UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

July 20, 2009

Mr. Kevin Bronson
Site Vice President
Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5508

SUBJECT: PILGRIM NUCLEAR POWER STATION - NRC INTEGRATED INSPECTION REPORT 05000293/2009003

Dear Mr. Bronson:

On June 30, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Pilgrim Nuclear Power Station (PNPS). The enclosed report documents the results, which were discussed on July 7, 2009, with Mr. Stephen Bethay, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

The report documents one self-revealing finding of very low safety significance (Green). The finding was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it was entered into your corrective action program, the NRC is treating the finding as a non-cited violation (NCV), in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Senior Resident Inspector at the PNPS. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Senior Resident Inspector at PNPS. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Donald E. Jackson, Chief
Projects Branch 5
Division of Reactor Projects

Docket No. 50-293
License No. DPR-35

Enclosure: Inspection Report 05000293/2009003
w/Attachment: Supplemental Information

cc w/encl:
Vice President, Operations, Entergy Nuclear Operations
Vice President, Oversight, Entergy Nuclear Operations
Senior Manager, Nuclear Safety & Licensing, Entergy Nuclear Operations
Senior Vice President and COO, Entergy Nuclear Operations
Assistant General Counsel, Entergy Nuclear Operations
R. Walker, Director, Radiation Control Program, Commonwealth of Massachusetts
The Honorable Therese Murray
The Honorable Vincent DeMacedo
Chairman, Plymouth Board of Selectmen
Chairman, Duxbury Board of Selectmen
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J. Giarrusso, MEMA, SLO
Commonwealth of Massachusetts, Secretary of Public Safety

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-293
License No:	DPR-35
Report No:	05000293/2009003
Licensee:	Entergy Nuclear Operations, Inc.
Facility:	Pilgrim Nuclear Power Station (PNPS)
Location:	600 Rocky Hill Road Plymouth, MA 02360
Inspection Period:	April 1, 2009 through June 30, 2009
Inspectors:	M. Schneider, Sr. Resident Inspector, Division of Reactor Projects (DRP) B. Smith, Resident Inspector, DRP S. Rich, Nuclear Safety Professional Development Program, DRP R. Rolph, Health Physicist, Division of Reactor Safety (DRS) T. Burns, Reactor Inspector, DRS
Approved By:	Donald E. Jackson, Chief Projects Branch 5 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000293/2009003; 04/01/2009-06/30/2009; Pilgrim Nuclear Power Station; Refueling and Other Outage Activities

The report documents the results of a three-month period of inspection by the resident and region based inspectors. One Green finding was identified, which was determined to be a non-cited violation (NCV). The significance for most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspect for each finding was determined using IMC 0305, "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Barrier Integrity

- Green. A Green self-revealing non-cited violation (NCV) of Technical Specification 5.4.1 "Procedures," was identified, because Entergy's refueling bridge operators did not continuously monitor a Double Blade Guide (DBG) that was moved into the core to ensure the DBG did not encounter any obstructions, interferences, or other abnormal indications specified by Pilgrim Procedure 4.3, Revision 113, "Fuel Handling." Specifically, the failure to properly implement the procedure resulted in damaging the refueling mast when the mast was moved and still latched to the DBG. Entergy entered this issue into their corrective action program as CR-PNP-2009-2083. Corrective actions included replacing a section of the refueling mast, replacing the grapple camera, conducting additional training with the refueling crews including a table top dry run, performing a Human Performance Error Review, and requiring Operations Senior Management to provide oversight during one hour of each three hour shift when the refueling crew was on the bridge moving fuel.

  The inspectors determined that the finding was more than minor because the finding was associated with the human performance attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone's objective to provide reasonable assurance that physical design barriers (i.e. fuel cladding) protect the public from radionuclide releases caused by accidents or events. The risk significance of the performance deficiency was determined to be of very low safety significance (Green) using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings." Specifically, since the finding did not affect spent fuel pool cooling or inventory and since no fuel or control rod was damaged when the mast was bent, the finding was determined to be of very low safety significance. The finding has a cross cutting aspect in Human Error Prevention Techniques in the Work Practices component of the Human Performance area. Specifically, Entergy did not employ effective self and peer checking techniques such that refueling activities were performed safely. (H.4.a of IMC 305) (Section 1R20)

REPORT DETAILS

Summary of Plant Status

Pilgrim Nuclear Power Station (PNPS) began the inspection period operating at 100 percent reactor power. PNPS started end-of-cycle power reduction on April 1, 2009 and was shutdown on April 17, 2009, to begin refueling outage (RFO) 17. Following completion of RFO 17 activities, a reactor start up was conducted on May 18, 2009, and the plant returned to 100 percent reactor power on May 22, 2009. On June 18, 2009, operators reduced power to 70 percent reactor power to perform a control rod pattern adjustment and to troubleshoot the "B" feedwater regulating valve. Operators restored the plant to 100 percent reactor power on June 19, 2009, and operated at or near 100 percent reactor power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Seasonal Susceptibility

a. Inspection Scope (1 sample)

The inspectors performed a review of severe weather preparations during the week of June 15, 2009, to evaluate the site's readiness for the onset of hurricane season, including the readiness of two risk-significant systems, the intake structure and the switchyard. The inspection examined selected equipment and supporting structures to determine if they were configured in accordance with Entergy procedures and if adequate controls were in place to ensure functionality of the systems. The inspectors reviewed selected steps in Entergy Procedure 2.1.37, Revision 25, "Coastal Storm Preparation and Actions," to ascertain if the steps had been completed. The inspectors performed partial walkdowns of the intake structure and switchyard to determine the adequacy of equipment protection from the effects of hurricanes. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Alternating Current (AC) Power System Readiness

a. Inspection Scope (1 sample)

The inspectors performed a review of Entergy's offsite and alternate AC power system readiness for susceptibilities during adverse weather. The inspectors reviewed Entergy's plant features and procedures for operation and continued availability of offsite and alternate AC power systems to determine if they were appropriate. The inspection focused on procedures affecting these areas and communication protocols between the transmission system operator (TSO) and Entergy to verify that appropriate information would be exchanged when issues arise that could impact the offsite power system.

The inspectors also reviewed Entergy's procedures to ensure that they addressed actions to be taken when notified by the TSO to transfer safety-related loads to the onsite power supply, compensatory actions to be performed if it were not possible to predict grid conditions, reassessment of plant risk based on maintenance activities which could affect grid reliability, and required communications between Entergy and the TSO. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdowns (71111.04Q)

a. Inspection Scope (3 samples)

The inspectors performed three partial system walkdowns during this inspection period. The inspectors reviewed the documents listed in the Attachment to determine the correct system alignment. The inspectors performed a partial walkdown of each system to determine if the critical portions of the selected systems were correctly aligned in accordance with these procedures and to identify any discrepancies that may have had an effect on operability. The walkdowns included selected control switch and valve position checks, and verification of electrical power to critical components. Finally, the inspectors evaluated other elements, such as material condition, housekeeping, and component labeling. The following systems were reviewed based on their risk significance for the given plant configuration:

- Reactor Building Closed Cooling Water System "A" in Cross-Tie;
- Residual Heat Removal (RHR) "B" while RHR "A" was in Shutdown Cooling Mode; and
- Emergency Diesel Generator "A" following Simulated Loss of Offsite Power Testing

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown (71111.04S)

a. Inspection Scope (1 sample)

The inspectors completed a detailed review of the Reactor Core Isolation Cooling (RCIC) system to assess the functional capability of the system. The inspectors performed a walkdown of the system to determine whether the critical components, such as valves, circuit breakers, and control switches, were aligned in accordance with operating procedures and to identify any discrepancies that could have an effect on operability. The inspectors discussed system health with the system engineer and conducted a review of outstanding maintenance work orders to determine whether the deficiencies significantly affected the RCIC system function. The inspectors also reviewed recent condition reports (CRs) to determine whether RCIC equipment problems were being identified and appropriately resolved. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

Fire Protection - Tours (71111.05Q)

a. Inspection Scope (5 samples)

The inspectors performed walkdowns of five fire protection areas during the inspection period. The inspectors reviewed Entergy's fire protection program to determine the required fire protection design features, fire area boundaries, and combustible loading requirements for the selected areas. The inspectors walked down these areas to assess Entergy's control of transient combustible material and ignition sources. In addition, the inspectors evaluated the material condition and operational status of fire detection and suppression capabilities, fire barriers, and any related compensatory measures. The inspectors then compared the existing condition of the areas to the fire protection program requirements to determine whether all program requirements were met. The documents reviewed during this inspection are listed in the Attachment. The fire protection areas reviewed were:

- Fire Area 1.30, Fire Zone 1.30, Drywell Areas;
- Fire Area 3.2, Fire Zone 3.2, Cable Spreading Room;
- Fire Area 1.10, Fire Zone 1.23, Standby Gas Treatment Systems Room;
- Fire Areas 1.10 and 4.3, Fire Zones 4.2 and 4.4, Emergency Diesel Generator Day Tanks Rooms “A” and “B”; and
- Fire Area 1.10, Fire Zone 1.10B, Traversing Incore Probe Room.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

Internal Flooding Inspection

a. Inspection Scope (1 sample)

The inspectors walked down the “A” Switchgear Room, Flood Zone TB37Y, and associated flood propagation pathways, to assess the effectiveness of Entergy’s internal flood control measures. The inspectors assessed the condition of floor drains, walls, and doors. The inspectors also evaluated whether potential sources of internal flooding were analyzed and if operators could adequately respond to an internal flooding event. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R08 In-service Inspection (ISI) (71111.08)

a. Inspection Scope (1 sample)

The purpose of this inspection was to assess the effectiveness of Entergy's ISI program for monitoring degradation of reactor pressure vessel internals, reactor coolant system boundary, risk significant piping system boundaries, and the containment boundary. The inspector assessed the in-service inspection activities using requirements and acceptance criteria for component examination specified in the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI and applicable NRC Regulatory Requirements.

The inspector selected a sample of nondestructive examination (NDE) activities for observation and also performed a documentation review of additional NDE activities for compliance with the requirements of ASME Section XI. The sample selection was based on the inspection procedure objectives, sample availability, and risk priority of those components and systems where degradation could result in a significant increase in risk of core damage. The inspector verified by documentation review that test procedures and examiner qualifications were current and in accordance with the ASME Code requirements. Also, the inspector reviewed examiner qualifications for use of the performance demonstration initiative (PDI) manual ultrasonic test (UT) procedures to examine welds. The inspector selected a sample of Condition Reports (CR), operability/functionality evaluations and corrective actions for review of Entergy's effectiveness in the identification and resolution of relevant indications discovered during the observed ISI activities. The inspector's observation and documentation review of non-destructive testing included the following:

- Ultrasonic testing, manual PDI-UT of pipe to cap butt weld 1-SD-1, RHR system, carbon steel, 3.5" diameter, 0.438" wall thickness;

- Magnetic particle test (MT) of support lugs, integral attachment to carbon steel piping. High Pressure Coolant Injection (HPCI) system, welds EB-23-13HL1(4);

- In Vessel Visual Inspection (IVVI) of steam dryer leveling screw tack welds, divider plate anchor, shroud head bolt #18 and various jet pump diffusers, swing gates, main wedges, auxiliary wedges, wedge restrainer bracket set screws and rods; and

- Liquid Penetrant test (PT) of stainless steel field weld of pipe to valve, B-11-159, Standby Liquid Control (SBLC), at drawing location ISI-1-11-1.

