February 3, 2006

Mr. Michael Balduzzi
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 05000293/2005005

Dear Mr. Balduzzi:

On December 31, 2005, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Pilgrim reactor facility. The enclosed inspection report documents the inspection results, which were discussed on January 12, 2006, with you and other members of your staff.

The inspection(s) 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.

This report documents two findings of very low safety significance (Green), one of which involved a violation of NRC requirements. However, because of the very low safety significance and because the issue has been entered into your corrective action program, the NRC is treating the issue as a non-cited violation (NCV), in accordance with Section VI.A.1 of the NRC's Enforcement Policy. Additionally, three licensee-identified violations which were determined to be of very low safety significance are listed in Section 4OA7 of this report. If you contest any NCV in this report, you should provide a response, with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at Pilgrim.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and 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 by Tracy Walker Acting for/

Clifford J. Anderson, Chief
Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 50-293/05-05
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-293
License No:	DPR-35
Report No:	05000293/2005005
Licensee:	Entergy Nuclear Operations, Inc.
Facility:	Pilgrim Nuclear Power Station
Location:	600 Rocky Hill Road Plymouth, MA 02360
Inspection Period:	October 1, 2005 through December 31, 2005
Inspectors:	W. Raymond, Senior Resident Inspector C. Welch, Resident Inspector S. Dennis, Senior Operations Engineer J. McFadden, Radiation Specialist J. Caruso, Senior Operations Engineer A. Ziedonis, Reactor Engineer D. Silk, Senior Emergency Preparedness Inspector (in-office)
Approved By:	Clifford Anderson, Chief Projects Branch 5 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000293/2005-005; 10/01/2005 -12/31/2005; Pilgrim Nuclear Power Station; Flood Protection Measures; Maintenance Effectiveness.

The report covered a 13-week period of inspection by resident inspectors and announced inspections by regional specialists in operator licensing and health physics. Two Green findings, one of which was a non-cited violation (NCV), were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). 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 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspector identified an NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action." Entergy did not take timely corrective action, for a condition adverse to quality identified in August 2004, regarding the missing seals required by plant design drawings to be installed around the A residual heat removal (RHR) quadrant floor plugs to minimize potential water intrusion into the RHR quadrant below. Entergy entered the issue into the corrective action program and plans to reschedule the required repairs.

  The finding was determined to be of very low safety significance per the Phase 1 worksheet in Appendix A of MC-0609, Significance Determination Process. The finding was not a design issue, did not result in a loss of a safety function of a mitigating system, and did not screen potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding is more than minor because it adversely impacted the Reactor Safety Mitigating System Cornerstone attribute Protection Against External Factors (i.e., flood hazard) and the cornerstone objective to ensure the reliability and availability of mitigating systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). A cross-cutting aspect of the finding related to problem identification and resolution, in that completion of corrective actions for a condition adverse to quality was not prioritized commensurate with the potential significance of the condition. As a result, timely corrective action was not taken to restore the A RHR quadrant floor plugs to their required design configuration. (1R06)

- Green. The inspector identified that Entergy failed to implement effective maintenance on the emergency lighting system in a manner necessary to prevent repeated functional failures from causes which were within the licensee's capability to foresee and prevent. As a result of failures predominately due to low battery electrolyte levels and the improper adjustment of the battery charger output voltage, the emergency lighting system experienced 20 functional failures in a 36-month period and failed to meet the reliability performance criteria in four

of the last five years. No violations of regulatory requirements were identified. Entergy placed the emergency lighting system in a(1) status and developed an action plan that addressed the lighting deficiencies necessary to restore system reliability and return the system to a(2) status.

