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

November 6, 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 05000293/2009004

Dear Mr. Bronson:

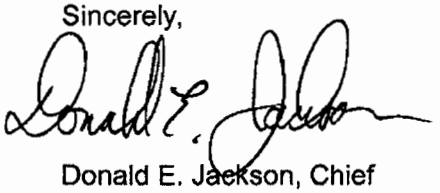
On September 30, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Pilgrim Nuclear Power Station (PNPS). The enclosed inspection report documents the results, which were discussed on October 14, 2009, with Mr. Stephen Bethay and other members of your staff.

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 two NRC identified findings and one self-revealing finding of very low safety significance (Green). The findings were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs), consistent with Section VI.A.1 of the NRC's Enforcement Policy. If you contest any NCV, 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 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 enclosure, 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,



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

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

Enclosure: Inspection Report 05000293/2009004
w/Attachment: Supplemental Information

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, 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

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-293
License No:	DPR-35
Report No:	05000293/2009004
Licensee:	Entergy Nuclear Operations, Inc.
Facility:	Pilgrim Nuclear Power Station (PNPS)
Location:	600 Rocky Hill Road Plymouth, MA 02360
Dates:	July 1, 2009 through September 30, 2009
Inspectors:	M. Schneider, Sr. Resident Inspector, Division of Reactor Projects (DRP) B. Smith, Resident Inspector, DRP G. Newman, Project Engineer, DRP W. Raymond, Sr. Resident Inspector, DRP S. Rich, Nuclear Safety Professional Development Program Engineer, DRP R. Rolph, Health Physicist, Division of Reactor Safety (DRS) E. Huang, Reactor Inspector, DRS
Approved By:	Donald E. Jackson, Chief Projects Branch 5 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000293/2009004; 07/01/2009-09/30/2009; Pilgrim Nuclear Power Station; Maintenance Effectiveness, Operability Evaluations, and Event Follow-up

The report covered a three-month period of inspection by resident and region based inspectors. Three Green findings were identified, which were determined to be non-cited violations (NCVs). The significance of 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: Mitigating Systems

- Green. The inspectors identified a non-cited violation (NCV) of very low safety significance (Green) of 10 CFR Part 50.65 paragraph (b), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy did not include all aspects of the emergency lighting system into the Pilgrim Maintenance Rule scoping document. Specifically, Entergy did not include the security diesel generator in the scoping document, which provides backup power to emergency yard lighting, and is required to meet Appendix R emergency lighting requirements. Entergy has entered the issue into their corrective action program (CAP) to add the security diesel generator and normal power supplies for yard emergency lighting into the Maintenance Rule scoping document.

  The finding is more than minor because it is associated with the Procedure Quality attribute of the Mitigating Systems cornerstone, in that, the issue affected emergency lighting reliability in support of the accomplishment of EOPs. The finding was determined to be of very low safety significance (Green) because the finding did not involve a design or qualification deficiency resulting in loss of operability or functionality, did not result in a loss of system safety function, and did not screen as potentially risk significant due to external initiating events. The finding does not have a cross-cutting aspect since the failure to scope this equipment into the Maintenance Rule was not recognized during the initial Maintenance Rule scoping activities and as a result, is not indicative of current performance. (Section 1R12)

- Green. The inspectors identified a NCV of very low safety significance (Green) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," because Entergy procedures directed operators to take corrective actions for degraded conditions prior to assessing operability of the affected system. Specifically, operators conducted corrective actions (backwashing) of the "B" RBCCW/SSW heat exchanger (HX) prior to assessing operability when the HX failed to meet the procedural differential pressure (dP) acceptance criteria. Entergy entered this issue into their CAP (CR-PNP-2009-03596) and performed a past operability evaluation which showed that the HX would have been able to meet its intended function during accident conditions.

The finding is more than minor because if left uncorrected, it has the potential to lead to a more significant safety concern. The finding was determined to be of very low safety significance (Green) because the finding did not involve a design or qualification deficiency resulting in loss of operability or functionality, did not result in a loss of system safety function, and did not screen as potentially risk significant due to external initiating events. The inspectors determined that this finding had a cross-cutting aspect in the "Resources" component of the Human Performance cross-cutting area because Entergy did not provide procedures adequate to ensure nuclear safety. [H.2(c)] (Section 1R15)

- Green. A self-revealing, NCV of very low safety significance (Green) of Technical Specification (TS) 5.4.1, "Procedures," was identified for a procedure error which resulted in the inadvertent isolation of the High Pressure Coolant Injection (HPCI) system. Specifically, Entergy procedure 8.M.2-2.6.3, "HPCI High Steam Line Temperature," which describes the conduct of continuity checks of temperature switches, was not adequately implemented and caused the HPCI system to isolate. Corrective actions have included revising the procedure to include a step requiring concurrent verification for resetting the temperature switch, and a wait time of five minutes before Entergy proceeds to test the next switch.

  This finding is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to require a Phase II analysis because the finding resulted in an actual loss of system safety function. Using the Pilgrim pre-solved initiating event sequences and an exposure time of less than three days with the HPCI system unavailable, the Phase II estimation determined this finding was of very low safety significance (Green). The inspectors determined that this finding had a cross-cutting aspect in the "Work Practices" component of the Human Performance cross-cutting area because Entergy did not conduct effective self or peer checks to ensure that continuity checks were adequately performed. [H.4(a)] (Section 4OA3)

Other Findings

None.

REPORT DETAILS

Summary of Plant Status

Pilgrim Nuclear Power Station (PNPS) began the inspection period operating at 100 percent reactor power. On July 13, 2009, operators reduced power to 47 percent for a thermal backwash of the main condenser and returned to 100 percent reactor power on July 14, 2009. On August 25, 2009, operators reduced power to 49 percent for a thermal backwash and restored the plant to 100 percent reactor power on August 26, 2009, and the plant 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 External Flooding

a. Inspection Scope (1 sample)

The inspectors reviewed the Pilgrim plant design and procedures, during the week of August 3, 2009, for coping with the design basis probable maximum flood. The inspectors reviewed the "Storm Flooding Protection" section of the Updated Final Safety Analysis Report (UFSAR) and operating procedures for mitigating external flooding conditions during severe weather. The inspectors also performed a walkdown of the site to determine if all susceptible flooding conditions had been considered in the plant design, and whether operating procedures could be reasonably carried out to mitigate flooding concerns. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Adverse Weather (Site/Imminent)

a. Inspection Scope (1 sample)

On the afternoon of August 21, 2009, Hurricane Bill was tracking to impact the Pilgrim plant during the upcoming weekend. The inspectors reviewed Entergy's preparations for the hurricane and the high winds expected to accompany the storm. The inspectors reviewed Entergy's severe weather procedures including: operations during severe weather, coastal storm preparation, and high winds (hurricane) procedures. The inspectors toured the refueling floor to verify that steps in Entergy's severe weather procedure of securing loose material could be reasonably performed. The inspectors also conducted a tour of the plant grounds and the switchyard to determine if loose debris or other material could become airborne in the presence of high winds and thereby potentially impact safety related equipment. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.3 Adverse Weather (Site/Imminent)

a. Inspection Scope (1 sample)

On August 28, 2009, Tropical Storm Danny was tracking to impact the Pilgrim plant within the next two days. The inspectors reviewed Entergy's preparations for the tropical storm and the high winds expected to accompany the storm. The inspectors reviewed Entergy's severe weather procedures including: operations during severe weather, coastal storm preparation, and high winds (hurricane) procedures. The inspectors also reviewed the stated plant risk given the external risk increase from the storm, and compared this to equipment that was out of service or planned to be taken out of service to determine if there was an overall increase in risk. The inspectors conducted a tour of the plant grounds and the switchyard to determine if loose debris or other material could become airborne in the presence of high winds and thereby potentially impact safety related equipment. 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 Equipment Alignment (Quarterly) (71111.04Q)

a. Inspection Scope (3 samples)

The inspectors performed three partial system walkdowns during this inspection period. 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 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 documents reviewed during this inspection are listed in the Attachment. The following systems were reviewed based on their risk significance for the given plant configuration:

- "A" Emergency Diesel Generator (EDG) while "B" EDG was out-of-service;
- "A" Residual Heat Removal (RHR) System following High Pressure Coolant Injection System (HPCI) testing and "A" RHR torus cooling; and
- "B" EDG while the shutdown transformer was out-of-service.