The inspector reviewed selected steam dryer and jet pump structural members and component base materials to evaluate examiner skill, test equipment performance, examination technique, and inspection environment (water clarity). The inspector

selected jet pump nonconforming conditions identified in Indication Notification Reports (INR) P1R17-IVVI-09-01, P1R17-IVVI-09-02 and P1R17-IVVI-09-03 for the review of IVVI effectiveness of indication identification and characterization. The inspector reviewed CR-PNP-2009-01531, which was initiated to report and characterize mechanical wear on jet pump components and shroud head bolt #18. Also, the indications reported during this examination were evaluated by comparison with previous examination results noted in 2005 and 2007. The comparison revealed no noticeable change in characterization of the indications.

The inspector selected two ASME Section XI repair/replacement plans for review where welding on a pressure boundary was performed. The review was performed to evaluate specification of appropriate base and weld materials and control of the welding process as detailed in the work order. Also, the inspector reviewed the weld procedures and welder qualifications for compliance with the requirements of ASME Section XI. Also, the inspector reviewed documentation that the weld examinations were performed in accordance with the ASME code requirements. The two ASME Section XI repair/replacement work orders reviewed were:

- WO 00133037, Fabrication and replacement of salt service water (SSW) system spool piece JF29-19-1 for application of rubber lining and installation in Loop "B" of system #29. Component parts consisting of carbon steel, ASTM A234, six inch schedule 40 150#, elbow, weld neck pipe flange and seamless pipe, weld map #1, Rev 0, welds 1 and 2; and

- WO 00133039, Fabrication and replacement of SSW spool piece JF29-15-7, discharge elbow from P-208D downstream from existing check valve. Component parts consisting of fabrication and installation of twelve inch standard wall (0.375") carbon steel sub-components (elbow, pipe, slip-on flanges) using six fabrication welds (1 through 6).

Also, the inspector performed a visual evaluation of portions of the primary containment and additional structural members attached to the liner to assess the condition of the protective coating. The inspector performed this visual evaluation to determine the extent of any peeling, blistering, coating loss or other damage as a result of corrosion, foreign material impact or lack of maintenance.

The inspector reviewed a sample of Condition Reports initiated during ISI examinations this outage to evaluate Entergy effectiveness in the identification and resolution of problems within the corrective action process. The inspector selected for review CR-PNP-2009-01180 (RHR pipe support H-10-1-12), CR-PNP-2009-01514 (linear indication at head to flange weld) and CR-PNP-2009-01182 (error in specification M301, extent of condition). The inspector reviewed the problem identification, flaw characterization, engineering assessment (operability/functionality evaluation) and the disposition entered into the corrective action program.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

Licensed Operator Training

a. Inspection Scope (1 sample)

The inspectors reviewed licensed operator response to a simulated General Emergency during an emergency planning drill on May 28, 2009. The inspectors reviewed operator response to the event in the simulator, emergency plan implementation by the Senior Reactor Operator, and the completion of a post drill critique. In addition, the inspectors observed licensed operator training on April 14, 2009. Specifically, the inspectors observed classroom Just In-Time training for senior reactor operators, reactor operators, and non-licensed operators to prepare them for Pilgrim's Refueling Outage. The lectures discussed upcoming outage work activities including reactor cavity water level, the replacement of control rod drive mechanisms, the integrated leak rate testing, and temporary power configurations. The inspectors assessed the training to determine if the training adequately prepared the operators for the refueling outage. The inspectors reviewed the lesson plans and training objectives to determine if they had been achieved. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q)

a. Inspection Scope (2 samples)

The inspectors reviewed degraded conditions associated with the systems listed below for items such as: (1) appropriate work practices; (2) identifying and addressing common cause failures; (3) scoping in accordance with 10 CFR 50.65(b) of the Maintenance Rule; (4) characterizing reliability issues for performance; (5) trending key parameters for condition monitoring; (6) charging unavailability for performance; (7) classification and reclassification in accordance with 10 CFR 50.65(a)(1) or (a)(2); and (8) appropriateness of performance criteria for structures, systems, and components (SSC)s/functions classified as (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified as (a)(1). The documents reviewed during this inspection are listed in the Attachment. Items reviewed included the following:

- Functional Failure Determination of Startup Transformer; and
- Switchyard Breakers 102, 103, 104, and 105.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope (7 samples)

The inspectors evaluated seven maintenance risk assessments for planned and emergent maintenance activities. The inspectors reviewed maintenance risk evaluations, work schedules, and control room logs to determine if concurrent maintenance or surveillance activities adversely affected the plant risk already incurred with out-of-service components. The inspectors verified the appropriate use of Entergy's qualitative risk assessment checklist for shutdown safety functions and entry into appropriate risk categories. The inspectors evaluated whether Entergy took the necessary steps to control work activities, minimized the probability of initiating events, and maintained the functional capability of mitigating systems. The inspectors assessed Entergy's risk management actions during plant walkdowns. The documents reviewed during this inspection are listed in the Attachment. The inspectors reviewed the conduct and adequacy of maintenance risk assessments for the following maintenance and testing activities:

- Orange Risk Condition due to the unavailability of the Shutdown Transformer and Station Blackout Emergency Diesel Generator;
- Orange Risk Condition during Maintenance and Valve Logic Testing of Residual Heat Removal Valves which affected shutdown cooling;
- Orange Risk Condition due to Closure of Shutdown Cooling Suction Valves to Support Residual Heat Removal Valve Hydrostatic and Local Leak Rate Testing;
- Emergent Departure from Defense-In-Depth Orange Risk Condition to Support Repair of MO-1001-29A Strain Gage;
- Yellow Risk for Shutdown Transformer Breaker 504 to A5 4160V Bus Timing;
- Orange Risk during Loss of Offsite Power/Emergency Core Cooling Systems Loading Testing; and
- Orange Risk during Primary Containment Isolation Valve Testing which removed Shutdown Cooling from Service.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (5 samples)

The inspectors reviewed five operability determinations associated with degraded or non-conforming conditions to determine if the operability determination was justified and if the mitigating systems or barriers remained available such that no unrecognized increase in risk had occurred. The inspectors also reviewed compensatory measures to determine if the compensatory measures were in place and were appropriately controlled. The inspectors reviewed licensee performance against related Technical Specifications and UFSAR requirements. The documents reviewed during this inspection are listed in the Attachment. The inspectors reviewed the following degraded or non-conforming conditions:

- CR-PNP-2009-01182, Main steam drain line valve weld not radiograph tested as specified by ASME Code;
- CR-PNP-2009-01261, Diesel Damper Vanes did not close all the way;
- CR-PNP-2009-02016, Shutdown Transformer Relay did not close within its Technical Specifications Timeband;
- CR-PNP-2009-02502, "B" Feed Regulating Valve Digital Controller Faults; and
- CR-PNP-2009-02707, Security Emergency Diesel Generator does not meet Surveillance Acceptance Criteria.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

.1 Permanent Modification for Booster Fan in Vital Motor Generator (MG) Set Room

a. Inspection Scope (1 sample)

The inspectors reviewed Permanent Modification Field Revision Notice (FRN) 87-73-29, "Installation of a Permanent Booster Fan in the Vital MG Set Room," to determine whether the licensing bases and performance capability inside the Vital MG Set Room had been degraded through the modification. A walkdown was performed to determine whether the components inside the room would perform their function under certain conditions. The inspectors reviewed applicable condition reports and drawings to determine whether they properly reflected the permanent modification. The inspectors also reviewed design basis calculations to determine if they were conservative in their heat loading assumptions. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

Introduction: The inspectors identified an Unresolved Item (URI) regarding design basis calculations for the Vital MG Set Room. The inspectors questioned Entergy about the most limiting initiating event for room heat-up and the subsequent impact on safety related components. Entergy provided the inspectors a calculation which addressed the room heatup following a Station Blackout event; however, they could not identify a design basis calculation which assessed room heatup following a Loss of Coolant Accident (LOCA) without a Loss of Offsite Power (LOOP). The performance deficiency is that Entergy did not have a calculation to verify an adequate design for the Vital MG Set Room during a LOCA without a LOOP event. As such, the inspectors could not verify which event was more limiting, whether safety related components in the room would be affected, and whether the performance deficiency was more than minor.

Description: The inspectors reviewed Calculation N124, "Vital MG Set Room Heatup During Station Blackout Conditions," to determine the post-accident MG set room temperature limit. Calculation N124 assumes a heat-up time for the Vital MG Set Room of eight hours, the mission time for a Station Blackout (SBO) event. Under worst case initial conditions, i.e. hottest summer day and maximum heat loading, the calculation predicts the room will heat up to 116 degrees F in an eight-hour time frame. However, the inspectors noted that other accident scenarios have a longer mission time, specifically the LOCA

without LOOP could result in a higher maximum temperature. Entergy concluded that the LOCA without LOOP could be more limiting than the SBO event and entered this issue into their corrective action program as CR-PNP-2009-0991. As part of their corrective actions, Entergy is modeling calculations of the Vital MG Set Room to determine the peak temperature in the room for a LOCA without LOOP event. The issue of concern is that if the peak temperature in the room is determined to be higher than what was previously evaluated, the safety-related circuit breakers in the room would need to be evaluated to ensure they could perform their function at the higher peak temperature. The inspectors require Entergy's final calculation to be completed to determine if the performance deficiency is more than minor. **URI 05000293/2009003-02, Design Calculation of the Vital MG Set Room Peak Temperatures**

.2 Permanent Modification for High Pressure Coolant Injection (HPCI) Turbine Controls Testing Device (TCTD)

a. Inspection Scope (1 sample)

The inspectors reviewed Permanent Modification EC-4350, Revision 0, "Installation of a HPCI TCTD," and the associated 10 CFR 50.59 screening, to determine whether the licensing bases and performance capability of the HPCI system had been degraded through the modification. A walkdown was performed to determine whether the components inside the room were as described in the permanent modification documentation. The inspectors reviewed applicable condition reports and drawings to determine whether they properly reflected the permanent modification. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.3 Temporary Modification for Reactor Shutdown/Flood-up Level Indication

a. Inspection Scope (1 sample)

The inspectors reviewed Temporary Modification Procedure 3.M.2-40, Revision 6, "Refuel Outage Temporary Modification Reactor Shutdown/Flood-up Level Indication," to determine whether the performance capability of the Reactor Vessel Level Indication had been degraded through the modification. The inspectors reviewed Control Room drawings, relevant condition reports, and procedures to ensure the temporary modification did not adversely affect the Reactor Vessel Level Indication. The inspectors reviewed the updated Control Room drawings to determine whether they properly reflected the temporary modification. The inspectors also performed a walkdown of temporary equipment installed in the plant to ensure the temporary equipment was installed in accordance with the procedural requirements. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.4 Temporary Modification for 125V DC Power to Bus "B"

a. Inspection Scope (1 sample)

The inspectors reviewed Temporary Modification Procedure 3.M.3-36.7, Revision 0, "Temporary Power for 125V DC Bus "B"," to determine whether the performance capability of the 125V DC safety related bus had been degraded through the modification. The inspectors reviewed electrical schematics and procedures to ensure the temporary modification did not adversely affect the reliability of 125V DC power. The inspectors reviewed Control Room drawings to determine whether they properly reflected the temporary modification. The inspectors also performed a walkdown in the lower switchgear room where temporary equipment was installed to ensure it was installed in accordance with procedural requirements. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.5 Temporary Modification for Residual Heat Removal (RHR) Valve Interlocks

a. Inspection Scope (1 sample)

The inspectors reviewed Temporary Modification Procedure 2.2.19.1, Attachment 19, Revision 28, "Bypassing MO-1001-47 and MO-1001-50 Valve Interlocks," to determine whether the performance capability of the RHR System had been degraded through the modification. The inspectors reviewed Control Room drawings, relevant condition reports, and procedures to ensure the temporary modification did not adversely affect the RHR System. The inspectors reviewed the updated Control Room drawings to determine whether they properly reflected the temporary modification. The inspectors also performed a walkdown of temporary equipment installed in the plant to ensure the temporary equipment was installed in accordance with the procedural requirements. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (8 samples)

The inspectors reviewed eight samples of post-maintenance tests (PMT) during this inspection period. The inspectors reviewed these activities to determine whether the PMT adequately demonstrated that the safety-related function of the equipment was satisfied, given the scope of the work performed, and that operability of the system was restored. In addition, the inspectors evaluated the applicable test acceptance criteria to verify consistency with the associated design and licensing bases, as well as TS requirements. The inspectors also evaluated whether conditions adverse to quality were entered into the corrective action program for resolution. Documents reviewed during this inspection are listed in the Attachment. The following maintenance activities and their post-maintenance

tests were evaluated:

- Replacement of the Station Blackout Diesel Governor;
- Preventive Maintenance conducted on MO-1001-50, Shutdown Cooling Suction Valve;
- Motor Replacement for Motor Operated Valve MO-1400-25A, Core Spray "A" Injection Valve;
- Replacement of the "B" 125VDC Battery Bank;
- Replacement of Drywell Fan Unit VAC205D1;
- Hydraulic Control Unit Maintenance on HCU 38-07 and HCU 22-47;
- Replacement of the "A" Recirculation Pump; and
- Replace Reactor Head Vent Valves.