The finding was determined to be of very low safety significance per the Phase 1 worksheet in Appendix A of MC-0609, Safety Determination Process. The finding was not a design deficiency, did not represent an actual loss of safety function of a mitigating system, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding is more than minor because it affected the reliability objective of the Equipment Performance attribute under the Mitigating System Cornerstone. Portions of the emergency lighting system were not available to perform their intended function of supporting operator actions to mitigate the consequences of fires upon loss of all other lighting. A cross-cutting aspect of the finding related to problem identification and resolution, in that effective corrective action was not taken for the failed emergency lights due to deferral of corrective maintenance and improper maintenance instructions. (1R12)

B. Licensee Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Pilgrim Nuclear Power Station (PNPS) operated during the period at 100 percent (%) core thermal power, except for short periods of planned operation at reduced power for routine testing and maintenance.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope (1 sample)

The inspector reviewed the licensee's actions in response to coastal storm conditions in October 2005. The inspector reviewed licensee actions to implement 2.1.37, "Coastal Storms" to verify actions were taken to protect risk significant systems. The inspector reviewed licensee actions to implement compensatory measures and verified that the emergency diesel generators (EDG) and other plant power supplies would be operable in the event of a loss of offsite power. The inspector toured the intake structure and site areas to monitor protection against excessive wind and wave action.

The inspector reviewed plant operational parameters and site conditions to verify that licensee controls were appropriate to protect essential equipment. The inspector reviewed licensee actions for the storm impact on intake structure as described in Condition Report (CR) 200504745. The inspector verified the licensee addressed adverse weather issues in the corrective action program.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial System Alignment

a. Inspection Scope (2 samples)

The inspector completed a partial system review of the below-listed risk significant systems during periods when its redundant train or system was out-of-service for maintenance and/or testing or following restoration of the train from maintenance. The position of key valves, breakers, and control switches required for system operability were verified by field walkdown and/or review of the main control board indicators. To ascertain the required system configuration, the inspectors reviewed plant procedures, system drawings, the Updated Final Safety Analysis Report, and the Technical Specifications. The references used for this review are described in the attachment to this report. This inspection activity represented two samples.

- RCIC system during scheduled maintenance and testing of the high pressure coolant injection (HPCI) system.
- A RHR train during planned maintenance on the B train.

b. Findings

No findings of significance were identified.

.2 Full System Walkdown

a. Inspection Scope (2 samples)

The inspectors performed full system reviews for the Primary Containment Atmospheric Control (PCAC) System, with a focus on the nitrogen supply and the safety-related containment atmosphere dilution subsystems, and the Core Spray (CS) system. The inspections were completed to verify the systems were properly aligned and capable of performing their safety function. To ascertain the required system configuration, the inspectors reviewed plant procedures, system drawings, the Updated Final Safety Analysis Report, and the Technical Specifications. The references used in the review are listed in the attachment to this report. Walkdown of the accessible portions of the systems was performed to assess the material condition of the system and the following attributes:

- valves were correctly positioned;
- electrical power was available and properly aligned;
- major system components were properly labeled;
- hangers and supports were correctly installed and functional;
- ancillary equipment or debris did not interfere with system performance; and
- valves were locked as required by the locked valve program.

The inspector reviewed inservice testing (IST) results for the Core Spray system and test results of procedure 8.C.37, “Standby Compressed Air/Nitrogen Bottle Surveillance.” The systems’ material condition was assessed based upon discussions with the system engineer and review of the following documents:

- 2005 2nd quarter system health report;
- condition reports for the PCAC system issued in 2005;
- maintenance rule information;
- work requests; and
- condition reports for the CS system issued in 2005.

The inspector reviewed the corrective action program to verify the licensee was identifying equipment alignment issues at an appropriate threshold and to evaluate the licensee’s resolution. This review included the actions associated with the backup nitrogen storage trailer X-168 as described in CR 200504457. This activity represented two inspection samples.

b. Findings

No findings of significance, with the exception of the licensee identified violation described in Section 4OA7 of this report, were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope (7 samples)

The inspector toured selected areas of the plant to observe conditions related to: (1) transient combustibles and ignition sources; (2) fire detection systems; (3) manual firefighting equipment and capability; and (4) passive fire protection features. The inspector verified adequate material condition of active and passive fire protection system features and their operational lineup and readiness. The inspector also reviewed the applicable fire hazard analysis fire zone data sheets and selected surveillance procedures to ensure that the specified fire suppression system surveillance criteria were met. This inspection activity represented seven samples:

