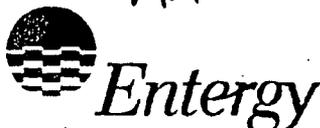


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DOCKETED  
USNRC

April 15, 2008 (10:00am)



OFFICE OF SECRETARY  
REGULATORY AND  
ADMINISTRATIVE STAFF

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

William J. Riggs  
Director, Nuclear Assessment

December 6, 2002

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555-0001

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

Pilgrim Nuclear Power Station Fourth Ten-Year Inservice Testing (IST)  
Program and Request for Approval of IST Relief Requests

U.S. NUCLEAR REGULATORY COMMISSION

In the Matter of Entergy (Pilgrim Nuclear Power Station)

Docket No. 50-293-LR Official Exhibit No. 51

OFFERED by: Applicant/Licensee Intervenor

NRC Staff

Other NRC Staff Exh. 13

IDENTIFIED on 4-10-08 Witness/Panel

Action Taken: ADMITTED REJECTED WITHDRAWN

Reported/Clerk Thibault

LETTER NUMBER: 2.02.109

Dear Sir or Madam:

Entergy Nuclear Operations, Inc. (Entergy) has revised the Pilgrim Nuclear Power Station (PNPS) Inservice Testing (IST) Program as required by 10CFR50.55a(f)(4)(ii) for the fourth 10-year interval starting December 7, 2002.

This submittal docket Pilgrim IST program, Procedure No. 8.1.1.1. and requests NRC approval of IST relief requests, as described in this letter.

The revised IST Program complies with 1995 Edition through 1996 Addenda of the OM Code for Operation and Maintenance of Nuclear Power Plants, Section IST requirements with a few exceptions. These exceptions invoke 10CFR50.55a(f)(4)(iv), the use of portions of later approved ASME OM Code editions and 10CFR50.55a(f)(5)(iii) the notification that conformance with certain code requirements are impractical.

The NRC has recently approved 1998 Edition through 2000 Addenda of the OM Code for Operation and Maintenance of Nuclear Power Plants, (OM Code - 2000). The following portions of the OM Code - 2000 will be adopted into the revised IST Program (There are no other related requirements within the OM Code - 2000 for these paragraphs):

- Appendix I-1390, Test Frequency, Class 2 and Class 3 Pressure Relief Devices that are Used for Thermal Relief Application.
- Appendix I-4110(h) and Appendix I-4130(g), Pressure Relief Devices - a minimum of 5-minute time elapse between successive openings.
- Deletion ISTA 2.1, Inspection - Duties of Inspector, Inspector Qualifications, and Access for Inspector.

A summary table of the IST Program Relief Requests requested for approval is enclosed (Attachment 1). This summary table provides a brief description of the impracticality or hardship requiring relief. The updated program Valve Relief Request No. 1 (VR-01) and No. 2 (VR-02) were recently reviewed and granted for ten years in a NRC Safety Evaluation Report (SER) dated September 17, 2002 and May 2, 2001, respectively.

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The details of the relief requests are specified in the IST Program Section 7.0 (Attachment 2) as pump and valve relief requests. A relief is requested where PNPS determined a non-conformance to certain Code requirement(s). The relief request provides either an alternative of acceptable level of quality and safety, an alternative since a hardship exists without a compensating increase in the level of quality and safety, or an alternative because it is an impractical requirement for the facility to meet.

PNPS has developed the following schedule plan for implementation of the updated program surveillance requirements:

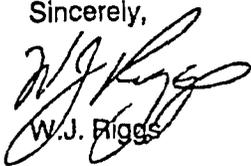
Subsection ISTB, Inservice Testing of Pumps, will be implemented three months from December 7, 2002, with the exception of Reactor Building Closed Cooling Water (RBCCW) and High Pressure Coolant Injection (HPCI) pump testing, which will be implemented upon receipt of NRC approval of the pump relief requests. Until then Pilgrim will continue to comply with the third 10-year IST Interval program requirements for RBCCW and HPCI pumps.

Implementation of Subsection ISTC, Inservice Testing of Valves, will begin three months from December 7, 2002.