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 Control Rod Drive (CRD) system and associated Hydraulic Control Units (HCU) 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, pressure indication on individual HCUs, and control switches, were aligned and within the appropriate range 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 performed a review of outstanding maintenance work orders to determine whether the deficiencies significantly affected the CRD system function. The inspectors also reviewed recent condition reports to determine whether CRD 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)

.1 Fire Protection (Quarterly) (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 specified 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:

- Battery Room "A," Fire Area 1.9, Fire Zone 2.3;
- Refueling Floor, Fire Area 1.9, Fire Zone 1.20;
- RHR "A" Quad, Fire Area 1.9, Fire Zone 1.1;
- "B" Train EDG Room, Fire Area 1.10, Fire Zone 4.1; and
- Condensate Pumps Area, Fire Area 1.10, Fire Zone 2.8.

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observation (71111.05A)

a. Inspection Scope (1 sample)

The inspectors observed an announced fire drill in the Operations and Maintenance Building Emergency & Plant Information Computer Room. The fire drill was performed in accordance with plant procedure ENN-DC-189, "Fire Drills," Revision 1. The inspectors observed performance of the fire brigade personnel to determine whether Entergy's fire fighting pre-plan strategies were utilized, the pre-planned drill scenario was followed, and the drill objectives were met. The inspectors confirmed that protective clothing and breathing apparatus were donned; sufficient fire fighting equipment was brought to the scene; the fire brigade leader's fire fighting directions were clear; and communications with the plant operators and between fire brigade members were effective. The inspectors observed the drill critique to determine whether areas to improve fire brigade performance were identified. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

.1 Internal Flooding Inspection

a. Inspection Scope (1 sample)

The inspectors walked down the "A" RHR Quadrant, 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.

.2 Underground Cable Inspection

a. Inspection Scope (1 sample)

The inspectors reviewed a sample of internal flood protection measures regarding cables located in underground manholes. The inspectors selected an inspection of cable pits 2B and 4 that contain underground safety-related power cables near the station blackout diesel generator and the main stack, respectively. The inspections monitored Entergy's maintenance activities and reviewed photographs of each manhole to inspect its as-found condition. The inspectors assessed the condition of power cables, splices and supports in the manhole and verified that cables were not submerged. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07A)

a. Inspection Scope (1 sample)

The inspectors reviewed Entergy's program for maintenance, testing, and monitoring of risk significant heat exchangers (HXs) to assess the capability of the HXs to perform their design functions. The inspectors assessed whether the HX program conformed to Entergy's commitments related to NRC Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment." In addition, the inspectors evaluated whether any potential common cause heat sink performance problems could affect multiple HXs in mitigating systems or result in an initiating event. Based on risk significance and prior inspection history, the "B" reactor building closed cooling water system HX was selected for review. The documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope (1 sample)

The inspectors observed licensed operator "as-found," simulator training on August 18, 2009. The inspectors observed crew response to a small-break loss of coolant accident concurrent with an anticipated transient without a scram. The inspectors assessed the licensed operators' performance to determine if the training evaluators adequately addressed observed deficiencies. The inspectors reviewed the applicable training objectives from the scenario to determine if they had been achieved. In addition, the inspectors performed a simulator fidelity review to determine if the arrangement of the simulator instrumentation, controls, and tagging closely paralleled that of the control room. 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 (3 samples)

The inspectors reviewed the three samples 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 paragraph (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 paragraph (a)(1) or (a)(2); and (8) appropriateness of performance criteria for structures, systems, and components (SSCs)/functions classified as paragraph (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified as paragraph (a)(1). The documents reviewed during this inspection are listed in the Attachment. Items reviewed included the following:

- Standby Liquid Control;
- Process Radiation Monitors; and
- Security Diesel Generator Emergency Lighting.

b. Findings

Introduction: The inspectors identified a non-cited violation (NCV) of very low safety significance (Green) of 10 CFR Part 50.65 paragraph (b), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy did not include all aspects of the emergency lighting system into the Pilgrim Maintenance Rule scoping document. Specifically, Entergy did not include the security diesel generator in the scoping document, which provides backup power to emergency yard lighting, and is required to meet Appendix R emergency lighting requirements.

Description: The Pilgrim security diesel generator is credited in the Fire Hazards Analysis (FHA) as the back-up power source for yard lighting, which is utilized to meet safe shutdown emergency lighting requirements. Safe shutdown emergency lighting has been determined to fall within the scope of the Maintenance Rule as discussed in 10 CFR Part 50.65 paragraph (b) scoping requirements for non-safety related structures, systems, or components (SSCs) used in plant emergency operating procedures (EOPs). The inspectors identified that the security diesel generator was not included within the scope of the Maintenance Rule for this function at Pilgrim. Entergy subsequently conducted a Maintenance Rule scoping evaluation utilizing Entergy procedure EN-DC-204, "Maintenance Rule Scope and Basis," Revision 1, and determined that the security diesel generator should be scoped under the consideration of non-safety related items used in the EOPs.

Analysis: The inspectors determined that Entergy's failure to include the security diesel generator in the Maintenance Rule scoping document when it was credited as a backup power supply for yard emergency lighting was a performance deficiency within Entergy's ability to foresee and correct and should have been prevented. Traditional Enforcement did not apply, as the issue did not have actual or potential safety consequence, had no willful aspects, nor did it impact the NRC's ability to perform its regulatory function. The finding is more than minor because it is associated with the Procedure Quality attribute of the Mitigating Systems cornerstone, in that, the issue affected emergency lighting reliability in support of the accomplishment of EOPs. A review of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Minor Examples," revealed that example 7.d applied to this finding. Specifically, the finding is more than minor because the security diesel generator has had a history of surveillance procedure failures due to oil and coolant temperatures being outside of normal bands, and there have been long term equipment issues including intake louver issues, thermostat performance, radiator hose leaks, and fuel level indicator problems. The inspectors determined the significance of the finding using IMC 0609.04,

"Phase 1 – Initial Screening and Characterization of Findings." The finding was determined to be of very low safety significance (Green) because the finding did not involve a design or qualification deficiency resulting in loss of operability or functionality, did not result in a loss of system safety function, and did not screen as potentially risk significant due to external initiating events.

The finding does not have a cross-cutting aspect since the failure to scope this equipment into the Maintenance Rule was not recognized during the initial Maintenance Rule scoping activities and, as a result, is not indicative of current performance. In addition, the current Entergy Maintenance Rule scoping procedure includes a review for non-safety related SSCs which support EOP implementation and specifically, emergency lighting. This process identified the need to include the security diesel generator into the Maintenance Rule scoping document when this issue was identified by the NRC and then evaluated by Entergy.

Enforcement: 10 CFR Part 50.65, paragraph (b), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," requires, in part, that the scope of the monitoring program includes non-safety related structures, systems, or components that are relied upon to mitigate accidents or transients or are used in plant EOPs. Contrary to the above, during the initial Maintenance Rule scoping, Entergy did not scope the function of the security diesel generator to provide the back-up power source to yard emergency lighting into the Pilgrim Maintenance Rule scoping document. Entergy's corrective actions have included a corrective action to add security diesel generator and normal power supplies for yard emergency lighting into the Maintenance Rule scoping document. Because this finding is of very low safety significance (Green) and has been entered into the corrective action program (CAP) (CR-PNP-2009-02852), this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **NCV 05000293/2009004-01, Failure to Include Security Diesel Generator into the Maintenance Rule Scoping Document**

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

a. Inspection Scope (3 samples)

The inspectors evaluated three maintenance risk assessments for planned 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:

- Yellow risk with the "B" EDG generator out of service;
- Yellow risk with the HPCI System out of service during high steam flow logic testing; and

- Yellow risk with the station blackout diesel generator and the shutdown transformer out of service.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (4 samples)

The inspectors reviewed four 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 Entergy's 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-2009-03312, "Steam-Water Mix Identified during "B" Residual Heat Removal Piping Temperature and Pressure Monitoring Procedure;"
- CR-PNP-2009-03503, "Turbine Bypass Valve Testing introduces possible vulnerability to Turbine Stop Valve Closure Scram being bypassed;"
- CR-PNP-2009-03440, "B Reactor Building Closed Cooling Water (RBCCW)/Salt Service Water (SSW) Heat Exchanger (HX) Failed its Differential Pressure (dP) Test;" and
- CR-PNP-2009-02536, "Elevated Drywell Temperatures Operational Decision Making Issue."

b. Findings

Introduction: The inspectors identified a NCV of very low safety significance (Green) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," because Entergy procedures directed operators to take corrective actions for degraded conditions prior to assessing operability of the affected system. Specifically, when the "B" RBCCW/SSW HX exceeded procedural dP acceptance criteria, operators conducted backwashing of the HX as directed by Entergy procedure 2.2.32, Attachment 7, "Salt Service Water System," prior to assessing operability. In addition, Entergy procedure 8.5.3.14, "SSW Flow Rate Operability Test," specifically directs backwashing of the HX as a corrective action prior to assessing operability when the HX fails to meet the dP acceptance criteria.