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope (1 sample)

Periodic review of RFO 17 Work Plan and Outage Risk

The inspectors, on a routine basis, reviewed the refueling outage work plan and daily shutdown risk assessments to verify Entergy addressed the outage impact on defense-in-depth for critical safety functions. Periodic risk updates, accounting for schedule changes and unplanned activities were also reviewed. The inspectors' review focused on verifying Entergy had provided adequate defense-in-depth for each safety function, and/or implemented planned contingencies to minimize the overall risk where redundancy was limited or not available. Detailed risk reviews for specific high risk periods and activities are documented in section 1R13 of this report.

Monitoring of Shutdown Activities

The inspectors observed operators performing portions of the reactor shutdown, and plant cooldown to assess operator performance with respect to communications, command and control, procedure adherence, and compliance with Technical Specification cooldown limits. Upon shutdown, the inspectors also performed an inspection walkdown of the drywell to verify the integrity of structures, piping and supports, and to confirm systems appeared functional.

Clearance Activities

The inspectors reviewed a sample of risk significant clearance activities and verified tags were properly hung and/or removed, equipment was appropriately configured per the clearance requirement, and that the clearance did not impact equipment credited to meet the shutdown critical safety functions.

Reactor Coolant System (RCS) Instrumentation

The inspectors periodically observed and verified by diverse means that associated

instruments for the reactor/refueling cavity/spent fuel pool (SFP) water level, the reactor coolant and SFP temperature, and the operating RHR system were functioning properly and accurately.

Electrical Power

The inspectors verified that the status of electrical systems met Entergy's outage risk control plan. The inspectors verified that compensatory measures were implemented when electrical power supplies were impacted by outage work activities. The inspectors verified that credited backup power supplies were available.

Residual Heat Removal (RHR) and Spent Fuel Pool (SFP) System Monitoring

The inspectors observed the RHR and SFP system status and operating parameters to verify that the cooling systems operated properly. Verification included periodic review of the SFP and reactor cavity level, temperature, and RHR system flow. Partial system walkdowns, to verify proper system configuration, were periodically performed for both RHR and Reactor Building Closed Cooling Water alignment.

Inventory Control

The inspectors reviewed Entergy's actions to establish, monitor, and maintain the proper water inventory in the reactor vessel and spent fuel pool. The inspectors reviewed the plant system flow paths and configurations established for reactor makeup and verified the configurations were consistent with the outage plan. In addition, the inspectors observed Entergy's installation of a freeze seal on a 1" line of their Hydraulic Control Unit 50-39 to support emergent maintenance on May 3, 2009. The inspectors reviewed Entergy's contingencies for ensuring reactor vessel level control if the freeze seal were to fail.

Foreign Material Exclusion (FME)

The inspectors reviewed implementation of licensee procedures for FME control for the open reactor vessel, reactor cavity, and SFP. The inspectors reviewed a sample of Entergy's actions to identify, document, and resolve FME events/issues.

Control of Heavy Loads

The inspectors reviewed licensee actions to control the lift of heavy loads during the outage. The review included activities related to the heavy loads associated with the replacement of the "A" reactor recirculation pump and motor. The inspectors reviewed licensee actions to manage the increased risk during these activities and to implement compensatory measures to protect the integrity of systems important to safe shutdown. This review included consideration of industry operating experience and licensee commitments to NRC regulatory guidance.

Containment Control

The inspectors reviewed licensee activities during the outage to control primary and secondary containment and to clean and prepare the containment for closure prior to plant restart. The inspectors performed periodic tours of the drywell to review the control of work activities and containment conditions. The inspectors performed a walkdown of the drywell

prior to reactor startup to review licensee cleanup and demobilization controls in areas where work was completed to assure that tools, materials and debris were removed. The inspectors also reviewed data and acceptance criteria for the primary containment Integrated Leak Rate Test (ILRT).

Fuel Shuffle Activities and Reactivity Control

The inspectors verified that refueling activities were performed in accordance with core alterations Technical Specifications, including the requirements for core monitoring using the source range monitors and the functional checks of the refueling interlocks. The inspectors observed communications and the coordination of activities between the control room, the General Electric physicist, and the refueling floor while fuel handling activities were in progress. The inspectors reviewed Entergy's response to refueling floor operational problems, including problems identified during movement of control rod blade guides which resulted in damage to a blade guide.

Monitoring Heatup and Startup Activities

The inspectors observed and/or reviewed heatup and startup activities during the period of May 18, 2009 through May 22, 2009. The inspection consisted of control room observations, plant walkdowns, and a review of control board indicators, operator logs, plant computer information, and station procedures. The inspectors observed operator actions including the preparations for the approach to criticality, reactor critical operations, low power operations, and the synchronization of the main turbine generator to the electrical grid. The inspectors observed plant restart and power ascension to verify that Technical Specifications, license conditions, and other requirements for mode changes were met.

Problem Identification and Resolution

The inspectors verified that Entergy was identifying outage related issues and had entered them into the corrective action program. The inspectors reviewed a sample of the corrective actions to verify they were appropriate to resolve the issues. The references used in this review are listed in the Attachment.

b. Findings

Introduction: A Green self-revealing non-cited violation (NCV) of Technical Specification 5.4.1 "Procedures" was identified, because Entergy's refueling bridge operators did not continuously monitor a Double Blade Guide (DBG) that was being moved into the core to ensure the DBG did not encounter any obstructions, interferences, or other abnormal indications as discussed in Pilgrim Procedure 4.3, Revision 113, "Fuel Handling." Specifically, the failure to follow the procedure resulted in damaging the refueling mast when the mast was moved and still latched to a DBG.

Description: On May 4, 2009, during Pilgrim's refueling outage, refueling personnel bent and damaged their refueling mast following the insertion of a DBG into the core. The DBG is a tool used for control rod vertical support when adjacent fuel is removed from the core. Refueling personnel had placed the DBG into its core location and the refueling Senior Reactor Operator (SRO) authorized grapple release and the raising of the refuel mast. Refueling personnel thought the mast had delatched from the DBG. However, the refuel

bridge operator did not perform a mast rotation verification check to ensure the DBG was delatched. In addition, neither the SRO nor the spotter visually verified the DBG was delatched. The refuel bridge operator proceeded to raise the mast above the core and traverse to the next location which bent the mast and the handle to the DBG. Entergy conducted inspections of the adjacent fuel assembly and control rod to ensure that no fuel or control rod had been damaged. The performance deficiency is that Entergy did not properly implement their Procedure 4.3 "Fuel Handling," which requires them to continuously monitor DBG movement to ensure the DBG does not encounter any obstructions, interferences, or abnormal indications. By not following their procedure, Entergy's refueling personnel damaged the refueling mast.

Analysis: The performance deficiency was the failure of Entergy's refueling bridge operators to continuously monitor a DBG during movement within the core to ensure the DBG did not encounter any obstructions, interferences or other abnormal indications as required by the fuel handling procedure. The inspectors determined that the finding was more than minor because the finding was associated with the human performance attribute of the Barrier Integrity Cornerstone and adversely affected the cornerstone's objective to provide reasonable assurance that physical design barriers (i.e. fuel cladding) protect the public from radionuclide releases caused by accidents or events. Although no fuel damage occurred during this event, the failure to follow the fuel handling procedure affected the cornerstone's objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events.

The failure to properly implement the fuel handling procedure affected the Barrier Integrity Cornerstone. IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1-Initial Screening and Characterization of Findings," was used to evaluate the significance of the finding. Attachment 0609.04, Table 4a, was used to evaluate the impact of the finding on fuel clad integrity. Following this event, Entergy inspected fuel assemblies and the control rod in proximity to the DBG and concluded that no damage had occurred to the fuel or control rod. Since the finding did not affect spent fuel pool cooling or inventory and since no fuel or control rod was damaged when the mast was bent, the finding was determined to be of very low safety significance (Green).

The finding has a cross cutting aspect in Human Error Prevention Techniques in the Work Practices component of the Human Performance area. Specifically, Entergy did not employ effective self and peer checking techniques such that refueling activities were performed safely. (H.4.a of IMC 305).

Enforcement: Technical Specification 5.4.1, "Procedures", requires that written procedures be implemented as recommended in NRC Regulatory Guide (RG) 1.33, "Quality Assurance Program Requirements," Revision 2, Appendix A, February 1978. RG 1.33, Appendix A, Section 2 includes procedures for Refueling Equipment Operation. Contrary to this, on May 4, 2009, Entergy did not properly implement Procedure 4.3, "Fuel Handling," which required them to continuously monitor DBG movement to ensure the DBG does not encounter any obstructions, interferences, or other abnormal indications. Corrective actions included replacing a section of the refueling mast, replacing the grapple camera, conducting additional training with the refueling crews including a table top dry run; performing a Human Performance Error Review and requiring Operations Senior Management to provide oversight during one hour of each three hour shift when the refueling crew was on the bridge moving fuel. Because this violation was of very low safety significance and Entergy has entered it into their corrective action program (CR-PNP-2009-

02083), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. **NCV 05000293/2009003-01, Failure to Follow Procedure Resulting in Damage to Refueling Mast**

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (6 samples)

The inspectors reviewed six samples of surveillance activities to determine whether the testing adequately demonstrated equipment operational readiness and the ability to perform the intended safety-related functions. The inspectors reviewed selected prerequisites and precautions to determine if they were met and if the tests were performed in accordance with the procedural steps. Additionally, the inspectors evaluated the applicable test acceptance criteria for consistency with associated design bases, licensing bases, and Technical Specification requirements. The inspectors also evaluated whether conditions adverse to quality were entered into the corrective action program for resolution. The documents reviewed during this inspection are listed in the Attachment. The following surveillance tests were evaluated:

- Local Leak Rate Testing of the "C" Main Steam Isolation Valve, Containment Isolation Valve (CIV);
- Loss of Offsite Power/Emergency Core Cooling Systems Loading Testing;
- Control Rod Scram Timing;
- Reactor Vessel Pressurization and Leakage Test;
- Primary Containment Integrated Leak Rate Test; and
- HPCI Operability Run at 150 psig (IST).