- Fire Zone 1.23, standby gas treatment room;
- Fire Zone 1.13, fuel pool cooling pump / heat exchanger area;
- Fire Zone 3.4, fan room 2 (control room HVAC);
- Fire Zone 1.9, CRD HCU east side;
- Fire Zone 1.2, 'B' RHR and CS pumps quad;
- Fire Zone 1.3, HPCI pump / turbine room; and
- Fire Zone 1.28, reactor recirculation pump motor-generator set room.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

.1 Internal Flooding

a. Inspection Scope (1 sample)

The inspector walked down the reactor building 23 foot level, the B quad, and the emergency diesel generator building to assess the effectiveness of Entergy's internal flood control measures. Items selected for review during the walkdowns included: watertight doors; floor sump systems; and passive equipment such as curbing, hatch seals, and floor drains. Due to their risk significance, emphasis was placed on flood controls to protect the CS, Residual Heat Removal (RHR), and HPCI systems, as well as the EDGs.

The inspector reviewed CRs 200402484, 200402760, 200403902, and 200505144 to verify Entergy was identifying internal flooding issues and taking appropriate corrective

action. The references used for this inspection are listed in the attachment to this report. This inspection activity represents one sample of internal flood controls.

b. Findings

Introduction

Green. A finding of very low safety significance that constituted a non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," was identified by the inspector. Contrary to procedure EN-LI-102, Corrective Action; Entergy did not take timely corrective action to correct a condition adverse to quality that was identified in August 2004 involving missing seals that are required by plant design to be installed around the floor plugs located above the A residual heat removal (RHR) quadrant to minimize potential water intrusion.

Description

On August 23, 2004, the NRC identified to Entergy management that the A RHR and RCIC quadrants were subject to possible flooding due to the lack of a water tight seal around the associated floor plugs located on the reactor building 23 foot level. The condition was captured in CR 200402484 and evaluated by engineering. Entergy determined from plant design drawings that the A RHR floor plugs were required to be sealed; however, sealing of the RCIC quadrant floor plugs was not required. Corrective actions were established in September 2004 to seal the gaps around the A RHR quadrant floor plugs (maintenance request (MR) 04114463), to periodically inspect the condition of the floor plug seals by modifying surveillance procedure 3.M.4-96, and to generate a design change to install a seal around the RCIC quadrant floor plugs (engineering request (ER) 04118634).

Maintenance procedure 3.M.4-96, "Floor Plug and Vault Hatch Seals," was revised in October 2004 and the A RHR quadrant floor plugs were inspected in December. Following the inspection, CR 200403902 was issued documenting that the A quadrant floor plugs did not meet the stated acceptance criteria; the floor plugs were still not sealed. CR 200403902 was administratively closed on January 25, 2005, to MR 05101003. CR 200402484 was closed on January 24, 2005, with the outstanding action to seal the A quadrant floor plugs closed to MR 04114463.

The performance deficiency associated with this finding is that corrective actions for a condition adverse to quality was not prioritized commensurate with the potential significance of the condition. In accordance with EN-LI-102, Attachment 9.4, corrective actions for conditions adverse to quality and classified as category C ("broke/fix") should normally be assigned a due date of less than 180 days. The corrective action to install the required seals for the RHR A quadrant floor plugs was closed to and tracked by the work control process. However, the priority established for the referenced maintenance requests was not commensurate with the condition reporting process timeliness requirements for a condition adverse to quality (i.e., < 180 days). Specifically, MR 04114463 was issued as Priority 20 and MR 05101003 a Priority 36 meaning the work

could be scheduled as resources allowed. Further, neither MR was identified as corrective maintenance. The active MR, MR 04114463, scheduled for work at the end of September 2006, was classified as "Other" and MR 05101003, cancelled to MR 04114463 on June 9, 2005, was not classified.