Description: The "B" RBCCW/SSW HX failed a weekly dP test on both August 5, 2009 and August 12, 2009 due to biofouling problems in the intake. Per Entergy procedure 2.2.32, operators backwashed the "B" RBCCW/SSW HX to lower the dP into an acceptable range. However, operators did not initially assess the operability of the HX when the HX initially failed the dP surveillance. Upon followup, the inspectors determined that Entergy procedure 8.5.3.14 also specifically directs operators to take corrective

actions (backwashing) prior to assessing operability. The inspectors determined that taking corrective actions before assessing operability could preclude the identification of a more significant safety concern if the system was degraded to the point of affecting operability. Entergy entered this issue into their CAP (CR-PNP-2009-03596) and performed a past operability evaluation which showed that for actual system conditions (i.e. temperature of the water, measured dP and flow rate), the HX would have been able to meet its intended function during accident conditions.

Analysis: The inspectors determined that the procedural guidance to take corrective actions prior to assessing operability of degraded HXs when the HX dP exceeded predetermined values specified in the procedure was a performance deficiency within Entergy's ability to foresee and correct and should have been prevented. Traditional Enforcement did not apply, as the issue did not have actual or potential safety consequence, had no willful aspects, nor did it impact the NRC's ability to perform its regulatory function. The finding is more than minor because if left uncorrected, it has the potential to lead to a more significant safety concern. Specifically, taking corrective actions (backwashing) before assessing operability precludes operators from identifying that the degraded condition could result in an inoperable system with the need to enter Technical Specification action statements.

A review of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Minor Examples," revealed that no minor examples were applicable to this finding. The inspectors determined the significance of the finding using IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The finding was determined to be of very low safety significance (Green) because the finding did not involve a design or qualification deficiency resulting in loss of operability or functionality, did not result in a loss of system safety function, and did not screen as potentially risk significant due to external initiating events.

The inspectors determined that this finding had a cross-cutting aspect in the "Resources" component of the Human Performance cross-cutting area because Entergy did not provide procedures adequate to ensure nuclear safety. Specifically, site procedures directed operators to take corrective actions (backwashing) prior to assessing operability of a degraded HX, which could mask a more significant safety concern. (H.2(c))

Enforcement. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that procedures shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. Contrary to the above, on August 5 and 12, 2009, Entergy procedures directed operators to backwash degraded HXs prior to assessing operability when the HX failed dP surveillance acceptance criteria. Corrective actions include Entergy initiating an evaluation for revision of applicable procedures to incorporate dP graphs for the assessment of operability of degraded HXs. Because this finding is of very low safety significance (Green) and has been entered into the (CAP) (CR-PNP-2009-03596), this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **NCV 05000293/2009004-02, Inadequate Procedures Result in the Failure to Evaluate Operability of the "B" RBCCW/SSW Heat Exchanger.**

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (7 samples)

The inspectors reviewed seven 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 CAP for resolution. The documents reviewed during this inspection are listed in the Attachment. The following maintenance activities and their post-maintenance tests were evaluated:

- Replace "A" Standby Liquid Control Pressure Relief Valve;
- Disassemble, Inspect, and Repair "B" Control Rod Drive Pump;
- Calibration of Stator Cooling Water Temperature Control Valve TCV-Y-07;
- Refurbish Actuator on Secondary Containment Damper AO-N-97;
- Salt Service Water Pump "E" Breaker testing;
- Station Blackout Diesel Generator Maintenance; and
- Shutdown Transformer Preventive Maintenance.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (5 samples)

The inspectors observed five surveillance activities and/or reviewed test data 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 TS requirements. The inspectors also evaluated whether conditions adverse to quality were entered into the CAP for resolution. The documents reviewed during this inspection are listed in the Attachment. The following surveillance tests were evaluated:

- Drywell Leakage Detection (Reactor Coolant System);
- Standby Liquid Control Quarterly Testing (Inservice Testing (IST));
- HPCI Biennial-Comprehensive testing (IST);
- Station Blackout Diesel Generator Testing (Routine); and
- "A" EDG Initiation by Loss of Offsite Power Logic (Routine).

b. Findings

Introduction. An unresolved item (URI) was opened related to the failure of the Standby Liquid Control (SBLC) "A" pump relief valve during system testing. The performance deficiency cannot be determined until the definitive cause(s) of the issue are known.

Description. On July 10, 2009, during the quarterly surveillance on the "A" SBLC train, the pump relief valve, PSV-1105A, lifted and failed to reseat, which diverted flow such that the system could not meet its TS acceptance criteria. The train was declared inoperable, the relief valve was replaced, and the system was restored to service on July 12, 2009. This issue has been entered into Pilgrim's CAP (CR-PNP-2009-03088) and an apparent cause evaluation (ACE) was conducted. However, Entergy has determined that the ACE may not definitively address the cause(s) of the SBLC train failure. The inspectors require Entergy's final ACE in order to evaluate whether or not a performance deficiency exists. **URI 05000293/2009004-03, Failure of the "A" Standby Liquid Control Train**

1EP6 Drill Evaluation (71114.06)

Cornerstone: Emergency Preparedness

a. Inspection Scope (1 sample)

The inspectors observed licensed operator "as-found" simulator training on August 18, 2009. The inspectors evaluated the operating crew activities related to an accurate and timely classification and notification of a site area emergency. Additionally, the inspectors assessed the ability of training evaluators to adequately address operator performance deficiencies identified during the exercise. 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 – 7 samples)

a. During the period August 31 - September 10, 2009, the inspectors conducted the following activities to verify that the licensee 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 Part 20, relevant Technical Specifications, and the licensee's procedures. This inspection activity represents the completion of following seven samples relative to this inspection area.

- The inspectors identified the changing of Thermex F-2 filters as significant work and reviewed the associated controls and surveys of these areas to determine if controls were acceptable;

- The inspectors walked down the perimeter of the area to determine whether prescribed radiation work permit (RWP), procedure, and engineering controls were in place, whether licensee surveys and postings were acceptable, and whether air samplers were properly located;
- During job performance observation for changing F-2 filters, 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 seven condition reports related to access controls;
- The inspectors questioned workers to verify that radiation workers were aware of the significant radiological conditions in their workplace, their RWP precautions, their Electronic Personal Dosimeter (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;
- The inspectors observed radiation protection technician performance with respect to radiation protection work requirements; and
- The inspectors discussed with the Radiation Protection Manager (RPM) the status of changes in licensee procedural controls of high dose rate - high radiation areas and very high radiation areas.

b. Findings

No findings of significance were identified.

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

Cornerstone: Occupational Radiation Safety

a. Inspection Scope (6 samples)

During the period August 31 - September 10, 2009, the inspectors conducted the following activities to verify that Entergy was properly implementing operational, engineering, and administrative controls to maintain personnel exposure ALARA during a refueling outage and routine plant operation. Implementation of these controls was reviewed against the criteria contained in 10 CFR Part 20, applicable industry standards, and Entergy's procedures. This inspection activity represents the completion of six 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.

Radiological Work Planning

The inspectors reviewed Radiation Work Permits (RWP) in progress reviews and post job reviews for the five highest dose activities for the refueling outage (RFO 17). These RWPs included scaffold work, refueling activities, reactor recirculation pump 'A'

replacement, in-service inspection activities, and valve work. The inspectors verified actual accumulated dose did not exceed estimated exposure by more than 50%.