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope (1 drill observation sample)

The inspectors observed an emergency planning drill on May 28, 2009. The inspectors evaluated the emergency response organization performance in the simulator, and in the Emergency Operations Facility, for a scenario which escalated to a General Emergency and involved a simulated offsite release. The inspectors assessed the implementation of Emergency Action Level (EAL) classification and notification decisions as well as Protective Action Recommendation development and notifications. The inspectors also assessed whether Pilgrim's critique of the exercise assessed all of the drill's observations and findings. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control To Radiologically-Significant Areas (71121.01)

.1 Access Control to Radiologically-Significant Areas (Pre-Outage)

.a Inspection Scope (12 samples)

During the period March 30, 2009 through April 2, 2009, the inspectors performed the following activities to verify that Entergy was properly implementing operational, administrative, and engineering controls for access to locked high-radiation areas, and other radiologically significant areas. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, Standards for Protection Against Radiation, relevant Technical Specifications, and Entergy's procedures. This inspection activity represented the completion of twelve (12) samples relative to this inspection area.

- The inspectors identified the refuel floor activities and the incore tip room survey activities as significant work areas and reviewed the associated controls and surveys of these areas to determine if controls were acceptable.

- The inspectors walked down the perimeter of these areas to determine whether prescribed radiation work permits (RWP)s, procedure, and engineering controls were in place, whether licensee surveys and postings were acceptable, and whether air samplers were properly located.

- The inspectors reviewed RWPs for the upcoming refueling outage used to access high radiation areas and identify what work control instructions or control barriers had been specified. These RWPs included scaffold work, refueling activities, reactor recirculation pump 'A' replacement, inservice inspection activities, and minor maintenance. The inspectors reviewed electronic personal dosimeter (EPD) alarm set points (both integrated dose and dose rate) for conformity with survey indications and plant policy. The inspectors verified that workers knew what actions they were to take if their EPD malfunctioned or alarmed.

- During job performance observations for refueling preparation activities, the inspectors verified the adequacy of radiological controls, such as; required surveys, including airborne surveys, radiation protection job coverage, and contamination controls.

- The inspectors reviewed seventeen (17) condition reports related to access controls. The inspectors also reviewed the 2007 radiation protection annual audit and the station's five year As Low As Reasonably Achievable (ALARA) plan.

- The inspectors questioned workers to verify that radiation workers were aware of the significant radiological conditions in their workplace, their RWP precautions, their EPD set-points, and that their performance took into consideration the level of radiological hazards present. The inspectors also observed radiation worker performance with respect to stated radiation protection work requirements.

- Of the 17 condition reports reviewed by the inspectors, 11 were due to radiation worker error. The inspectors reviewed the reports for observable patterns and discussed corrective actions planned and taken with the Radiation Protection Manager (RPM).

- The inspectors observed radiation protection technician performance with respect to radiation protection work requirements.

- Of the 17 condition reports reviewed by the inspectors, 3 were due to radiation protection technician error. The inspectors discussed with the RPM the status of changes in licensee procedural controls of high dose rate - high radiation areas and very high radiation areas (VHRA).

- The inspectors discussed with a radiation protection supervisor the controls in place for special areas that have the potential to become VHRA during certain plant operations. Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Review of RWPs for airborne radioactivity areas with the potential for individual worker internal exposures of >50 millirem Committed Effective Dose Equivalent (CEDE) (20 DAC-hrs); and

- Adequacy of Entergy's internal dose assessment for any actual internal exposure greater than 50 millirem CEDE.

b. Findings

No findings of significance were identified.

.2 Access Control To Radiologically-Significant Areas (Outage)

a. Inspection Scope (12 samples)

During the period April 29, 2009 through May 5, 2009, the inspectors performed the following activities to verify that Entergy was properly implementing operational, administrative, and engineering controls for access to locked high radiation areas, and other radiologically significant areas. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, relevant Technical Specifications, and Entergy's procedures. This inspection activity represents the completion of twelve (12) samples relative to this inspection area.

- The inspectors reviewed all licensee Performance Indicators (PIs) for the Occupational Exposure Cornerstone for follow-up.

- The inspectors walked down the perimeter of the drywell, work areas inside the drywell such as the 'A' recirculation pump replacement, and under the vessel work. The inspectors also walked down the refueling floor and the condenser bay. The inspectors verified whether prescribed RWP, procedure, and engineering controls were in place, whether licensee surveys and postings were acceptable, and whether air samplers were properly located.

- The inspectors reviewed seventeen (17) condition reports from the start of the refueling outage through May 1, 2009. Follow-up actions for these condition reports were performed in an efficient and timely manner commensurate with their importance to safety and risk.

- During job performance observations for N9A weld overlay activities and refueling activities, the inspectors verified the adequacy of radiological control preparation activities. The inspectors verified the adequacy of radiological controls, such as: required surveys, radiation protection job coverage and contamination control.

- The inspectors observed radiation worker performance to determine if they were aware of significant radiological conditions in their workplace, the RWP controls/limits, and that their performance took into consideration the level of the radiological hazards present.

- The inspectors reviewed two (2) condition reports since the beginning of the refueling outage that found the cause to be due to radiation worker error. The inspectors verified there were no observable patterns traceable to a similar cause.

- The inspectors observed radiation protection technician performance with respect to all radiation protection work requirements. The inspectors verified that worker performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

- The inspectors reviewed one (1) condition report that found the cause of the event was radiation protection technician error. The inspectors verified this was an isolated case and no pattern traceable to a similar cause.

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Review RWPs for airborne radioactivity areas with the potential for individual worker internal exposures of >50 millirem CEDE (20 DAC-hrs);

- Adequacy of Entergy's internal dose assessment for any actual internal exposure greater than 50 millirem CEDE packages;

- Review of licensee documentation for PI events; and

- Review the application of dosimetry to effectively monitor exposure when significant dose rate gradients exist.

b. Findings

No findings of significance were identified.

2OS2 As Low As Reasonably Achievable (ALARA) Planning and Controls (71121.02)

.1 As Low As Reasonably Achievable (ALARA) Planning and Controls (Pre-Outage)

a. Inspection Scope (7 samples)

During the period March 30, 2009 through April 2, 2009, the inspectors performed the following activities to verify that Entergy properly implemented operational, engineering, and administrative controls to maintain personnel exposure ALARA during routine plant operation. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and Entergy's procedures. This inspection activity represents the completion of seven (7) samples relative to this inspection area.

Current Cumulative Exposure and Trend

The inspectors reviewed pertinent information regarding plant collective exposure history, current exposure trends, and ongoing or planned activities to assess current performance and exposure challenges.

The inspectors reviewed the upcoming outage work schedule and the associated work activity exposure estimates. The five work activities that are likely to result in the highest personnel collective exposures are scaffolding, refueling activities on the refuel floor, in service inspection, replacement of the 'A' recirculation pump, and routine maintenance.

Radiological Work Planning

The inspectors obtained from Entergy, a list of the outage work activities with estimated exposures. The inspectors reviewed the ALARA reviews for the five highest dose work activities to determine if appropriate procedures, engineering, and work controls had been designated.

Verification of Dose Estimates and Exposure Tracking Systems

The inspectors reviewed the assumptions and basis for the current annual collective exposure estimate and the methodology used. The inspectors reviewed the methods used to make adjustments to the exposure estimate when unexpected changes occur.

Source Term Reduction and Control

The inspectors reviewed Pilgrim documentation to determine the historical trends and current status of tracked plant source terms.

Problem Identification and Resolution

The inspectors reviewed condition reports related to the ALARA program since the last inspection to determine if repetitive deficiencies or significant individual deficiencies are identified.

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following item:

- Pilgrim had no declared pregnant workers during this assessment period.

b. Findings

No findings of significance were identified.

.2 As Low As Reasonably Achievable (ALARA) Planning and Controls (Outage)

a. Inspection Scope (7 samples)

During the period April 29, 2009 through May 5, 2009, the inspectors performed the following activities to verify that Entergy was properly implementing operational, engineering, and administrative controls to maintain personnel exposure ALARA during refueling outage operation. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and Pilgrim's procedures. This inspection activity represents the completion of seven (7) samples relative to this inspection area.

Inspection Planning

The inspectors reviewed the work schedule for the refueling outage during the inspection period. The inspectors also reviewed the site specific procedures associated with maintaining occupational exposures ALARA.

Radiological Work Planning

The inspectors reviewed the exposure estimates for six (6) work activities that were likely to result in the highest personnel collective exposures. The inspectors compared the results achieved with the intended dose established in Pilgrim's ALARA planning for these work activities. The inspectors reviewed Pilgrim's response to increased dose rates and higher than estimated work hours.

Verification of Dose Estimates and Exposure Tracking Systems

The inspectors reviewed the method for adjusting exposure estimates and attended a manager's ALARA committee meeting for the purpose of making adjustments. The inspectors verified that estimated exposure is based on sound radiation protection and ALARA principles.

Source Term Reduction and Control

The inspectors reviewed the source term from shut down to May 1, 2009. The plant implemented effective contingency plans when the refuel pool activity was higher than expected.

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following item:

- Pilgrim had no declared pregnant workers during this assessment period.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope

Cornerstone: Initiating Events (3 samples)

The Initiating Events cornerstone PI data for unplanned scrams per 7,000 critical hours; unplanned scrams with loss of normal heat removal; and unplanned power changes per 7,000 critical hours was reviewed to assess the completeness and accuracy of the reported information. Specifically, PI data from the second quarter of 2008 through the first quarter of 2009 was reviewed and compared to information contained in NRC inspection reports, Licensee Event Reports (LERs), and operator logs.

Cornerstone: Barrier Integrity and Mitigating Systems (2 samples)

The inspectors reviewed PI data to determine the accuracy and completeness of the reported data. The review was accomplished by comparing reported PI data to confirmatory plant records and data available in plant logs, the chemistry data base, Licensee Event Reports (LER), CRs, and NRC inspection reports. The acceptance criteria used for the review was Nuclear Energy Institute (NEI) 99-02, Revision 5, "Regulatory Assessment Performance Indicator Guidelines," and Pilgrim TS 3.6, "Primary System Boundary." The documents reviewed during this inspection are listed in the Attachment. The following performance indicators were reviewed:

- Mitigating System Cornerstone, Safety System Functional Failures from the first quarter of 2008 through the first quarter of 2009; and
- Barrier Integrity Cornerstone, RCS Activity from the second quarter of 2008 through the first quarter of 2009

Cornerstone: Occupational Exposure Control Effectiveness (1 sample)

The inspectors reviewed implementation of Entergy's Occupational Exposure Control Effectiveness Performance Indicator (PI) Program. Specifically, the inspector reviewed recent condition reports, and associated documents, for occurrences involving locked high radiation areas, very high radiation areas, and unplanned exposures against the criteria specified in NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 5, to verify that all occurrences that met the NEI criteria were identified and reported as performance indicators. This inspection activity represents the completion of

one (1) sample relative to this inspection area; completing the annual inspection requirement.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Review of Items Entered into the Corrective Action Program (CAP)

a. Inspection Scope

The inspectors performed a screening of each item entered into Entergy's CAP. This review was accomplished by reviewing printouts of each CR, attending daily screening meetings and/or accessing Entergy's database. The purpose of this review was to identify conditions such as repetitive equipment failures or human performance issues that might warrant additional follow-up.

b. Findings

No findings of significance were identified.

.2 Semi-Annual Review to Identify Trends

a. Inspection Scope

The inspectors performed a review of Entergy's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The review was focused on repetitive equipment and corrective maintenance issues, but also considered the results of daily inspector CAP item screening. The review included issues documented in CAP trend reports and the site CAP performance indicator data. The review focused on the six-month period of December 2008 through June 2009. The documents reviewed during this inspection are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. Two low level trends were identified in the areas of post maintenance/modification testing and temporary modification controls.