Analysis

The finding's risk significance is more than minor because it impacted the Reactor Safety Mitigating System Cornerstone attribute Protection Against External Factors (i.e., flood hazard) and adversely impacts the cornerstone's objective to ensure the reliability and availability of mitigating systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding's risk significance was determined to be of very low safety significance (Green) in accordance with MC-0609, Appendix A, Significance Determination Process, because the finding did not result in a loss of a safety function of a mitigating system and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

The finding has a cross-cutting aspect in problem identification and resolution, in that completion of corrective actions for a condition adverse to quality was not prioritized commensurate with the potential significance of the condition. As a result, timely corrective action was not taken to restore the A RHR quadrant floor plugs to their required design configuration.

Enforcement

10 CFR 50, Appendix B, Criterion XVI requires, in part, that conditions adverse to quality be promptly identified and corrected. Contrary to the above, Entergy did not take prompt corrective action to restore the A RHR quadrant floor plugs to the required design configuration. The condition adverse to quality was identified in August 2004 and per the guidance provided in EN-LI-102, Attachment 9.4, corrective actions for a condition adverse to quality should normally be completed within 180 days (except for long term corrective actions). Because the finding is of very low safety significance and has been entered into Entergy's Corrective Action Program (CR 200505144) this violation is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A of the NRC Enforcement Policy. Entergy initiated an action item to reschedule the required repairs. **NCV 0500293/2005005-001, Untimely Problem Resolution of an Internal Flood Control Deficiency.**

1R11 Licensed Operator Requalification (71111.11)

.1 Licensed Operator Simulator Training

a. Inspection Scope (1 sample)

The inspector observed an evaluated licensed operator simulator training exercise on October 17, 2005. The training was performed using scenarios SES-149 and SES-150 and involved both operational transients and design basis events. The inspector

evaluated both the crew's performance and evaluators' assessments in-terms of the crew meeting the scenarios objectives, accomplishing the critical tasks, proper use of abnormal and emergency operating procedures, command and control, effective communication, and the crew's ability to implement the emergency plan in-terms of event classifications and notifications. The inspector reviewed the post-scenario critique and verified lessons learned and items for improvement were discussed with the crew to enhance future performance.

The inspector observed the November 4 re-examination of the control room supervisor (CRS) per Scenarios SES-140 and 202. The inspection focused on the CRS command and control and procedure usage in responding to the simulated events.

b. Findings

No findings of significance were identified.

.2 Licensed Operator Requalification Exams

a. Inspection Scope (1 sample)

The following inspection activities were performed using NUREG-1021, Rev. 9, "Operator Licensing Examination Standards for Power Reactors," Inspection Procedure Attachment 71111.11, "Licensed Operator Requalification Program," and NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process" (SDP).

The inspectors reviewed documentation related to communications and command and control promulgated as a result of issues identified during requalification examinations in 2004 (CR 200403994). This review included "interim guidance" contained in a Night Order issued on March 17, 2005, as well as guidance contained in the Operations Standards. The inspector reviewed a number of procedures and guidelines regarding transient/EOP briefings to ensure that application of the guidance would not hamper or obstruct implementation of the emergency operating procedures (EOPs).

The inspectors compared the guidance in the EOPs, Emergency Plant Guidelines (EPG), and Plant Specific Technical Guidelines (PSTGs) against the guidance in procedures 1.3.34, "Conduct of Operations," 5.3.35, "Operations Management Emergency and Transient Response Expectations for Operating Crews," "Operations Standards," and interim night order guidance. This review also included a comparison of the "Operations Standards" against corporate procedure ENN-PL-163, "Common Expectations and Standards for the Operations Departments Across Entergy."

The inspectors compared Pilgrim's EOPs and PSTGs with the BWR EPGs to determine if the PNPS PSTGs and EOPs adequately addressed deviations or exceptions to the BWR EPG/SAGs. The focus of the review was on the use of the main turbine bypass valves in anticipation of an Emergency Depressurization (ED) in the level control leg of the RPV Control EOP.

The inspectors interviewed licensed operators, supervisors, and managers regarding training and implementation of the "interim guidance" for communications and command and control. The training and operations personnel responsible for crew evaluations during requalification exams were also interviewed to better understand training and evaluation standards in this area.