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.

Declared Pregnant Workers

The inspectors verified that Pilgrim had no declared pregnant workers during this assessment period.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation (71122.02)

Cornerstone: Public Radiation Safety

a. Inspection Scope (6 samples)

During the period July 21 - 23, 2009, the inspectors performed the following activities to verify that the radioactive material processing and transportation program complies with federal regulations. The inspectors reviewed shipment documentation and observed work activities.

Inspection Planning and System Walkdown

The inspectors reviewed the Pilgrim UFSAR description of the radioactive waste processing system. The inspectors reviewed the recent radiological release report for information on the type and amount of radioactive waste that was disposed of.

The inspectors verified that the scope of Pilgrim's audit program meets the requirements of NRC regulations. The inspectors walked down the radioactive material processing system to ensure it was as described in the UFSAR and in the Process Control Plan. The inspectors noted the Concentrator equipment was no longer in use and that the system is

isolated, drained, and dismantlement initiated.

On-Site Inspection

The inspectors reviewed the current processes for transferring radioactive waste into shipping/disposal containers to determine if appropriate waste stream mixing and sampling procedures, and methodology for waste concentration averaging provide representative samples of the waste product for the purpose of waste classification.

The inspectors reviewed documentation for six (6) radioactive shipments, the associated waste stream 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," analysis results, and the scaling factors used to calculate the activities for hard to detect isotopes. The inspectors reviewed Pilgrim's program to ensure that waste stream composition data accounts for changing operational parameters and thus remains valid between the annual or biennial sample analyses.

The inspectors reviewed the radioactive shipment documentation for compliance with NRC and Department of Transportation requirements. The inspectors interviewed a radwaste shipper to determine if the shipper was knowledgeable of shipping regulations.

Problem Identification and Resolution

The inspectors reviewed quality assurance audits, self assessments, and four condition reports related to the radioactive material processing and transportation program performed since the last inspection. The inspectors also reviewed the corrective action reports written against the associated condition reports.

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program (71122.03)

a. Inspection Scope (10 samples)

During the period August 31 - September 10, 2009, the inspectors conducted the following activities to verify that Pilgrim properly implemented REMP consistent with Pilgrim's Technical Specifications (TS) and/or Offsite Dose Calculation Manual (ODCM) and to ensure Pilgrim's surveys and controls are adequate to prevent the inadvertent release of licensed materials into the public domain. This inspection activity represents the completion of ten samples relative to this inspection area.

Inspection Planning and In-Office Inspection

The inspectors reviewed the current Annual Radiological Environmental Operating Report, and Pilgrim's assessment results, to verify that the REMP was implemented as specified by TS and the ODCM. The review included changes to the ODCM with respect to environmental monitoring commitments in terms of sampling locations, monitoring and measurement frequencies, land use census, inter-laboratory comparison program, and

analysis of data. The inspector also reviewed the ODCM to identify environmental monitoring stations. In addition, the inspector reviewed the following: Pilgrim's self-assessments and audits, event reports, inter-laboratory comparison program results, the UFSAR for information regarding the environmental monitoring program and meteorological monitoring instrumentation, and the scope of the audit program to verify that it met the requirements of 10 CFR Part 20.1101, "Radiation Protection Programs."

Onsite Inspection

The inspectors walked down 11 air particulate and iodine sampling stations; 1 composite water sampling location; and 15 thermoluminescent dosimeter (TLD)/optically stimulated dosimeter (OSL) monitoring locations and determined that they were located as described in the ODCM and determined that applicable equipment material condition to be acceptable.

The inspectors observed the collection and preparation of air samples, the collection of water samples and simulated TLD/OSL dosimeter sample collection. The inspectors verified that environmental sampling was representative of the release pathways as specified in the ODCM and that sampling techniques were in accordance with procedures.

Based on direct observation and review of records, the inspector verified that the primary meteorological tower instruments were operable, calibrated, and maintained in accordance with guidance contained in the UFSAR and Pilgrim's procedures. The inspectors verified that the meteorological data readout in the control room and recording instruments were operable.

The inspectors reviewed each event documented in the Annual Radiological Environmental Monitoring Report which involved a missed sample, inoperable sampler, lost TLD, or anomalous measurement for the cause and corrective actions and verified the appropriate events were documented in Pilgrim's corrective action program. The inspector conducted a review of Pilgrim's assessment of any positive sample results.

The inspectors reviewed any significant changes made by Pilgrim to the ODCM as the result of changes to the land use census or sampler station modifications since the last inspection. The inspector noted that no changes were made to the ODCM for the inspection period January 2007 through January 2009.

The inspectors reviewed the calibration and maintenance records for air samplers. The inspectors reviewed the following: the results of Pilgrim's vendor (Fitzpatrick Nuclear Power Plant) inter-laboratory comparison program to verify the adequacy of environmental sample analyses performed by Pilgrim's contractor; Pilgrim's vendor quality control evaluation of the inter-laboratory comparison program and the corrective actions for any deficiencies; and Pilgrim's determination of any bias to the data and the overall effect on the REMP. The inspectors reviewed the Quality Assurance audit results of the program to determine whether Pilgrim met the TS/ODCM requirements. The inspector verified that the appropriate detection sensitivities with respect to TS/ODCM are utilized for counting samples.

Unrestricted release of material from the Radiologically Controlled Area (RCA)

The inspectors observed personnel and equipment exiting the RCA at the main control point. The inspectors verified the adequacy of the controls and surveys used for release of materials and personnel from these areas.

The inspectors reviewed radiation monitoring instrumentation used for the release of material from the RCA to ensure it was appropriate for the radiation types present, and was calibrated with appropriate radiation sources. The inspectors reviewed Pilgrim's equipment to ensure the radiation detection sensitivities were consistent with the NRC guidance. The inspectors reviewed Pilgrim's procedure for release of material from the RCA.

Identification and Resolution of Problems

The inspectors reviewed Pilgrim's audits and self-assessments related to the radiological environmental monitoring program since the last inspection to determine if identified problems were entered into the CAP, as appropriate. Selected corrective action reports for the radiological environmental monitoring program and the radioactive material control program were reviewed since the last inspection to determine if identified problems accurately characterize the causes, and corrective actions were assigned to each commensurate with their safety significance.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator (PI) Verification (71151)

.1 Mitigating Systems

a. Inspection Scope (3 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, CRs, Licensee Event Reports (LERs), 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." The documents reviewed during the inspection are listed in the Attachment. The following performance indicators were reviewed:

- High Pressure Injection System from the second quarter of 2008 through the second quarter of 2009 (MS07);
- Heat Removal System from the second quarter of 2008 through the second quarter of 2009 (MS08); and
- Residual Heat Removal System from the second quarter of 2008 through the second quarter of 2009 (MS09).

b. Findings

No findings of significance were identified.

.2 Radiological Effluent Technical Specification/ODCM Radiological Effluent Occurrences

a. Inspection Scope (1 Sample)

The inspectors reviewed relevant effluent release reports for the period January 1, 2008 through December 31, 2008, for issues related to the public radiation safety performance indicator (PR01), which measures radiological effluent release occurrences that exceed 1.5 milli-rem/quarter whole body or 5.0 millirem/quarter organ dose for liquid effluents, 5 milli-rads/quarter gamma air dose, 10 millirads/quarter beta air dose, and 7.5 millirads/quarter for organ dose for gaseous effluents. This inspection activity represents the completion of one 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 Operator Workarounds

a. Inspection Scope (1 sample)

The inspectors performed the annual review of operator workarounds to verify Entergy was identifying operator workaround problems at an appropriate threshold and entering them into the CAP. The inspectors reviewed identified workarounds to determine whether the mitigating system function was affected, whether the operator's ability to implement abnormal and emergency operating procedures was affected, and whether appropriate procedures had been updated to reflect actual plant conditions. The inspection was accomplished through personnel interviews, plant tours, and review of station documents. The documents reviewed during the inspection are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. Operator workarounds have been identified and entered into the CAP for resolution. No unrecognized impacts to operator or system performance were identified, and corrective actions have been implemented to restore the affected systems.