Post Maintenance/Modification Testing

The inspectors reviewed eight maintenance work order packages and one permanent modification package during this quarter in order to verify that the testing adequately demonstrates the safety function that may have been affected by the maintenance or modification activity. In the majority of the packages reviewed, the inspectors identified discrepancies with the specification, completion, and documentation of post maintenance or modification test activities. Examples the inspectors identified included:

- The Engineering Change (EC) PMT requirements for drywell cooler work were not all specified in the work order (WO) PMT section, including; verification of proper reassembly

for all structural elements, bolting and anchorages, proper alignment of the fan housing, proper fit-up of flange joints with no visible gaps, and no loose or missing fasteners. Substitute work and testing activities were identified which reasonably demonstrated the expected PMT attributes were met. CR-PNP-2009-02618 was written to document the missing PMT.

- The completion of the EC PMT requirements for reactor head vent valve work could not be located for inspector review. The PMT requirements included; inspection for visible leakage and/or the completion of non-destructive testing of all welded joints, soap bubble tests of all air joints breached by the modification, continuity and meggar checks of all cables, In-Service Test (IST) valve position verification, full exercise, stroke test and fail safe tests, visual examination of all welds during the reactor vessel pressure test, and establishing a new IST baseline. Substitute work and testing was identified which reasonably demonstrated the expected PMT attributes were met. CR-PNP-2009-02648 and -02676 were written to document the missing PMT.

- The completion of EC PMT for the HPCI TCTD could not be located for inspector review. The functional test of the HPCI pump (1 attribute of a total of 8 PMT attributes specified in the EC post modification test plan) was located and satisfactorily completed. With the exception of a new TCTD power supply circuit breaker thermography test, the remaining PMT were related to the construction of the TCTD equipment which does not directly interface with the HPCI system except during testing which is conducted when the HPCI system is not required to be operable. Operations assessed the condition of the lack of thermography to be acceptable in consideration that no deficiencies were identified at the circuit breaker panel or the TCTD during testing and that the circuit breaker is normally open. In addition, discussion with Electrical Maintenance personnel identified that the thermography had been performed successfully but that the documentation for the test could not be located. CR-PNP-2009-02861 was written to document the missing PMT.

- The inspectors identified several documentation and administrative errors associated with WO PMT requirements including; missing documentation for the verification of the completion of PMT, lack of documentation of the basis for the satisfactory completion when acceptance criteria had not been met and/or no CR documenting this basis, and the lack of documentation of the completion of a soap bubble test. Each of these issues was subsequently documented in a CR, the condition evaluated or corrected, and determined not to affect the functionality or operability of safety-related equipment.

Entergy corporate procedure EN-MA-101, Revision 6, “Conduct of Maintenance,” identifies, in part, that PMT consists of testing that is performed following any maintenance activity to ensure that the original deficiency was corrected, no new deficiency was created as a result of the maintenance activities, and equipment will perform its intended function when returned to service. EN-MA-101 also identifies that the PMT documentation fully describes the test performed and results such that an independent third party will be able to review and understand what was done, what the results were and conclusions drawn. The inspectors have concluded that the number and extent of PMT issues identified during this quarter constitutes a low level trend with the specification, performance, and documentation of PMT. The inspectors discussed this low level trend with Entergy and CR-PNP-2009-2778 was written to document the examples, to conduct an apparent cause evaluation, and to specify corrective actions. The inspectors will follow Entergy’s investigation and corrective actions to evaluate their response to this low level trend.

Temporary Modification Controls

The inspectors reviewed temporary modification packages during Pilgrim's refueling outage in order to verify that modifications had not affected the safety functions of important safety systems. During the review the inspectors identified discrepancies with temporary modification controls including procedural adherence, appropriate tagouts, and drawings not being up to date. The following examples illustrate these discrepancies:

- During a review of the procedural temporary modification for cross-tying both trains of Reactor Building Closed Cooling Water, the inspectors identified that administrative controls were not used as specified by the procedure. Specifically, tags were not placed as specified on the control panel and on the piping and instrumentation drawing (PI&D). CR-PNP-2009-1468 was written.

- During a review of the reactor shutdown/flood-up level indication procedural temporary modification, the inspectors noted that a valve was not tagged as specified by the procedure. CR-PNP-2009-2085 was written.

- During a review of the MO-1001-50 shutdown cooling suction valve and pump interlock procedural temporary modification, the inspectors identified that Entergy did not update the applicable control room drawing nor did they maintain a copy of the procedural temporary modification in the control room as specified by the procedure. CR-PNP-2009-2187 was written.

The inspectors also identified that Entergy's temporary modification audit program requires a quarterly review; however, there are no specific requirements to conduct audits during an outage, a timeframe where a significant number of temporary modifications are installed/implemented. The inspectors have concluded that the discrepancies identified this quarter constitute a low level trend in the area of temporary modification controls. The inspectors discussed this low level trend with Entergy and CR-PNP-2009-3064 was written to document the examples and to specify corrective actions. The inspectors will follow Entergy's investigation and corrective actions to evaluate their response to this low level trend.

.3 Annual Sample: Review of Risk Assessment Process Improvements and Management

a. Inspection Scope (1 sample)

The inspectors conducted a review of CR-PNP-2008-00946 to assess the effectiveness of Entergy's corrective actions to improve the risk assessment process. The inspectors also reviewed CR-PNP-2009-03792, NCV 05000293/2008002-01, and NCV 05000293/2008005-01 related to previous risk assessment issues, the RFO17 shutdown risk report, and attended shutdown risk assessment meetings during the outage.

b. Findings and Observations

No findings of significance were identified.

The inspectors concluded that Entergy's efforts to improve the assessment of the risk of maintenance and testing activities, particularly emergent risk activities, have been effective. The inspectors noted that the accuracy and communication of on-line and

shutdown risk assessment have improved and that Operations has taken a greater leadership role in this process. The inspectors also noted that Entergy's shutdown risk assessments during RFO17 more accurately reflected shutdown plant risk than they have in the past and that Entergy took reasonable risk management actions during heightened periods of risk. The inspectors did note that Entergy entered Orange risk conditions several times during the outage and that Entergy may be able to avoid these heightened risk activities by reviewing the activities and evaluating whether a different approach could be used (e.g., evaluate whether the Loss of Offsite Power test can be conducted one train at a time). The inspectors also noted that Entergy's risk assessment process should be reviewed for improvements and updates (e.g., current risk communication methods, such as risk information signs and color coded Outage Turnover reports, are not discussed in this procedure) to more accurately reflect current risk assessment management approaches.

4OA3 Event Follow-up (71153)

.1 Operator Response to Unplanned Loss of the 23KV Offsite Power Line

a. Inspection Scope (1 sample)

On April 29, 2009, NStar de-energized a supply line which provides power to the shutdown transformer. The loss of this power supply affected offsite power supplies for the Technical Support Center, security loads, and auxiliary loads for the Station Blackout Emergency Diesel Generator. Operators entered Procedure 2.4.A.23, Loss/Degradation of 23KV Line, and verified that all onsite power supplies to the above loads had energized. Power to the 23KV line was subsequently restored less than 10 minutes later. The inspectors responded to the Control Room, reviewed applicable procedures and Technical Specifications, and reviewed operator response. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Refueling Personnel Response to Shroud Tie Rod Gap and Inability to Install the Separator

a. Inspection Scope (1 sample)

On May 3, 2009, Refueling personnel identified a ½ inch gap between the core shroud outside diameter and the tie rod upper support at the 135 degree location. The existence of this gap was subsequently evaluated and the decision was made to leave the tie rod as-is. On May 11, 2009, Refueling personnel identified a problem with the re-installation of the separator. Visual inspections revealed that the separator was sitting on the 135 degree tie rod upper support. On May 12, 2009, the separator was removed from the vessel and returned to the dryer/separator pool. Entergy and General Electric Hitachi personnel generated a procedure to push the tie rod upper support closer to the shroud to allow separator installation. The tie rod upper support was successfully pushed ½ inch toward the core shroud and the separator was successfully seated, latched, and verified on May 13, 2009.

The inspectors reviewed selected technical documents, the temporary procedure used to re-position the tie rod upper support, and the Updated Facility Safety Analysis Report. The inspectors also attended the Onsite Safety Review Committee meeting which evaluated this activity. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.3 Operator Response to "B" Condensate Pump Leak

a. Inspection Scope (1 sample)

On May 10, 2009, at approximately 10:00am, operators identified a leak coming from the packing gland of the "B" condensate pump during fill of the condenser hotwell. The leakage was collecting in the condensate pump pit and draining to the radiological waste system via the turbine building floor sumps. Operations stopped the fill of the hotwell and notified Mechanical Maintenance personnel. At that time, Mechanical Maintenance personnel determined that the packing for the "B" condensate pump had not yet been installed. Mechanical Maintenance personnel determined that a Mechanical Maintenance supervisor had signed off of a work boundary tagout and had incorrectly reported that the system was "pipe tight" to the Shift Outage Coordinator. Operations drained the condenser hotwell to below the level of the "B" condensate pump packing, re-established the work boundary tagout, and Mechanical Maintenance installed the "B" condensate pump packing on May 11, 2009.

The inspectors interviewed Mechanical Maintenance personnel, Operations personnel and Outage Control Center personnel and reviewed statements from Mechanical Maintenance personnel. The inspectors reviewed control room logs, radiological waste logs, and Outage Control Center logs. The inspectors reviewed the work order, tagouts associated with the work order, and the timeline of the work, tagout removal, hotwell filling, problem discovery and resolution activities. The inspectors also reviewed the subsequent Apparent Cause Evaluation conducted by the Maintenance Department. The documents reviewed during the inspection are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. The inspectors determined that Entergy did not follow tagout procedure requirements and did not identify that work had not been completed on the "B" condensate pump prior to signing off the work boundary tagout. This failure to comply with tagout requirements constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy. In addition, the inspectors identified that no condition report was written by Entergy to document the tagout problem and the resultant interruption to the hotwell fill activity at the time of the occurrence. An apparent cause evaluation was subsequently conducted and corrective actions identified under CR-PNP-2009-02265 and was reviewed by the inspectors.

.4 Operator Response to the Loss of Steam Jet Air Ejector Radiation Monitors

a. Inspection Scope (1 sample)

On May 19, 2009, Operations determined that both pre-treatment (Steam Jet Air Ejector (SJAE)) process radiation monitors were inoperable. As a result, Operators implemented the Offsite Dose Calculation Manual (ODCM), Table 3.1-2, Radioactive Gaseous Effluent Monitoring Instrumentation, requirements which allowed gases to continue to be released from the SJAE to the offgas system for up to 72 hours provided the augmented offgas system was not bypassed and that downstream post-treatment radiation monitors were operable. Otherwise, the ODCM would require the plant to be in hot standby within 12 hours. Operations also reviewed TS 3.8.1, Main Condenser Offgas, which requires that the gross gamma activity rate of noble gases measured at a main condenser pre-treatment monitor station shall be limited to 500,000 µCi/second whenever steam is available to the air injectors. TS 3.8.1 requires the plant to be shutdown within 72 hours if this limit cannot be met. However, Operations determined that TS 3.8.1 was met by a satisfactory "grab" sample that is obtained once every 31 days as described in TS surveillance requirement 4.8.1.1. On May 20, 2009, Entergy revised the ODCM to remove the 72-hour shutdown requirement and to instead allow gases to continue to be released from the SJAE to the augmented offgas (AOG) system as long as the AOG system is not bypassed, the post-treatment radiation monitors were operable or tripped and capable of alarm and auto-isolation of the main stack, the AOG charcoal area radiation monitor and control room alarm are functional, and the TS 4.8.1.1 grab sample was performed once every 24 hours. An additional option in the ODCM revision is to perform TS 4.8.1.1 grab samples every 4 hours.

