PNPS Owners Activity Report (OAR) for the Second Period of the 4<sup>th</sup> Interval, Engineering Report No. PNPS-RPT-11-00003, Rev. 0 (5 pages)

A047  
NRR


cc: Mr. Richard Guzman, Project Manager  
Office of Nuclear Reactor Regulation  
Mail Stop: O-8C2  
U.S. Nuclear Regulatory Commission  
1 White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

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

Senior Resident Inspector  
Pilgrim Nuclear Power Station

Attachment to Entergy Letter No. 2.11.049

**PNPS Owner's Activity Report (OAR-1) for the Second Period of the 4<sup>th</sup> Interval**  
**(5 pages)**

	<b>NUCLEAR MANAGEMENT MANUAL</b>	QUALITY RELATED	EN-DC-147	REV. 5
		INFORMATIONAL USE	PAGE 1	
Engineering Reports				

ATTACHMENT 9.1  
SHEET 1 OF 1

ENGINEERING REPORT COVER SHEET

Engineering Report No. PNPS-RPT-11-00003 Rev 0

Page 1 of 5

Attachment 1 pages: 1-2

Attachment 2 pages: 1



**ENTERGY NUCLEAR**  
Engineering Report Cover Sheet

**Engineering Report Title:**

PNPS OWNERS ACTIVITY REPORT (OAR) FOR THE SECOND PERIOD OF THE 4<sup>TH</sup> INTERVAL

**Engineering Report Type:**

New ☒ Revision ☐ Cancelled ☐ Superseded ☐  
Superseded by: \_\_\_\_\_

**Applicable Site(s)**

IP1 ☐ IP2 ☐ IP3 ☐ JAF ☐ PNPS ☒ VY ☐ WPO ☐  
ANO1 ☐ ANO2 ☐ ECH ☐ GGNS ☐ RBS ☐ WF3 ☐ PLP ☐

EC No. N/A

**Report Origin:** ☒ Entergy ☐ Vendor  
Vendor Document No.: N/A

**Quality-Related:** ☒ Yes ☐ No

Prepared by: Katie Bienvenue / Katie Bienvenue Date: 6/9/11  
Responsible Engineer (Print Name/Sign)

Reviewed by: Rich Pardee / Rich Pardee Date: 6/9/11  
Reviewer (Print Name/Sign)

Approved by: Curt Hanson (HSB) / Curt Hanson Date: 7/13/2011  
ANII (Print Name/Sign)

Approved by: Steve Woods / Steve Woods Date: 7/19/2011  
Supervisor / Manager (Print Name/Sign)

## FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number PNPS-RPT-11-00003

Plant Pilgrim Nuclear Power Station

Unit No. 1 Commercial Service Date June 8, 1972 Refueling Outage Number 18  
(If applicable)

Current Inspection Interval 4<sup>th</sup>  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, other)

Current Inspection Period 2<sup>nd</sup>  
(1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>)

Edition and Addenda of Section XI applicable to the Inspection Plans 1998 Edition, 2000 Addenda

Date / Revision of Inspection Plans PNPS ISI Program Plan, No. PNPS-RPT-05-001 Rev. 1

Edition and Addenda of Section XI applicable to repair/replacement activities, if different than the inspection plans 2001 Edition, 2003 Addenda

Code Cases used: Reference PNPS ISI Program Plan, No. PNPS-RPT-05-001 Rev. 1 for code cases used.

### CERTIFICATE OF CONFORMANCE

I certify that (a) the statements made in this report are correct; (b) the examinations and tests, meet the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of 18 conform to the requirements of Section XI (refueling outage number)

Signed

Daniel P. Pardee

(Owner or Owner's designee, Title)

EP&CSr. Engr.

Date

7-13-11

### CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Massachusetts and employed by HSB-CT of Hartford, Connecticut have inspected the items described in this Owner's Activity Report, and state that to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI

By signing this certificate neither the Inspector nor his employer makes any warranty expressed or implied concerning the repair/replacement activities and evaluation described in this report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection

[Signature]  
(Inspector's Signature)