.3 Annual Sample: Failure of Motor-Generator (MG) set to Power 120 VAC Instrument Bus (IP 71152)

a. Inspection Scope (1 sample)

The inspectors reviewed Entergy's problem identification, evaluation, and resolution of a failure of an MG set to power the 120 VAC Instrument Bus (CR-PNP-2009-00015). On January 4, 2009, a failure of the Vital MG set resulted in a momentary loss of Vital AC. This caused both feedwater regulating valves and scoop tubes to lock-up, recirculation MG sets to have a runback, the Extended Test System to trip, and an automatic Reactor Building Isolation System actuation to occur.

The inspectors reviewed Entergy's associated Apparent Cause Evaluation (ACE), extent of condition review, and proposed short-term and long-term corrective actions. The inspectors conducted interviews with site personnel and reviewed site-specific procedures, condition reports, work orders, and vendor manuals. The documents reviewed during this inspection are listed in the Attachment.

b. Findings & Observations

No findings of significance were identified.

The inspectors determined that Entergy performed a thorough Apparent Cause Evaluation and developed and implemented timely corrective actions to prevent recurrence. The apparent causes identified were: no preventative maintenance (PM) existed to inspect and/or replace the "3" relay on the Vital MG set; the PM on the voltage regulator may not have the proper interval for replacement and/or refurbishment; and cracked and brittle wiring due to heat related aging could have caused a problem in the voltage regulator. The vendor manuals and operating experience on the relay and voltage regulators did not have specific guidance on the maintenance practices recommended. The immediate corrective action was to inspect and replace the "3" relay and voltage regulator. The long term corrective actions are to: add specific steps to an existing maintenance procedure to inspect and/or replace the "3" relay; create a PM to replace the voltage regulator based on the lab results of the failed regulator; and inspect and repair the wiring due to heat related degradation and create an aging management program to routinely replace the wires.

The inspectors noted that the corrective action regarding the inspection and repair of MG set wiring due to heat related degradation and creation of an aging management program for the wires to routinely inspect/replace the wires was closed to a work order. The work order only had work task instructions to inspect and repair the MG set wires and did not have an instruction or note regarding the creation/implementation of an aging management program for the wires. The inspectors passed this observation on to Entergy to ensure that all of the corrective actions would be thoroughly tracked to completion.

4OA3 Event Follow-up (71153)

.1 (Closed) LER 05000293/2008-005-00, High Pressure Coolant Injection (HPCI) System Inoperable During Surveillance Testing due to Human Error

a. Inspection Scope (1 sample)

The inspectors reviewed Entergy's actions associated with LER 05000293/2008-005-00, which are addressed in the CAP as CR-PNP-2008-03693. The event was discussed in NRC Inspection Report 05000293/2008005. The documents reviewed during the inspection are listed in the Attachment. This LER is closed with the following NCV.

b. Findings

Introduction. A self-revealing, NCV of very low safety significance (Green) of TS 5.4.1, "Procedures," was identified for a procedure error which resulted in the inadvertent isolation of the HPCI system. Specifically, Entergy procedure 8.M.2-2.6.3, "HPCI High Steam Line Temperature," which describes the conduct of continuity checks of temperature switches, was not adequately completed and caused the HPCI system to isolate.

Description. On November 20, 2008, Entergy inadvertently isolated the HPCI system while performing surveillance procedure 8.M.2-2.6.3, "HPCI High Steam Line Temperature." The procedure directed personnel to test temperature switches by applying heat, removing the heat, and then verifying there was no continuity across the switch. The next step then directed to apply heat to the next temperature switch. The procedure requires Entergy to verify that the first temperature switch had reset by verifying no voltage is present across the terminals of the next temperature switch to be tested. However, when this step was completed, Entergy did not verify that probes were adequately installed to ensure that the first switch had reset. Entergy then applied heat to the second switch, which isolated HPCI because the first switch had not yet reset. The system was restored to an operable status within approximately 1 hour.

Analysis. The inspectors determined that the failure to adequately perform continuity checks as specified in the surveillance procedure was a performance deficiency within Entergy's ability to foresee and correct and should have been prevented. Traditional Enforcement did not apply, as the issue did not have actual or potential safety consequence, had no willful aspects, nor did it impact the NRC's ability to perform its regulatory function. This finding is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to adequately perform continuity checks as specified in the surveillance procedure caused an isolation of the HPCI system, and rendered it unavailable to respond to an initiating event.

A review of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Minor Examples," revealed that no minor examples were applicable to this finding. Using Inspection Manual Chapter 0609.04, "Phase I Initial Screening and Characterization of Findings," the finding was determined to require a Phase II analysis because the finding resulted in an actual loss of system safety function. Using the Pilgrim pre-solved initiating event sequences and

an exposure time of less than three days with the HPCI system unavailable, the Phase II estimation determined this finding was of very low safety significance (Green). The dominant accident sequence was a transient with a loss of the power conversion system coupled with a failure of high pressure injection and a failure to depressurize. The finding was evaluated for external risk contributors and large early release (LERF) by a Region 1 Senior Reactor Analyst (SRA) and determined to have a negligible risk contribution. This was driven largely by the short duration of the isolation and the ability to recover the system.

The inspectors determined that this finding had a cross-cutting aspect in the "Work Practices" component of the Human Performance cross-cutting area because Entergy did not conduct effective self or peer checks to ensure that continuity checks were adequately performed. (H.4(a)).

Enforcement. Technical Specification 5.4.1, "Procedures," requires that written procedures be maintained 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 8 includes the requirement for implementing surveillance procedures for Emergency Core Cooling System tests. Contrary to the above, on November 20, 2008, procedure 8.M.2-2.6.3, "HPCI High Steam Line Temperature," was not adequately implemented resulting in the isolation of HPCI. Corrective actions have included revising the procedure to include a step requiring concurrent verification for resetting the temperature switch, and a wait time of five minutes before Entergy proceeds to test the next switch. Because this finding is of very low safety significance and has been entered into the CAP (CR-PNP-2008-03693), this violation is being treated as an NCV, consistent with the NRC Enforcement Policy. **NCV 05000293/2009004-04, Human Error Resulting in Unplanned HPCI Isolation.**

4OA5 Other Activities

.1 (Closed) Unresolved Item (URI) 05000293/2009003-02 Design Calculation of the Vital MG Set Room Peak Temperatures

During an inspection referenced in Inspection Report 05000293/2009003 of Permanent Modification Field Revision Notice 87-73-29, "Installation of a Permanent Booster Fan in the Vital MG Set Room," the inspectors reviewed Calculation N124, "Vital MG Set Room Heat-up during Station Blackout Conditions," to determine the post-accident room temperature limit. The calculation assumed an eight-hour heat-up time for the room, which corresponds to the mission time for a Station Blackout event. The inspectors identified that the Loss-of-Coolant Accident without Loss of Offsite Power (LOCA without LOOP) event had a longer mission time and concluded that a performance deficiency existed in that Pilgrim design documents had not evaluated the maximum room temperature for this event. Entergy evaluated the temperature in the room in Calculation M1304 using the longer mission time associated with the LOCA without LOOP Event and determined that the same peak temperature of 116°F would be reached. Since Calculations N124 and M1304 result in the same peak temperature, there is no added impact to the safety-related circuit breakers in the room. As a result, the performance deficiency associated with this URI was determined to be of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy. This URI is closed.

.2 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors performed 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 July 23, 2009, a Public Radiation Safety exit meeting was held with Entergy. Kevin Bronson, Site Vice President, attended the meeting. Subsequent to the exit meeting, the inspectors asked Entergy whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

On September 10, 2009, an Occupational Radiation Safety exit meeting was held with Entergy. Kevin Bronson, Site Vice President, attended the meeting. The inspectors verified prior to the exit meeting that the inspector was not provided any proprietary information.