The inspectors reviewed the condition of the SJAE radiation monitors and concluded that the inoperability of both SJAE radiation monitors would affect the ability to show compliance with TS 3.8.1. The inspectors reviewed the ODCM and the subsequent ODCM revision. The inspectors performed a review of the new ODCM requirements and the existence of additional equipment (e.g., AOG charcoal radiation monitors) and increased sampling activities, and concluded that the requirements of TS 3.8.1 could reasonably be shown to be met with these actions in place. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.5 (Closed) LER 05000293/2008-006-00, Automatic Scram Resulting from Switchyard Breaker Fault during Winter Storm

The inspectors reviewed Entergy's actions associated with the LER, which are addressed in the corrective action program as CR-PNP-2008-03962 and -03963. The event was discussed in NRC Inspection Report 05000293/2008005, Section 4OA3.5. No findings of significance were identified and no violation of NRC requirements occurred. The LER provided an accurate description of the event and follow-up actions, taken or planned, were appropriate to address the event. This LER is closed.

.6 (Closed) LER 05000293/2008-007-00, Momentary Loss of all 345KV Off-Site Power to The Startup Transformer from Switchyard Breaker Fault

The inspectors reviewed Entergy's actions associated with the LER, which are addressed in the corrective action program as CR-PNP-2008-3980. The event was discussed in NRC Inspection Report 05000293/2008005, Section 4OA3.6. No findings of significance were identified and no violation of NRC requirements occurred. The LER provided an accurate description of the event and follow-up actions, taken or planned, were appropriate to address the event. This LER is closed.

4OA5 Other Activities

Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with Entergy security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours. These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples and were considered an integral part of the inspectors' normal plant status reviews and inspection activities.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On April 2, 2009, an Occupational Radiation Safety exit meeting was held with Mr. Kevin Bronson, Site Vice President. The inspectors verified prior to the exit meeting that the inspector was not provided any proprietary information.

On May 4, 2009, an In Service Inspection exit meeting was held with Mr. Kevin Bronson, Site Vice President. The inspectors verified at the exit meeting that the inspector was not provided any proprietary information.

On May 5, 2009, an Occupational Radiation Safety exit meeting was held with Mr. Kevin Bronson, Site Vice President. The inspectors verified at the exit meeting that the inspector was not provided any proprietary information.

On July 7, 2009, the resident inspectors conducted an exit meeting and presented the preliminary inspection results to Mr. Stephen Bethay, and other members of the Pilgrim staff. The inspectors confirmed that proprietary information provided or examined during the inspection was controlled or returned to Entergy and the content of this report includes no proprietary information.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:

K. Bronson	Site Vice President
R. Smith	General Manager Pilgrim Operations
S. Bethay	Director, Nuclear Safety Assurance
T. Kelly	Radiation Protection Technician
C. Littleton	Probabilistic Risk Assessment Engineer
J. Lynch	Licensing Manager
W. Lobo	Licensing Engineer
W. Mauro	Supervisor, Radiological Engineering
D. Noyes	Operations Manager
I. Onorato	Radiation Protection Technician
J. Onorato	Radiation Protection Technician
J. Priest	Radiation Protection Manager
M. Thornhill	Radiation Protection Supervisor
T. Trainor	Outage Manager
J. West	Radiation Protection Technician

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

NCV 05000293/2009003-01	Failure to Follow Procedure Resulting in Damage to Refueling Mast

Opened

URI 05000293/2009003-02	Design Calculation of the Vital MG Set Room Peak Temperatures

Closed

LER 05000293/2008006-00	Automatic Scram Resulting from Switchyard Breaker Fault During Winter Storm
LER 05000293/2008007-00	Momentary Loss of all 345KV Off-Site Power to The Startup Transformer from Switchyard Breaker Fault

LIST OF DOCUMENTS REVIEWED

Section 1R01

Procedure 8.C.40, Revision 24, Seasonal Weather Surveillance
Procedure 2.1.37, Revision 25, Coastal Storm – Preparations and Actions
Procedure 2.1.42, Revision 8, Operation During Severe Weather
Procedure 5.2.2, Revision 31, High Winds (Hurricane)
CR-PNP-2007-03609, Copies of Procedure 2.2.94 had the Wrong Revision Out in the Field
CR-PNP-2009-02853, Wrong Revision of Procedure 2.2.94 in Intake Structure Toolbox
CR-PNP-2009-02835, Tornado Door 247 Found Open
Procedure 1.4.4, Revision 20, New England Power Grid Operations/Interfaces
Procedure 2.1.14, Revision 98, Station Power Changes
NRC Generic Letter 2006-02, Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power
CR-PNP-2008-1582, Discrepancies within Pilgrim Response to Generic Letter 2006-02
Procedure 1.5.22, Revision 11, Risk Assessment Process
ISO New England Procedure, Master/Local Control Center Procedure #1, Revision 7, Nuclear Plant Transmission Operations
Master/LCC Procedure #1, Revision 7, Attachment A, Pilgrim Nuclear Station
Pilgrim Response to GL 2006-02, dated 4/03/2006

Section 1R04

Procedure 2.2.30, Revision 67, Reactor Building Closed Cooling Water System
TS 3.5.B.3, Reactor Building Closed Cooling Water System
EN-DC-136, Revision 3, Temporary Modifications
CR-PNP-2009-01468, Clarification of Temporary Modification Tag Requirements
Training Manual on RHR Shutdown Cooling
Procedure 2.2.19, Revision 99, RHR
Procedure 2.2.19.1, Revision 28, RHR System – Shutdown Cooling Mode of Operation
Procedure 8.9.1, Revision 112, Emergency Diesel Generator and Associated Emergency Bus Surveillance
Procedure 2.2.8, Revision 94, Standby AC Power System (Diesel Generators)
Procedure 2.1.12.1, Revision 67, Emergency Diesel Generator Surveillance
Training Manual, Reactor Core Isolation Cooling System
Procedure 3.M.4-78, Revision 9, RCIC Turbine Major Preventive Maintenance Inspection
Final Safety Analysis Report Chapter 4.7, Reactor Core Isolation Cooling System
Procedure 2.2.22, Revision 69, Reactor Core Isolation Cooling System
System Health Report
CR-PNP-2009-02593, Rescheduling RCIC Inverter Replacement
CR-PNP-2009-01976, Anomaly in the Seating of RCIC Steam Line Inboard Isolation Valve
CR-PNP-2009-01887, RCIC Turbine Exhaust Line Check Valve Not Seating
CR-PNP-2008-03356, RCIC Turbine Flow and Pressure Outside of Specified Parameters

Section 1R05

UFSAR Chapter 10.8, Fire Protection System
Fire Hazards Analysis Fire Area 1.30-Drywell
Procedure 5.5.2, Revision 42, Special Fire Procedure
Procedure 8.B.13, Revision 4, Hydrostatic Testing of Fire Hose
Procedure 8.B.3.1, Revision 16, Fire Hose Station Equipment Inspection
CR-PNP-2009-01894, Self-Adhesive Knee Pads on Drywell Equipment
Fire Hazards Analysis
Fire Damper Test Results
UFSAR Chapter 10.8.4.6, Fire Barrier System
Procedure 8.B.17.2, Revision 9, Inspection of Fire Damper Assemblies
Procedure 8.B.17.1, Revision 19, Inspection of Fire Door Assemblies
Procedure 8.B.14, Revision 41, Fire Protection Technical Requirements
Exemption Request #7, Fixed Suppression and Twenty-Foot Separation with no Intervening Combustibles
Exemption Request #9, Fixed Suppression Where Alternate Shutdown Capabilities Exist

Section 1R06

PNPS Probabilistic Safety Assessment, Appendix E, Internal Flooding Analysis
Equipment Out-of-Service Risk Assessment Tool
PNPS Flooding Calculations
Timeline of Fire Response to Fire in the HP Cal Lab

Section 1R08

Non Destructive Test (NDT) Examination Reports

PT-09-002, Liquid Penetrant Examination Summary Sheet ISI-I-11-1, weld B-11-159, SBLC system, pipe to valve butt weld
MT-09-008, Magnetic Particle Examination Summary Sheet ISI-I-23-2-EB-23-13HL1(4), Support Lugs, High Pressure Coolant Injection system, integral attachment
UT-09-023, Ultrasonic Calibration/Examination, Summary Sheet ISI-I-1-1SH2-1-SD-1, Main Steam system, weld 1SD-1, pipe to cap weld
RT-09-003, Radiographic Examination Summary ISI-I-1-1 SH2-1-SD-10R

NDT Examination Procedures

ENN-NDE-10.01, Revision 3, VT-1 Examination
ENN-NDE-10.02, Revision 3, VT-2 Examination
ENN-NDE-10.03, Revision 2, VT-3 Examination
ENN-NDE-9.40, Revision 1, Liquid Penetrant Examination
ENN-NDE-9.41, Revision 1, Liquid PT for ASME Section XI
ENN-NDE-9.31, Revision 1, Magnetic Particle Examination (MT) for ASME Section XI
ENN-NDE-9.04, Revision 2, Ultrasonic Examination of Ferritic Piping Welds (ASME Section XI)
TP08-034 R0, Temporary Procedure for Phased Array Ultrasonic Examination of Core Shroud Assembly Welds Using Sector-Line Scanning

In Vessel Remote Visual Examination

INR-P1R17-IVVI-09-01, Steam Dryer Leveling Screw Tack Weld
INR-P1R17-IVVI-09-02, Steam Dryer Divider Plate Anchor
INR-P1R17-IVVI-09-03, Steam Dryer Separator Shroud Head Bolt #18

Condition Reports

CR-PNP-2009-01173, Mechanical Design specification M301 has error on Table 1
CR-PNP-2009-01531, IVVI inspection noted slight wear latched pin location shroud head bolt #18
CR-PNP-2009-01767, IVVI inspection noted FME at various locations
CR-PNP-2009-01514, Identified linear indication at RPV head to flange weld
CR-PNP-2009-01673, Unable to inspect nozzle RPV-N9A-1
CR-PNP-2009-01688, Evaluate area of corrosion identified on core spray piping
CR-PNP-2007-02093, Various areas identified as needing coating repairs in drywell
CR-PNP-2009-01180, "B" loop RHR piping support has cracking in saddle to pipe stitch weld
CR-PNP-2009-01182, Error in piping specification M301, Extent of Condition
CR-PNP-2009-01285, Design drawing does not show installed tack welds, RHR containment spray pipe support
CR-PNP-2009-02084, One dimension on the N9A overlay did not achieve minimum
CR-PNP-2009-01977, Tack weld should have been mechanically removed

Work Orders

WO 00133037, Fabrication of SSW, system 29, spool piece JF29-19-1 for application in Loop B
WO 00133039, Shop fabrication of spool piece JF 29-15-7 for SSW system
WO 00193071, Removal of cracked tack weld on support H-10-1-12

Miscellaneous

NOP83M1 R9, ASME Code Repairs and Replacements
TP08-028, Procedure for IVVI of BWR 2 RPV Internals
EN-LI-102 R13, Corrective Action Process
ENN-NDE-9.23, Revision 1, Indication Evaluation Flow Chart (Attachment 9.7)
CS-1/1-RMD R0, Weld Procedure Specification for Gas Metal Arc Welding (GMAW) of carbon steel
LO-PNPLO-2008-00135, Self-Assessment of the PNPS ISI Program
Procedure Qualification Record PQR 3355, Welding Procedure Qualification Record for GMAW, semi-automatic, carbon steel to carbon steel
EN-0275, Welder Qualification, History and Continuity Log
PRR-19, Pilgrim Relief Request for weld overlay repair of RPV Jet Pump Instrumentation Nozzle Weld, RPV-N9A-1
Certificate of Examiner performance qualifications for penetrant, magnetic particle, ultrasonic (manual, performance demonstration initiative) and visual (VT1, 2 and 3). Documentation includes training and vision test results for selected examiners.