Entergy requests timely NRC review and approval of IST Relief Requests in order to support implementation of the new program.

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

Sincerely,



W.J. Riggs

Attachments: 1. Relief Request Summary Table – 1 page  
2. Procedure No. 8.1.1.1, "Inservice Pump and Valve Testing Program" – 178 pages

cc: Mr. Travis Tate, Project Manager  
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Senior Resident Inspector

ATTACHMENT 2

PROCEDURE NO. 8.I.1.1,

INSERVICE PUMP AND VALVE TESTING PROGRAM

## 1.0 PURPOSE AND SCOPE

This Procedure encompasses and controls the PNPS Inservice Testing (IST) Program. It identifies the scope of components (pumps and valves) and testing requirements for compliance with 10CFR50.55a(f), Inservice Testing Requirements. This Procedure will be utilized for the IST Program submittal to satisfy ISTA 2.2.3 Inservice Test Interval and to identify impractical Code requirements in accordance with 10CFR50.55a(f)(5).

Impractical Code requirements are reviewed and dispositioned by the Nuclear Regulatory Commission (NRC) and documented in a Safety Evaluation Report authored by the Office of Nuclear Reactor Regulation as related to the Inservice Testing Program and Requests for Relief. The NRC will grant program relief requests pursuant to 10CFR50.55a(a)(3)(i), 10CFR50.55a(a)(3)(ii), or 10CFR50.55a(f)(6)(i). Granting of relief ensures that the IST Program has satisfactorily demonstrated that either: 1) the proposed alternative provides an acceptable level of quality and safety, 2) compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, or 3) conformance with certain requirements of the applicable Code edition and addenda is impractical for its facility.

## 2.0 DISCUSSION

The scope of the IST Program includes those safety-related pumps and valves which are part of the Reactor coolant pressure boundary and must meet the requirements applicable to components classified as ASME Code Class 1. Additionally, other safety-related pumps and valves that perform a function to shut down the Reactor or maintain the Reactor in a safe shutdown condition, mitigate the consequences of an accident, or provide overpressure protection for safety-related systems meet the test requirements applicable to components which are classified as ASME Code Class 2 or Class 3. This scope is limited to those pumps and valves identified as meeting ASME Code Class 1, 2, or 3 in accordance with Regulatory Guide 1.26 classifications. The pumps and valves not performing a function as stated above or those meeting the exclusion requirements of the OMA Code need not be tested, but the bases for a component's exclusion must be justified. TDBD-121, "Topical Design Basis Document for In-Service Testing (IST)", provides the bases information related to IST Program exclusions.

Non-ASME Code Class safety-related pumps and valves that perform a function to shut down the Reactor or maintain the Reactor in a safe shutdown condition, mitigate the consequences of an accident, or provide overpressure protection for safety-related systems are to be tested under the requirements of 10CFR50 Appendix B. The scope of the PNPS Appendix B Test Program includes those safety-related pumps and valves identified as non-ASME Code Class in accordance with Regulatory Guide 1.26 but would be considered ASME Code Class 1, 2, 3.

This Procedure details the following items: compliance requirements, general information, pump hydraulic circuits, and tables of the components (pumps and valves) tested. The last Section (7.0) contains Valve Justifications (i.e., cold shutdown, Refuel Outage, Disassembly Examination, and Series Valve Pairs) and Relief Requests. In addition, the Procedure references the Condition Monitoring Program for check valves.

The Procedure's pump and valve tables provide a cross-reference between a component test requirement and a Station Procedure implementing the test. Additional information is provided within this component listing: safety class, category, test frequency, test parameters, Relief Requests, justifications, and remarks. Newly incorporated component/test requirements will have implementing Procedures identified for future incorporation. All newly identified component/test requirements shall be initially tested during the next scheduled frequency (i.e., quarterly, cold shutdown, refueling interval, and 2 years) following Procedure approval date. These newly incorporated component/test requirements will be identified by an asterisk (\*) next to the implementing Procedure. When using (\*) Procedures for postmaintenance testing, the current approved Procedure should be reviewed for applicability (i.e., is the new test requirement or component incorporated)

PNPS 8.1.1, "*Administration of Inservice Pump and Valve Testing*", covers the administrative requirements for the development, performance, and maintenance of the PNPS Inservice Test Program in accordance with the ASME OMa Code for Operation and Maintenance of Nuclear Power Plants, and includes the 1995 Edition through 1996 Addenda.