Commissions

NB11916 ABNI MA1651

National Board, State, Province, and Endorsements

Date

7/13/2011

TABLE 1		
ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED EVALUATION FOR CONTINUED SERVICE		
Examination Category and Item Number	Item Description	Evaluation Description
F-A	While performing ISI inspections on Torus Saddle Supports in Bays 1-5 degraded cosmetic grout conditions adjacent to the torus saddle support base plates was noted. There was also some minor cracking in the concrete pedestal for the support. These conditions are cosmetic in nature.	Accepted for continued service. The degraded grout conditions are outside the baseplate footprint and therefore are not part of the structural load path and any cracking or spalling is non-structural and cosmetic only. Therefore these conditions will not adversely affect the structural load carrying capacity of the Torus Saddle Supports.
F-A	ISI VT-3 Exam on Anchor H-10-1-87SA in the 'A' RHR Quad was performed and it does not meet acceptance criteria of CEP-NDE-0903. There is a small crack in the concrete adjacent to the anchor on the wall.	Accepted for continued service. Cracks identified in this condition report are cosmetic in nature and do not exhibit signs that the cracks are due to significant stress or overload. These cracks do not adversely affect operability of the H-10-1-87A support.
F-A	ISI VT-3 Exam on Lateral Restraint H-10-1-21SR in the 'A' RHR Quad was performed and it does not meet acceptance criteria of CEP-NDE-0903. The Spherical bearings do not move and there is a 7% misalignment of the strut. This condition was previously identified by NCR 91-137, reworked and accepted.	Accepted for continued service. Identified conditions affecting support H-10-1-21SR are minor. Angular misalignment is acceptable, non of the identified discrepancies adversely affects the structural integrity of the support. Support H-10-1-21SR is fully OPERABLE as is the associated loop of RHR.
B-G-1	RPV stud thread damage to 24 studs occurred during head removal, several vessel studs received damage to the upper portion of the stud threads.	Accepted for continued service. 23 studs were repaired and or accepted as is, RPV number one stud replaced and preservice UT completed.

TABLE 1

## ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED EVALUATION FOR CONTINUED SERVICE

Examination Category and Item Number	Item Description	Evaluation Description
B-G-1	During the visual VT-1 examination of the RPV Closure Head Washers at stud locations 19 through 36 (RPV-CW-19-36) linear indications were recorded on the bottom (flat) surface of washers 19 and 22. A previous (2001) historical acceptable indication in washer 30 was also recorded with no changes. During the expanded scope VT-1 examinations of the RPV Closure Head Washers an additional six (6) washers (#'s 5, 14, 16, 18, 39 47) were identified with linear indications that did not meet ASME Section X1 IWB-3515.1 code acceptance standards. Linear indications on two (2) washers (#'s 19 22) was previously reported in CR-PNP-2011-01907. VT-1 examination have been completed on all RPV Closure Head Washers and a total of eight (8) washers have been identified with linear indications.	Accepted for continued service. The indications are not fatigue or stress corrosion cracks and therefore are not expected to grow during future operation. There are no operational concerns from the identified indications associated with the continued permanent use of the washers identified in the CNF's.
E-C	During ISI inspection of the IWE-LINERDRAINS on 74' RB, Drain line 1 was leaking approximately 100 drops per minute. Drain line 1 is the discharge at the funnel at the north wall of the spent fuel pool and it drains the fuel pool liner monitoring trench drain.	Accepted for continued service. Small amounts of leakage from SFP leakage detection system is not an operability or functionality concern. Continued monitoring and trending is the appropriate response to variations in the observed leakage.
E-A	An ASME Section XI IWE General Visual Examination was conducted of the condition of the Drywell and Torus interiors and exterior surfaces during RFO-18 per PNPS Procedure 2.1.8.7. Various "relevant conditions" exceeding the acceptance criteria in Engineering Procedure CEP-CII-003 were found, mainly related to protective coating condition. - Reference CR07-2093 from RFO16 to compare results.	Accepted for continued service. No repair is recommended to be completed this outage. Development of a systematic approach is recommended for future repair of coatings in the drywell and to the torus.
F-A	During RFO18 ISI VT-3 exam on H-2-1-SS21 Snubber, the cold piston rod setting was 4 1/4" and it should have been 3 5/16" to 4" per PNPS 3.4-28 and CEP-NDE-0903 for the as left.	Accepted for continued service. No Degraded or Nonconforming Condition exists, affected snubber (SS-02-20-21) listed in this CR supports recirc piping in the drywell. Snubber piston rod setting evaluated by engineering and found acceptable.

TABLE 2

## ABSTRACT OF REPAIR/REPLACEMENT ACTIVITIES REQUIRED FOR CONTINUED SERVICE

Code Class	Item Description	Description of Work	Date Completed	Repair/Replacement Plan Number
2	Replacement	Restore RHR support H-10-1-186	2/1/11	247126-21
3	Repair	Repair broken weld on SSW support H-29-1-2	5/24/11	274898
1	Replacement	Replace FW Check Valve 62A bolting	4/28/11	52253926
1	Replacement	Replace RPV Closure Head Stud #1 in RFO18	5/9/11	274101
1	Replacement	Replace galled 2" RPV head vent piping flange bolting	5/9/11	274012