Section 1R11

Lesson Plan O-RQ-04-04-58, RFO 17 Just-In Time Training
Control Rod Drive Matrix Schematic
Significant Event Report 2-08, Reduced Shutdown Safety Margins

Section 1R12

Procedure EN-DC-203, Revision 1, Maintenance Rule Program
Procedure EN-DC-207, Revision 1, Maintenance Rule Periodic Assessment
Procedure EN-DC-205, Revision 1, Maintenance Rule Monitoring
NUMARC 93-01, Revision 2, Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants
Procedure EN-DC-206, Revision 1, Maintenance Rule (a)(1) Process
Regulatory Guide 1.160, Revision 2, Monitoring the Effectiveness of Maintenance at Nuclear Power Plants
Procedure EN-DC-204, Revision 1, Maintenance Rule Scope and Basis
Scram Data Sheets
Technical Basis for Revising Maintenance Rule Unavailability Performance Criteria for Lines 342 and 355
Maintenance Rule SSC Basis Document
CR-PNP-2008-3962, Reactor Scram Due to Switchyard Fault

Section 1R13

Refueling Outage 17 Risk Review Report
Departure from Defense In-Depth Form for Power Availability
Risk Assessment Review Checklists
Procedure 3.M.1-45, Revision 7, Outage Shutdown Risk Assessment
Departure from Defense In-Depth Forms dated 3/11/09, 4/8/09, 4/22/09 and 4/26/09
Temporary Procedure No. TP09-012, Revision 0, RFO-17 Compensatory Measures
RFO 17 Outage Shift Turnover Sheets dated 4/23/09, 4/24/09 and 4/27/09
Procedure 8.M.3-1, Special Test for Automatic ECCS Load Sequencing of Diesels and Shutdown Transformer with Simulated Loss of Off-site Power and Special Shutdown Transformer Load Tests
Outage Risk Notebook
Procedure 8.M.2-1.5.9, Revision 26, Primary Containment Isolation Valve Testing

Section 1R15

CR-PNP-2009-01182, Main Steam Drain Line Valve Weld not radiograph tested as specified by ASME Code
WO 19900065, Replace MO-220-2 Valve per PDC00-32
WO 01103687, PWT MR for Main Steam Outside Containment for RFO #13
WO 01103702, PWT for Vessel Hydro for RFO #13
EN-OP-104, Operability Determinations
Inspection Manual Part 9900, Technical Guidance

Specification M301, Field Fabrication and Installation of Piping and Instrumentation
UFSAR Chapter 4.11, Main Steam Lines and Feedwater Piping
CR-PNP-2009-01315, Operability Evaluation without Discussion of Visual Exam
Operability Evaluation on CR-2009-01261
Procedure 2.2.108, Revision 42, Diesel Generator Cooling and Ventilation System
CR-PNP-2009-01261, Diesel Damper Vanes did not close all the way
CR-PNP-2009-02016, Shutdown Transformer Relay did not close within its Technical Specifications Timeband
CR-PNP-2009-02502, "B" Feed Regulating Valve Digital Controller Faults
Operational Decision-Making Issue (ODMI) for CR-PNP-2009-02502, Revision 0, dated May 22, 2009
Procedure 2.4.49, Revision 40, Feedwater Malfunctions
Procedure 2.2.82, Revision 41, Reactor Vessel Water Level Control System
Final Safety Analysis Report, Chapter 11.8. Condensate and Feedwater System
UFSAR, Chapter 7.10, Feedwater Control System
CR-PNP-2009-02707, Security Emergency Diesel Generator Does Not Meet Acceptance Criteria
Fire Hazards Analysis
Procedure 8.9.14, Revision 31, Security Diesel Generator Surveillance
PNPS Appendix R Exemption Summary, Exemption Summary #17, Emergency Lighting in the Yard Area
UFSAR Chapter 10.8, Fire Protection System
Procedure 2.2.153, Revision 10, Security Diesel Generator and Backup Power System
CR-PNP-2009-02755, Functionality of CR-PNP-2009-02707 Does Not Address Appendix R 8 Hour Lighting Requirement

Section 1R18

Procedure 3.M.2-40, Revision 6, Refuel Outage Temporary Modification Reactor Shutdown/Flood-up Level Indication
Control Room Logs
EN-DC-136, Revision 3, Temporary Modifications
CR-PNP-2009-02085, NRC Resident Identified a tag missing from a level transmitter bypass valve
Procedure 3.M.3-36.7, Revision 0, Temporary Power for 125V DC Bus "A" or "B"
Procedure 2.2.19.1, Revision 28, Residual Heat Removal System – Shutdown Cooling Mode of Operation
Control Room Logs for Temporary Modification Installation/Removal and Limiting Condition for Operation Entry
CR-PNP-2009-02187, Control Room Drawing not annotated as specified by the Procedural Temporary Modification and paperwork not retained in the Control Room as specified by Procedure
CR-PNP-2009-00991, Modification in Vital MG Set Room Basis Not Retrievable
Standard Review Plan 9.4.5, Revision 2, Engineered Safety Feature Ventilation System
Turbine Building Design Calculation SDBD-24, Revision O
ER 06118315, Update Structural Drawing C194 with Fan Detail
Procedure 2.4.153, Revision 18, Loss of Turbine Building Ventilation
Procedure ENN-MS-S-009-PNPS, Revision 0, System Safety Function Sheets
Memorandum dated May 15, 1992, Assessment of Heatup of Vital MG-Set Room
UFSAR 10.9-2, Design Temperatures

Calculation N124, Revision 0, Vital MG-Set Room Heatup
FRN-87-73-29, Seismic Restraints for Permanently Installed Booster Fan
Procedure 5.3.18, Revision 27, Loss of 120V AC Safeguard Buses Y3 and Y31
Cutler Hammer Circuit Breakers Data Sheets
EC-4350, Revision 0, HPCI TCTD
EN-LI-100, Attachment 9.1, Revision 6, Process Applicability Determination Form for EC-4350
EN-DC-117, Revision 1, Post Modification Test Plan Form for EC-4350 ECN #14227
ECN #14227, Engineering Change Notice Summary Form for EC-4350
Engineering Calculation C15.0.3434, Motor Stand for the HPCI TCTD
Procedure 8.I.1.1, Revision 22, Inservice Pump and Valve Testing Program
Procedure 8.5.4.1, Revision 104, HPCI System Pump and Valve Quarterly and Biennial Comprehensive Operability
CR-PNP-2009-02861, Completed Work Order Tasks for the HPCI TCTD Post Modification Tests Cannot be Found
EN-DC-117, Revision 2, Post Modification Testing and Special Instructions

Section 1R19

UFSAR Section 8.10, Blackout AC Power Source
WO 51546813, Bench Test of New Governor
EN-MA-102, Revision 2, PNPS Inspection
Temporary Procedure TP09-001, Revision 0, Manual Start and Loading of SBODG via Safety Bus A5 or A6 and Governor Response Check
V-0540, Blackout Diesel Generator Vendor Manual
Procedure 8.9.16.1, Manually Start and Load Blackout Diesel via the Shutdown Transformer Station Blackout Governor Tuning Data
WO 51685930 01, MO-1001-50 MOV Maintenance and Inspection
WO 51685930 02, MO-1001-50 Post Maintenance Test
WO 00164837 01, Replace Motor on MO-1001-50
Procedure 3.M.3-51, Revision 26, Electrical Termination Procedure
Procedure 8.Q.3-8.2, Revision 15, Limitorque Type HBC, SB/SMB-0 through SB-SMB-3 Valve Operator Maintenance
WO 00164837 02, Post Work Test MO-1001-50
CR-PNP-2009-02210, Post work Test Procedure for MO-1001-50 work cannot be located
CR-PNP-2009-02273, Discrepancies Identified in Work Package 51685930
EC12474 for Motor Replacement for MO-1400-25A
WO 516865 01, Stem Lube for MO-1400-25A
Procedure 3.M.3-24.15, Revision 7, Valve Stem Lubrication
WO 00164834, Replace Motor on MO-1400-25A
CR-2007-0844, Motors with Magnesium Rotors Should be replaced
WO 5153464 202, Replacement of the “B” 125VDC Battery Bank
Procedure 8.9.8.2, Revision 20, “B” 125VDC Battery Acceptance, Performance or Service Test
CR-PNP-2009-1705, The End of First Step Voltage Value was not met during the Service Discharge Test 8.9.8.2
Procedure 3.M.3-25.3, Revision 13, Resistance Testing and Torquing of Station Batteries
Procedure 3.M.3-51, Revision 26, Electrical Termination Procedure
WO 00169979 01, 8.9.8.2B 125V D1 Battery Acceptance or Performance Test
TS 4.9.A.2, Station and Switchyard Batteries

CR-PNP-2009-2538, Incorrect length of time chosen for battery equalizing time
WO 001485909 01, EC12778, Replace Fan Unit VAC 205D1 in RFO 17
Procedure 3.M.3-17.1, Revision 23, Raychem or Taping of 1000 Volt and Under Cables and/or Wires
Procedure 3.M.3-4, Revision 53, Insulation Test
EC12133, Evaluate and Incorporate Replacement Fan Housing and Fan Wheel Changes for VAC-205's Howden Buffalo Quote ENT-DF-BH-060908
CR-PNP-2009-2618, Post Maintenance Tests missing from Work Order
Technical Specifications
WO 163704, Perform CRD/HCU Post Maintenance Test
WO 51678259, 3.M.4-76 Scram Inlet & Outlet Valves CV126 & CV127 (HCU-38-07)
WO 51686316, 3.M-4-76 Scram Inlet & Outlet Valves CV126 & CV127 (HCU-22-47)
WO 51527475, Remove and Replace Pump Internals, P201, Dust Maintenance
Power Maneuver Load Profile 5/12/09 Startup
Temporary Procedure TP08-017, Revision 1, Functional Test Following P-201A Rotating Element, Cover and Motor Replacement
Procedure 2.2.84, Revision 100, Reactor Recirculation System
Procedure 8.F.42, Revision 14, Recirculation System Instrumentation Calibration
WO 51531741 02, Replace Reactor Head Vent Valves, EC8218
EC8218, Replace Reactor Head Vent Valves
EN-MA-102, Attachment 9.2, Inspection Report of Electrical Portion of EC8218
Technical Manual for Target Rock Solenoid Operated Valve, Model 082511-001
Procedure 1.13.1, Revision 6, Postwork Test Matrices and Guidelines
Procedure 3.M.1-30, Revision 10, Postwork Testing Guidance

Section 1R20

NUREG-0612, Control of Heavy Loads at Nuclear Power Plants
Procedure 3.M.1-45, Revision 7, Outage Shutdown Risk Assessment
NUREG-1449, Shutdown and Low Power Operation at Commercial Nuclear Power Plants in the United States
RFO-17, Just-In-Time Training
NRC Information Notice 93-72, Observations from Recent Shutdown Risk and Outage Management Pilot Team Inspections
NRC Generic Letter 98-02, Loss of Reactor Coolant Inventory and Associated Potential for Loss Of Emergency Mitigation Functions while in a Shutdown Condition
NRC Information Notice 2005-16, Outage Planning and Scheduling Impacts on Risk
Temporary Procedure TP08-027, Revision 0, Administrative Controls for Recirculation Pump Motor Project P-201A Heavy Load Handling Activities in the Drywell
CR-PNP-2009-02015, Station Risk Review Refers to TS 3.10D, which no longer exists
Pilgrim Relief Request 19, Jet Pump Instrumentation Nozzle Weld, RPV-N9A-1 Repair Plan
Procedure 2.2.19.1, Revision 28, Residual Heat Removal System – Shutdown Cooling Mode of Operation
EN-OP-104, Revision 3, Operability Determination
EN-LI-102, Revision 13, Corrective Action Process
Procedure 3.M.4-9, Revision 14, Inspection of the Drywell and Suppression Chamber
Procedure 3.M.1-51, Revision 5, Readiness for Restart Reviews