On October 14, 2009, the resident inspectors performed 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

Entergy personnel:

K. Bronson	Site Vice President
R. Smith	General Manager Pilgrim Operations
S. Bethay	Director, Nuclear Safety Assurance
S. Beneduci	Supervisor, Engineering
S. Brewer	Radiation Protection Supervisor
D. Burke	Security Manager
M. Gatslick	Licensing Specialist IV
K. Gracia	Operations Work Shift Manager
W. Lobo	Licensing Engineer
J. Macdonald	Assistant Operations Manager
W. Mauro	Supervisor, Radiological Engineering
D. Noyes	Operations Manager
I. Onorato	Radiation Protection Technician
J. Onorato	Radiation Protection Technician
R. Passalugo	Radwaste Shipping Technician
R. Pierson	Security Shift Supervisor
J. Priest	Radiation Protection Manager
M. Shean	Security Officer
J. West	Radiation Protection Technician
S. Wollman	System Engineering Supervisor

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

URI 05000293/2009004-03	Failure of the "A" Standby Liquid Control Train

Opened and Closed

NCV 05000293/2009004-01	Failure to Include Security Diesel Generator into the Maintenance Rule Scoping Document
NCV 05000293/2009004-02	Inadequate Procedures Result in the Failure to Evaluate Operability of the "B" RBCCW/SSW Heat Exchanger
NCV 05000293/2009004-04	Human Error Resulting in Unplanned High Pressure Coolant Injection (HPCI) Isolation

Attachment

Closed

LER 05000293/2008-005-00	High Pressure Coolant Injection (HPCI) System Inoperable During Surveillance Testing due to Human Error
URI 05000293/2009003-02	Design Calculation of the Vital MG Set Room Peak Temperatures

LIST OF DOCUMENTS REVIEWED

Section 1R01

Procedure 2.4.154, Revision 21, Severe Weather, Intake Structure Fouling
UFSAR 2.4.4, Storm Flooding Protection
Procedure 5.2.2, Revision 31, High Winds (Hurricane)
Procedure 2.1.37, Revision 25, Coastal Storm – Preparations and Actions
Procedure 2.1.42, Revision 9, Operation during Severe Weather
ER16173, Temporary Hypo Tank Removal
PNPS Individual Plant Examination for External Events, Supplement 4, Section 5.2 Floods

Section 1R04

TS 3.5.F.1, Minimum Low Pressure Cooling and Diesel Generator Availability
Procedure 2.2.8, Revision 94, Standby AC Power System (Diesel Generators)
Procedure 2.2.19, Revision 100, Residual Heat Removal
Pilgrim Training Manual for RHR System
CR-PNP-2009-3616, Valve label for MO-1001-16A lying in valve yoke
Procedure 2.2.108, Revision 42, Diesel Generator Cooling and Ventilation System
Procedure 2.1.12.1, Revision 68, Emergency Diesel Generator Surveillance
UFSAR 8.5, Standby AC Power Source
TS 3.9, Auxiliary Electrical System
Procedure 2.2.87, Revision 122, Control Rod Drive System
CRD System Health Report
CR-PNP-2009-3796, Lead Shielding Inhibiting Valve Movement

Section 1R05

Fire Hazards Analysis, Fire Zone Data Sheet for Fire Area 1.9, Fire Zone 2.3, Battery Room "A"
Fire Protection Engineering Evaluation (FPEE) 92, Revision 0, III-T Penetration in Barrier between "A" Division Battery Room and Switchgear Room
FPEE 103, Revision 0, Battery Room/Switchgear Room Unfilled Blockwalls
FPEE 91, Revision 0, Battery Room Fire Doors
FPEE 99, Revision 0, Barrier between "A" Division Battery Room and Switchgear Room
Drawing Number A318, Revision E5, Reactor and Turbine Building Floor Plan at El. 37'-0," Fire Barrier System
Procedure 8.B.17.2, Revision 9, Inspection of Fire Damper Assemblies
CR-PNP-2009-03365, Unsecured Cart Identified in "A" Battery Room

FPEE 87, Revision 0, Unfilled Blockwalls/Joints – Generator Auxiliary Area
Fire Hazards Analysis Fire Zone Data Sheet for Fire Area 1.9, Fire Zone 1.20, Refueling Floor
Drawing A320, Revision E4, Reactor Building Plan El. 117'-0," Fire Barrier System
Procedure ENN-DC-189, Revision 1, Fire Drills
Procedure 5.5.2, Revision 44, Special Fire Procedure
Fire Hazards Analysis, Att. 8.3, PNPS Appendix R, Exemption Summary
Fire Hazards Analysis – Fire Zone 1.1 Data Sheet
CR-PNP-2009-03529, Spare Penetration in "A" RHR Quad Wall
ML011920301, Exemptions for certain requirements of 10CFR50.R.III.G in certain areas of the plant
Procedure 8.B.29, Revision 10, Inspection of Fire Barriers
Fire Hazards Analysis, Fire Zone 4.1 Data Sheet
Procedure 5.5.2, Revision 44, Special Fire Procedures, Att. 21 – Diesel Generator
Fire Hazards Analysis, Fire Area 1.10, Fire Zone 2.8
Exemption Request #23, Exempt from Three Hour Fire Barrier in RHR Quad
Engineering Evaluation #50, Revision 1, Appendix A, Fire Barriers for the Turbine Lube Oil Area
Procedure 5.5.2, Revision 44, Special Fire Procedure
Procedure 8.B.17.1, Revision 20, Inspection of Fire Door Assemblies

Section 1R06

Flooding Calculation S&SA 60, Revision 0, Flooding due to ECCS leakage outside containment
Procedure 8.A.16, Revision 16, RHR System Integrity Surveillance
Pilgrim Probabilistic Safety Assessment, Appendix E, Internal Flooding Analysis
CR-PNP-2009-03529, Potential opening in the base of the wall between the "A" RHR quad and the torus room
CR-PNP-2009-3903, Water Found in Safety Related Manholes
Photographs of manhole inspections for bunkers 2b and 4

Section 1R07

CR-PNP-2009-03440, "B" Reactor Building Closed Cooling Water and "B" Turbine Building Closed Cooling Water heat exchangers failed their differential pressure evaluation
Generic Letter 89-13, Service Water Problems Affecting Safety-Related Equipment
Procedure 8.5.3.14.1, Revision 4, RBCCW heat exchanger thermal performance test
Calculation M710, Revision 0, Heat Exchanger Performance Testing
Maintenance Request 06103318, RBCCW heat exchanger inspection and repair
Boston Edison's response to NRC Generic Letter 89-13, Service Water Problems Affecting Safety-Related Equipment
Procedure 8.E.30, Revision 40, RBCCW system instrumentation calibration

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LORT/NRC simulator Exam Scenario: SES-179, Revision 0, Small Break LOCA/ATWS

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CR-PNP-2009-03088, Standby Liquid Control Pump "A" failed to meet minimum flow criteria
Standby Liquid Control Maintenance Rule Basis Document, Revision 2
CR-PNP-2009-04006, Incorrect Maintenance Rule Function description used in functional failure determination
Reg. Guide 1.160, Revision 2, Monitoring the Effectiveness of Maintenance at nuclear power plants
NUMARC 93-01, Revision 2, Industry Guideline for Monitoring the Effectiveness of Maintenance at nuclear power plants
Process and Area Radiation Monitoring Maintenance Rule Basis Document, Revision 2
CR-PNP-2009-02515, Pre-treatment radiation monitors declared inoperable
CR-PNP-2009-03467, Pre-treatment radiation monitors reading lower than normal
Process and Area Radiation Monitoring Maintenance Rule spreadsheet
Process and Area Radiation Monitoring System Health Report – 2nd Quarter 2009
CR-PNP-2007-04514, Main steam line radiation monitor high-voltage cable damaged
CR-PNP-2008-01888, Turbine building gaseous effluent monitor failed source check
CR-PNP-2009-03603, Gaseous effluent monitor failed functional check
CR-PNP-2008-00853, Flow radiation monitors lost power due to blown fuse
CR-PNP-2009-00963, Containment high area radiation monitor high-voltage cable damaged
CR-PNP-2009-04070, Maintenance Rule Functional Failure Determination not performed
CR-PNP-2009-02497, Pre-treat process radiation monitors reading low due to open valve
CR-PNP-2009-04084, Process Radiation Monitor System near (a)(1) status
Maintenance Rule Performance Criteria for Emergency Lighting
Maintenance Rule SSCs Base Document for Emergency Lighting
Fire Hazards Analysis Exemption Summary #17 – Emergency Lighting in the Yard Area
CR-PNP-2009-02852, Security EDG needs to be evaluated for Maintenance Rule Scoping Applicability
CR-PNP-2009-03462, Security EDG parameters do not meet specified criteria
CR-PNP-2009-00005, Security EDG parameters out of specified band
CR-PNP-2009-00349, Acceptance Criteria not met during Security EDG test
CR-PNP-2009-00770, Security EDG parameters out of specified band and coolant leak on radiator pipe, including equipment issues with radiator pipe leak, thermostat failed, level indicator needs to be replaced
CR-PNP-2009-02707, Trend in Security EDG tests not meeting acceptance criteria
EN-DC-204, Revision 1, Maintenance Rule Scope and Basis