Station ALARA practices have been considered when addressing ASME Code test requirements within this Procedure. When test requirements are added or revised, good ALARA practices should be incorporated to minimize personnel dose.

### 3.0 REFERENCES

- [1] 10CFR50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants
- [2] 10CFR50 Appendix J, Primary Reactor Containment Leakage Testing
- [3] 10CFR50.55a(b), Code and Standards, Reference Applicability
- [4] 10CFR50.55a(f), Inservice Testing Requirements
- [5] ASME Code, Mandatory Appendix I, Inservice Testing of Pressure Relief Device in Light-Water Reactor Power Plants
- [6] ASME Code, Subsection ISTA, General Requirements

#### 5.2.4 Core Spray (CS) Pumps

- [1] Test Group B - pumps that are not operated routinely except for testing.
- [2] Test Frequency/Method

CS pumps are tested quarterly using the Group B Test Method and biennially using the Comprehensive Test Method.

- [3] Hydraulic Test Path

Each pump shall be tested by establishing a flow path with suction from and discharge returning to the Torus. Using the CS Full Flow Test Valve for throttling, establish a flow rate in accordance with current Technical Specifications requirements. Pump discharge and suction pressures shall be recorded and the differential pressure will be calculated and compared to the established value.

- [4] Instrumentation

- (a) Inlet Pressure (psig) M&TE test gauges at PI-40A, PI-40B.
- (b) Discharge Pressure (psig) M&TE test gauges at PT-1460A, PT-1460B.
- (c) Flow rate, Q (GPM) Flow indicators FI-1450-4A (Loop A) and FI-1450-4B (Loop B) or EPIC Computer Points CSP002 (Loop A) and CSP004 (Loop B).

#### 5.2.5 High Pressure Coolant Injection (HPCI) Pump

- [1] Test Group B - a pump that is not operated routinely except for testing
- [2] Test Frequency/Method

The HPCI pump (reference PR-02) is tested quarterly using the Group B Test Method and biennially using the Comprehensive Test Method when adequate steam pressure is available.

- [3] Hydraulic Test Path

The HPCI pump (main/booster integral unit) shall be tested by establishing a flow path with suction from and discharge returning to the CST. Using the HPCI Full Flow Test Valve for throttling, establish the speed and flow rate in accordance with current Technical Specifications requirements. Pump discharge and suction pressure shall be recorded. The differential pressure will be calculated and compared to the established value

[4] Instrumentation

- (a) Inlet Pressure (psig): PI-2340-1 or M&TE test gauge at PI-2381 (Quarterly Group B Test). M&TE test gauge at PI-2381 (Biennial Comprehensive Test).
- (b) Discharge Pressure (psig). M&TE test gauge at PI-2357
- (c) Flow rate, Q (GPM). FI-2340-1.
- (d) Speed, N (RPM): M&TE tachometer.

5.2.6 Reactor Core Isolation Cooling (RCIC) Pump

[1] Test Group B - a pump that is not operated routinely except for testing.

[2] Test Frequency/Method

The RCIC pump is tested quarterly using the Group B Test Method and biennially using the Comprehensive Test Method when adequate steam pressure is available.

[3] Hydraulic Test Path

The RCIC pump shall be tested by establishing a flow path from and returning to the CST. Using the full flow test valve for throttling, establish the speed and flow rate in accordance with current Technical Specifications requirements. Pump discharge and suction pressures shall be recorded. The differential pressure will be calculated and compared to the established value

[4] Instrumentation

- (a) Inlet Pressure (psig): PI-1340-2 or M&TE gauge at 1360-20 (Quarterly Group B Test). M&TE test gauge at 1360-20 (Biennial Comprehensive Test).
- (b) Discharge Pressure (psig): M&TE test gauge at PI-1360-5
- (c) Flow rate, Q (GPM): FI-1340-1.
- (d) Speed, N (RPM): M&TE tachometer.