Entergy Memorandum dated May 15, 2009, Results of UT Examination of Jet Pump Instrumentation Nozzle RPV-N9A-1 Weld Overlay (TAC No. ME1151)
CR-PNP-2009-2414, Drywell Cleanup Should Have Occurred Days Earlier
CR-PNP-2009-2424, Locking Nut Adjusted By Engineer without a Work Order
CR-PNP-2009-2413, C-19B Failed Particulate functional check with C-19A Out-of-Service
CR-PNP-2009-2421, C-19B Relay Chattering
CR-PNP-2009-2386, PV-9239 300# Regulator Connecting Link Assembly Nut Tightened by Engineer
CR-PNP-2009-2408, Results of Drywell Inspection
RFO-17 Daily Outage Shift Turnover Sheets
Procedure 2.1.1, Revision 167, Startup from Shutdown
Procedure 2.1.14, Revision 98, Station Power Changes
Procedure 2.1.5, Revision 109, Controlled Shutdown from Power
Procedure 2.1.7, Revision 52, Vessel Heatup and Cooldown
Contingency Plan for Freeze Seal on HCU50-39
Part 9900: Technical Guidance, Mechanical Freeze Plugs
EN-I-IU-103, Revision 0, Human Performance Error Reviews
CR-PNP-2009-1828, Control Rod Blade Moved to the Wrong Location
Critical Step Review for Bridge Operation

Section 1R22

Procedure 8.7.1.6, Revision 25, Local Leak Rate Testing of the Main Steam Isolation Valves
CR-PNP-2009-01598, Outboard Main Steam Isolation Valve “D” Failed Local Leak Rate Testing
MSIV As-Found Leak Rate @ 23 psig
TS 4.7.A.4, Primary Containment Integrity Surveillances
CR-PNP-2009-02016, Loss of Offsite Power Test Acceptance Criteria Not Met
Procedure 1.3.34, Revision 116, Operations Administrative Policies and Processes
Procedure 8.M.3-1, Special Test for Automatic ECCS Load Sequencing of Diesels and Shutdown Transformer with Simulated Loss of Offsite Power and Special Shutdown Transformer Load Test
Procedure 9.9, Revision 64, Control Rod Scram Insertion Time Evaluation
Control Rod Scram Testing Data Forms
Technical Specifications Amendment 279, Revise Requirements for Control Rod Scram Insertion Times
CR-PNP-2008-00748, Control Rod 22-07 Identified as a Slow Rod
Procedure 2.1.8.5, Revision 21, Reactor Vessel Pressurization and Temperature Control for Class 1 System Leakage Test
Procedure 8.7.1.4.1, Revision 19, Primary Containment Integrated Leak Rate Test Preparations
Procedure 8.7.1.4.2, Revision 17, Primary Containment Integrated Leak Rate Test
CR-PNP-2009-02614, Documentation of Lifted Leads and Jumpers could not be found
CR-PNP-2009-02677, ILRT Test Procedure Discrepancies
CR-PNP-2009-02452, HPCI run allowed reactor pressure to drop significantly
Procedure 8.5.4.3, Revision 48, High Pressure Coolant Injection Operability Demonstration And Flow Rate Test at 150 psig
CR-PNP-2009-02856, Leakage Rate Test Results Discrepancies observed

Section 1EP6

Procedure EP-IP-100.1, Revision 5, EALs
Controller Manual Combined Functional Drill (09-02), May 28, 2009
EP Performance Indicator Reporting Form

Section 2OS1

Procedures:

EN-RP-100	Rad Worker Expectations, Revision 3
EN-RP-104	Radiation Work Permits, Revision 4
EN-RP-106	Radiological Survey Documentation, Revision 2
EN-RP-108	Radiation Protection Postings, Revision 7
EN-RP-110	ALARA Program, Revision 5
EN-RP-131	Air Sampling, Revision 6
EN-RP-150	Radiography and X-Ray Testing, Revision 5
6.1-220	Radiological Controls for High Risk Evolutions, Revision 5

Condition Reports:

2008-03470, 03481, 03498, 03575, 03576, 03604, 03632, 03639, 03733, 03759, 03845, 04077

2009-00665, 01057, 01115, 01138, 01139, 01379, 01458, 01459, 01462, 01474, 01483, 01487, 01603, 01626, 01666, 01682, 01693, 01698, 01723, 01725, 01821, 01885

Radiation Work Permits:

2009-0016, 0039, 0050, 0051, 0052, 0053, 0054, 0055, 0056, 0064, 0065, 0066, 0067, 0068, 0073, 0090, 0093, 5016, 0035, 0040, 0042, 0043, 0049, 0063, 0069, 0070, 0074, 0079, 0083, 0085, 0086, 0100, 0101, 0105, 0107, 0501

Other

2007 Radiation Protection Program Annual Report

Section 2OS2

Procedures:

EN-RP-110	ALARA Program, Revision 5
6.1-220	Radiological Controls for High Risk Evolutions, Revision 5

Condition Reports:

2008-03562, 03631, 03758, 03675
2009-00045

ALARA Managers Committee Meeting Minutes

RP09-04, RP09-07, RP09-08, RP09-09

ALARA Subcommittee Meeting Minutes

PM09-01, PM0902, PM09-03, PM09-04, PM09-05, PM09-06, PM09-07, PM09-08

Miscellaneous Records & Reports:

Hot Spot Master Tracking list as of 3/31/2009
Pilgrim Station 5 Year ALARA Plan
PNPS RFO 17 Chemistry Start Up / Shutdown and Outage Control Plan

Section 4OA1

NRC Performance Indicator Report for Pilgrim
NEI 99-02, Revision 5, Regulatory Assessment Performance Indicator Guidelines
Licensee Event Reports Issued from the 1st quarter 2008 through the 1st quarter 2009
TS 3.6.B, Coolant Chemistry
Pilgrim Chemistry Records for Reactor Coolant System Radioactivity (Total Iodine per ml of Water)
Control Room Logs
PI Data Sheets
Procedure EN-LI-114, Revision 4, Performance Indicator Process

Section 4OA2

CR-PNP-2009-02618, Drywell Cooler Missing PMT
CR-PNP-2009-02648 and -02676, Head Vent Valve Missing PMT
CR-PNP-2009-02861, HPCI TCTD Missing PMT
CR-PNP-2009-2778, PMT Low Level Trend
CR-PNP-2009-1468, TMOD Tags Missing
CR-PNP-2009-2085, TMOD Tag Missing
CR-PNP-2009-2187, TMOD Control Room Drawing Not Updated
CR-PNP-2009-3064, TMOD Low Level Trend
CR-PNP-2008-00946, Inaccurate Assessment of Station Risk
CR-PNP-2008-03792, Failure to Conduct at Risk Review for Out-of-Service Equipment
RFO-17 Outage Risk Assessment Report
RFO-17 Daily Shutdown Risk Assessments
Non-Cited Violation (NCV) 05000293/2008002-01, Inadequate Risk Assessment for Emergent Maintenance on A5 Emergency Bus Undervoltage Relays
NCV 05000293/2008005-01, Failure to Conduct a Risk Assessment for Emergent Maintenance On the High Pressure Coolant Injection System

Section 40A3

Technical Specification 3.9, Auxiliary Electrical System
Control Room Logs
Procedure 2.4.A.23, Revision 12, Loss/Degradation of 23KV Line
CR-PNP-2009-1951, Loss of 23KV Power Supply to the Shutdown Transformer
Operations and Maintenance Event Timelines
CR-PNP-2009-02265, Installation Sequence for Condensate Pump Lantern Ring Necessitated Additional Engineering and Maintenance Resources
WO 00135745, Task 1, Condensate Pump "B"
Personnel Statements
CR-PNP-2009-1581, Inadequate Tagout for "B" Condensate Pump
Condensate and Feed Maintenance Rule Basis Document
CR-PNP-2009-2300, Nuclear Safety Concern with "B" Condensate Pump Work
"B" Condensate Pump Tagout
Control Room Narrative Logs
Outage Control Center Log
Tagout Log
CR-PNP-2009-02294, Separator is hung up on the 135 degree cliff hanger
EN-DC-149, Revision 2, For Document 0000-0101-7465 Confirmation of the Acceptability of the Pilgrim Shroud Repair Assemblies for Future Operation Following 2009 Refueling Outage
EN-DC-149, Revision 2, For Document 0000-0101-0186/0000-0101-7487, PNPS Stress Evaluation of Tie Rod Support Nut at 135 degree in 2009 Outage
EN-DC-149, Revision 2, For Document 000-0101-7898, PNPS FIV Evaluation of 135 degree Tie Rod with Loss of Upper Mid-Lateral Support
EN-LI-100, Revision 8, For TP 09-009, Shroud Tie Rod Support Re-Positioning
PNPS-TRR-01, Revision 5, Attachment 3, Upper Support Gap Reduction
UFSAR Chapter 3.3.4.1.1, Core Shroud
EN-WM-104, Revision 0, On-Line Risk Assessment of Loss of both Steam Jet Air Ejector Radiation Monitors
Procedure 8.C.34, Revision 49, Operations Technical Specifications Requirements for Inoperable Systems/Components
CR-PNP-2009-2515, Pre-Treatment Radiation Monitors Declared Inoperable Due to Low Flow
Radiation Monitoring Maintenance Rule Basis Document
TS 3.8.1, Main Condenser Offgas
CR-PNP-2009-02497, RCO Sample on 5/19/09 resulted in alarm setpoints being less than zero
CR-PNP-2009-02508, Night Shift Chemistry Technicians Forced to Perform an Offgas Sample
Pilgrim Active LCO Log
Chemistry Logs for SJAE Release Rate
PNPS Offsite Dose Calculation Manual
Licensee Amendment 177, dated July 31, 1998
LER 2008-006-00, Automatic Scram Resulting from Switchyard Breaker Fault during Winter Storm
CR-PNP-2008-3962, Reactor Scram Due to Switchyard Fault
CR-PNP-2008-3963, Failure of Y3 and Y4 During Plant Trip
LER 2008-007-00, Momentary Loss of all 345KV Off-Site Power to the Startup Transformer from Switchyard Breaker Fault
CR-PNP-2008-3980, Loss of 345KV off-site power on 12/20/2008

LIST OF ACRONYMS

AC	Alternating Current
ALARA	As Low As Reasonably Achievable
AOG	Augmented Offgas
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Plan
CEDE	Committed Effective Dose Equivalent
CR	Condition Reports
DBG	Double Blade Guide
DRP	Division of Reactor Projects
EC	Engineering Change
EPD	Electronic Personal Dosimeter
FME	Foreign Material Exclusion
HPCI	High Pressure Coolant Injection
IMC	Inspection Manual Chapter
INR	Indication Notification Reports
IR	Inspection Report
ISI	In-service Inspection
IVVI	In-Vessel Visual Inspection
LER	Licensee Event Report
MG	Motor Generator
MT	Magnetic Particle Test
NDE	Non-Destructive Examination
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PI	Performance Indicator
PMT	Post Maintenance Tests
PNPS	Pilgrim Nuclear Power Station
RFO	Refueling Outage
RHR	Residual Heat Removal
RPV	Reactor Pressure Vessel
PT	Liquid Penetrant Test
RWP	Radiation Work Permit
SJAE	Steam Jet Air Ejector
SFP	Spent Fuel Pool
TCTD	Turbine Controls Testing Device
TS	Technical Specification
TSO	Transmission System Operator
UFSAR	Updated Final Safety Analysis Report
WO	Work Order