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Equipment Out Of Service (EOOS) Quantitative Risk Tool
Control Room Logs
Daily Risk Sheet for 8/20/09
Weekly Risk Profile for week of 8/30/09

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CR-PNP-2009-03312, Steam-Water Mix Identified During "B" RHR Piping Temperature and Pressure Monitoring

Procedure 8.5.2.10, Revision 13, RHR Piping Temperature and Pressure Monitoring
CR-PNP-2009-03348, Slightly Elevated Temperatures Observed on RHR "B" during Performance of Procedure 8.5.2.10
Procedure 8.5.2.15, Revision 17, LPCI System and Core Spray System keepfill checks
CR-PNP-2009-03503, Turbine Bypass Valve Testing introduces possible vulnerability to Turbine Stop Valve Closure Scram being bypassed
UFSAR Section 7.2, Reactor Protection System
Procedure 9.3, Revision 32, Core Thermal Power Evaluation
Procedure 8.A.9-2, Revision 25, Turbine Test-monthly, 70% power
CR-PNP-2009-03440, "B" RBCCW Heat Exchanger failed its DP test
Procedure 8.5.3.14, Revision 27, SSW Flow Rate Operability Test
Procedure 2.2.32, Revision 80, Salt Service Water System
Work Order (WO) 52200681, RBCCW HX "B" Fouling Evaluation on 8/6/09
Procedure EN-OP-104, Revision 2, Operability Determinations
CR-PNP-2009-03596, After NRC Inspection Inspectors identified several issues
Operational Decision Making Issue (ODMI), Drywell Temperatures, dated 07/08/2009
CR-PNP-2009-2536, Increasing Drywell Temperatures
CR-PNP-2009-2536, Trigger Points for Drywell Temperature Increases
CR-PNP-2009-4028, 50.59 for Removal of Biological Shield Blocks did not consider effect on local drywell temperatures

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WO 0020075901, PSV-1105A Remove/Reinstall to Support Setpoint Testing
Procedure 3.M.4-80, Revision 11, Standby Liquid Control Discharge Relief Valve Maintenance
Procedure 3.M.4-66, Revision 4, Safety Related Relief Valve Test Procedure
Procedure 8.I.26, Revision 11, Administration of Inservice Pressure Relief Device Testing Program
Engineering Change (EC) 16032, Revision 0, PSV-1105A Equivalency Evaluation
CR-PNP-2009-03367, PSV-1105A Data Sheet Discrepancies
WO 0019990301, Disassemble, Inspect, and Repair P-209B
Procedure 3.M.4-14, Revision 35, Rotating Equipment Inspection Assembly and Disassembly
Procedure 3.M.4-17.4, Revision 31, Lubrication Sampling and Change Procedure
CR-PNP-2009-03426, "B" CRD Pump Discharge Pressure Outside of Post Work Test Acceptance Limit
WO 00199724, Calibrate SCW Temperature Control Valve
Valve Performance Diagnostic Tests for TCV-Y-07
Air Operated Valve Testing and Trending Evaluation for TCV-Y-07
Procedure EN-MA-125, Revision 4, Troubleshooting Control of Maintenance Activities
Procedure 2.4.156, Revision 11, Stator Cooling Water Malfunctions
WO 51699209, Temporary Modification Installation to Gag Damper during Refurbishment of Actuator on AO-N-97
Procedure EN-MA-102, Attachment 9.2, Revision 2, PNPS Inspection Program – AO-N-97 Plant Impact Sheet
Procedure 3.M.4-121, Revision 14, GH-Bettis Actuator Refurbishment
Procedure 8.7.3, Revision 57, Secondary Containment Leak Rate Test
WO 5168926102, Uncouple "E" SSW pump motor
WO 5168926104, Re-couple "E" SSW pump motor

Procedure 3.M.4-14.2, Revision 55, Salt Service Water Pumps: Routine Maintenance
WO 5168926101, "E" SSW Pump Breaker Testing
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Drawing SE155, Revision 61, Station Electrical Single Line Composite Diagram 4.16KV and 480VAC Systems
Drawing E8-10-8, Revision 31, Arrangement Diagram Motor Control Center B14
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WO 5153540801, SBO Diesel Generator Combustion Air Cleaner
WO 5153457601, Station Blackout Diesel Generator Clevis and Pin Assemblies
CR-PNP-2007-3008, Governor Fuel Rack probe rods clevis to clevis pin clearances
WO 0017415701, Station Blackout Diesel Lube Oil Basket Strainer Drain Valve
CR-PNP-2009-3848, Post Maintenance Test requirements not met, signed off as satisfactory
WO 0014237502, Inspect SDT Cables at HV Bushings
WO 0020439104, Perform Repairs of Pull Box 1A Cables
WO 0020439105, Inspect Pull Box for Excessive Accumulation of Water
WO 0020439103, Inspect Pull Box 1A Cables
WO 0020439101, Inspect Pull Box 1A
WO 0014237503, Repair SDT Cables at HV Bushings
WO 0020444203, As Left Insulation Test
WO 0020444202, PMT for Insulation Test
WO 0020444201, F15 Insulation Test
WO 5153230505, Temporary Repairs to Broken Discharge Resistors, F15 Circuit
Procedure 3.M.3-51, Revision 26, Electrical Termination Procedure
WO 5154686801, Replace Jacket Water Heaters on SBO EDG
WO 0020439102, Inspect Pull Box 1A Cables
WO 5167377901, Perform Breaker Maintenance
Procedure 3.M.3-5.9, Revision 6, 4 KV Breaker 152-600 Bus Cubicle Maintenance and Inspection
WO 5167377902, PM of Spare 4 KV Breaker

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TS 4.6.C.2, Primary System Boundary, Leakage Detection Systems
CR-PNP-2009-03234, C19 Out-of-Service
Procedure 7.9.17, Revision 34, Attachments 3 & 4, Drywell Leak Detection Monitors
Operators Logs
7.4.17, Revision 34, Attachment 4, C19 Functional Check Data Sheet, completed 7/7/09
Win CDMS Trend of C19A Particulate Efficiency since August 2007
Procedure 8.4.1, Revisions 68 and 69, Standby Liquid Control Pump Quarterly and Biennial Capacity and Flow Rate Test
CR-PNP-2008-3216, Standby Liquid Control Pushbutton Not Fully Depressed During Surveillance
Drawing M249, Revision 29, P&ID Standby Liquid Control System
CR-PNP-2008-2669, Leaking Relief Valve PSV1105A
Procedure 8.5.4.1, Revision 104, High Pressure Coolant Injection System pump and valve quarterly and biennial comprehensive operability
Procedure 8.I.1.1, Revision 22, Inservice Pump and Valve Testing Program
CR-PNP-2009-03088, Standby Liquid Control Pump "A" failed to meet its acceptance criteria

CR-PNP-2009-03610, Small steam leak observed while running HPCI turbine
HPCI turbine pump vibration trending spreadsheet
ASME-OM-Code 1998, Code for Operation and Maintenance of Nuclear Power Plants
Procedure 8.9.16.1, Revision 40, Manually Start and Load Blackout Diesel via the Shutdown Transformer
WO 5219047102, 8.9.16.1 Manually Start and Load Blackout Diesel Generator
UFSAR 8.10, Blackout AC Power Source
CR-PNP-2009-03808, Station Blackout diesel generator radiator fan breaker found tripped open
CR-PNP-2009-03831, Station Blackout diesel generator exhaust cylinder temperature high
CR-PNP-2009-03854, Test Equipment needed for SBO diesel testing out of calibration
Procedure 8.M.2-2.10.8.5, Revision 43, Diesel Generator "A" Initiation by Loss of Offsite Power Logic
Technical Specification Table 4.2.B, Minimum Test and Calibration Frequency for CSCS
CR-PNP-2009-03897, Relay pick-up time delay outside acceptance criteria
Technical Specification Surveillance Requirements 4.9.A.1.C, Auxiliary Electrical Equipment Surveillance
CR-PNP-2009-03920, The reasonable expectation of operability for time-delay relay 162-501 does not fully identify potential causes
CR-PNP-2009-02016, Shutdown transformer breaker closing time outside acceptance criteria
V-0383 Agastat Timing Relays Vendor Manual
WO 00193090, Shutdown Transformer Breaker Close Time Delay Relay

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LORT/NRC simulator Exam Scenario: SES-179, Revision 0, Small Break LOCA/ATWS
EP Performance Indicator Reporting and Information Form
ERO Participation Information for Opportunities

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Procedures:
EN-RP-100, Revision 3, Radworker Expectations
EN-RP-101, Revision 4, Access Control for Radiologically Controlled Areas

Condition Reports:

CR-PNP-2009-02637, 02644, 02873, 03152, 03341, 03445, 03672

Radiation Work Permit - In progress Reviews and Post job reviews:

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Other

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Procedure 6.10-022, Revision 9, ALARA Engineering Controls

Condition Reports:

CR-PNP-2008-03631, CR-PNP-2009-02672, CR-PNP-02774, CR-PNP-03079, CR-PNP-3081

ALARA Managers Committee Meeting Minutes: RP09-17, RP09-08, RP09-09

ALARA Subcommittee Meeting Minutes: PM09-09

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Procedures:
EN-RW-102, Revision 6, Radioactive Shipping Procedure
EN-RW-105, Revision 1, Process Control Program
1.15.4, Revision 6, Radioactive Material Processing, Packaging, and Shipping Quality Control Program
1.15.6, Revision 4, Processing, Packaging, and Shipping of Radioactive Material

Condition Reports: CR-PNP-2008-01776, CR-PNP-2008-02115, CR-PNP-2008-03154
CR-PNP-2009-02941

Audits, Assessments and Reports:

O2C-PNPS-2009-0373, Process Control Program
O2C-PNPS-2008-0341, Radwaste Packaging, Handling, and Shipping
O2C-PNPS-2008-0311, Radwaste Packaging, Handling, and Shipping Work Order
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TEST PLAN And Verification and Validation Megashield, Version 3.0, dated July 2005

Radioactive Shipment Records:

RSR 08-02, Class C, 751 Curies
RSR 08-05, Class C, 277 Curies
RSR 08-14, LSA-II, 5.45 Curies
RSR 08-16, LSA-II, 4.49 Curies
RSR 09-04, LSA-II,19.4 Curies
RSR 09-08, LSA-II, 6.75 Curies

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Material Control Program

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7.12.25, Revision 12, Air Particulate and Air Iodine filter preparation and collection
7.12.30, Revision 8, Surface water sampling
7.12.45, Revision 7, Marine life sampling
7.12,50, Revision 6, Bottom sediment sampling
7.12.55, Revision 6, Crop sampling
7.12.80, Revision 9, Maintenance and calibration of the REMP air sampler
8.E.72, Revision 3, Surveillance, maintenance, and calibration of 220' met tower

Work Orders:

52035374, 52188519

Condition Reports:

CR-PNP-2008-02219, 02454, 02697, 03488, 03489, 03908, 03540, 03909
CR-PNP-2009-00359, 00702, 00826, 02639, 03632, 03633, 03634, 03670, 03683, 03824, 03904, 03913

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QA-06-2007-PNP-01, Quality Assurance Audit Report, Effluent and Environmental Monitoring Program, July 18, 2007
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Section 4OA1

PNPS-RPT-05-006, Revision 2, Pilgrim Nuclear Power Station Mitigating Systems Performance Index Basis Document
LERs 05000293/200800300, 200800400, 200800500
System Health Reports for HPCI, Reactor Core Isolation Cooling (RCIC) and RHR
PNPS Mitigating Systems Performance Indicator Records 2Q08, 3Q08, 4Q08, 1Q09, 2Q09
NEI 99-02, Revision 5, Regulatory Assessment Performance Indicator Guidelines
Operator Logs
SEG-04 Unavailability Analysis for HPCI, RCIC, RHR, Revision 1
Consolidated Data Entry Failure summary Report
MSPI Derivation Reports for High Pressure Injection
MSPI Derivation Reports for Heat Removal System
MSPI Derivation Reports for Residual Heat Removal

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Procedure 1.3.34.4, Revision 17, Compensatory Measures
Procedure 2.2.22, Revision 70, Reactor Core Isolation Cooling (RCIC) System
Procedure 2.2.22.5, Revision 13, RCIC Injection and Pressure Control
Procedure 2.2.21, Revision 75, HPCI System

Procedure 2.2.21.5, Revision 15, HPCI and Pressure Control
Condition Reports 200601802, 200802095
Compensatory Actions and Disabled Annunciator Logs
Pilgrim Operator Workarounds Aggregate Impact Report
Pilgrim Operator Compensatory Measures Report
Operational Decision Making Action Plan for CR 09-02502
CR-PNP-2009-00015, Failure of the Vital MG Set
CR-PNP-2009-00262, Vital MG Set AC Motor would trip out on the thermal overloads
CR-PNP-2004-00705, Vital MG Set Tripped Offline
Procedure 3.M.3-18, Revision 20, RPS MG Set: Relay Calibration, Annunciator Verification, Voltage Regulator Test, and Output Meter Check
Procedure 3.M.3-19, Revision 25, Vital MG Set: Relay Calibration, Annunciator Verification, Voltage Regulator Test, and Output Meter Check
Procedure 5.3.6, Revision 30, Loss of Vital AC (Y2)
Work Orders: 00177464, 00186545, 00186544
Drawing E14 Sheet 1, Revision 35, Single Line Diagram 120V Instrument AC Vital and Reactor Protection AC Systems & +/- 24 VDC Power System
Drawing E21 Sheet 1, Revision 15, Schematic Diagram Vital & Reactor Protection AC System 24 VDC Radiation Monitor System Supply
Technical Specifications and Bases
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GEK 2400, Revision 1, Vender Manual for Silicon Controlled Rectifier Voltage Regulators
GEH-2385H, Vendor Manual for Machine Tool Relays, NEMA Type A1B

Section 40A3

LER 2008-005-00, HPCI System Inoperable During Surveillance Testing due to Human Error
CR-PNP-2008-03693, HPCI System Inadvertent Isolation
Conduct of Maintenance Pre-Job Brief Sheet
Procedure 8.M.2-2.5.3, Revision 37, HPCI Steam Line High Temperature

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Procedure 8.05, Revision 20, Perimeter Inspection/Operational Testing of Perimeter Intrusion Detection System
Condition Reports 200903430, 200903431
Work Orders: 09-165, 09-164, 08-175, 09-106

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ALARA	As Low As Reasonably Achievable
ATWS	Anticipated Transient Without Scram
CAP	Corrective Action Program

CFR	Code of Federal Regulations
CR	Condition Reports
CRD	Control Rod Drive
dP	Differential Pressure
DRP	Division of Reactor Projects
EC	Engineering Change
EDG	Emergency Diesel Generator
HCU	Hydraulic Control Units
HPCI	High Pressure Coolant Injection
HX	Heat Exchanger
IMC	Inspection Manual Chapter
IR	Inspection Report
LER	Licensee Event Report
LOCA	Loss-of-Coolant Accident
LOOP	Loss of Offsite Power
MG	Motor-Generator
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OSL	Optically Stimulated
PI	Performance Indicator
PM	Preventive Maintenance
PMT	Post Maintenance Tests
PNPS	Pilgrim Nuclear Power Station
RBCCW	Reactor Building Closed Cooling Water
RCA	Radiologically Controlled Area
RCIC	Reactor Core Isolation Cooling
RG	Regulatory Guide
RHR	Residual Heat Removal
RWP	Radiation Work Permit
SBLC	Standby Liquid Control
SDP	Significance Determination Process
SSCs	Systems, Structures and Components
SSW	Salt Service Water
TLD	Thermoluminescent dosimeter
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
WO	Work Order