The inspector reviewed the simulator training lesson plan "Operating Crew Roles and Responsibilities," as well as licensee evaluations of the annual operating requalification exams for all crews in order to determine if training was appropriately addressing both plant operations and communications. The inspectors also observed the administration of the annual requalification exam in the simulator for two operating crews with a specific focus on how EOPs are being implemented in conjunction with the communication standards.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope (3 samples)

The inspectors reviewed follow-up actions for issues relating to the selected systems and reviewed the performance history of the systems to assess the effectiveness of Entergy's maintenance activities. The inspectors reviewed Entergy's problem identification and resolution actions for these issues in accordance with procedures and the requirements of 10 CFR 50.65(a)(1) and (a)(2), "Requirements for Monitoring the Effectiveness of Maintenance." In addition, the inspectors reviewed system classification, performance criteria and goals, system health reports, and corrective actions that were taken or planned to verify whether the actions were reasonable and appropriate. The references used for this review are listed in the attachment to this report.

The following inspection activities were conducted to confirm proper classification of equipment issues for the referenced systems and components:

- Primary Containment Atmospheric Control System (09): The inspector reviewed the primary containment atmospheric control system health report for the second quarter 2005, and the current maintenance rule (a)(1) status (System Health Report Executive Summary). The inspector also reviewed the bases for classifying the system in an (a)(2) status.

- Fire Protection System (33): The inspector reviewed the fire protection system health report for the second quarter 2005, and the current maintenance rule (a)(1) status (System Health Report Executive Summary). The inspector also reviewed the bases for classifying the system in an (a)(2) status.

- Emergency Lighting System (05E) emergency battery operated lighting units (EBLU): This review encompassed five years (2001-2005) and was accomplished by reviews of system (05E) health reports, condition reports, maintenance records, prior a(1) action plans, and monthly performance monitoring results for the EBLUs. A system walkdown was performed and the system engineer was interviewed.

b. Findings

Introduction

Green. The inspectors identified that Entergy failed to implement effective maintenance on the emergency lighting system in a manner necessary to prevent repeated functional failures from causes which were within the licensee's capability to foresee and prevent. As a result of failures predominately due to low battery electrolyte levels and the improper adjustment of the battery charger output voltage, the emergency lighting system experienced 20 functional failures in a 36-month period and failed to meet the reliability performance criteria in four of the last five years. No violations of regulatory requirements were identified.

Description

The emergency lighting system is comprised of three sub-systems; an alternating current (AC) system, a 125 volt direct current (DC) system, and a system of individual 8-hour EBLU. Only the 148 emergency battery lighting units credited for safe-shutdown are within scope of the Maintenance Rule. Acceptable system performance is defined in Entergy's Maintenance Rule program as no more than 2 system functional failures in a 24 month rolling period. A system functional failure is considered to have occurred when the number of operable emergency lights is less than 95% (8 failures) of those required for safe-shutdown.

Emergency Lighting was placed into a(1) status in early 2003 due to an increase in EBLU functional failures that occurred subsequent to incorporating acceptance criteria related to battery electrolyte level into the monthly surveillance procedure, 8.B.21. Battery electrolyte level was added to the acceptance criteria in accordance with the standards established in the Electric Power Research Institute (EPRI) Emergency Battery Lighting Unit Maintenance and Application Guide. Pilgrim's original batteries, Excide LEC 36, do not have a provision to add electrolyte and, therefore, require replacement over time as the electrolyte level drops due to repeated charges and discharges. In March 2003, an a(1) action plan was implemented that replaced the existing failed emergency lights with low electrolyte levels with a new lighting unit containing an Excide136 battery and F100 Omni-Test lighting component. In March 2004, the system was restored to a(2) status. Fifty-three older style EBLUs had been replaced and four consecutive monthly surveillances (November 03 - February 04) were satisfactorily accomplished. In accordance with the action plan, the remaining older style EBLUs were to be replaced with newer units when the original units failed due to low electrolyte levels during the monthly surveillance testing.

The inspectors concluded that Entergy failed to implement effective maintenance on the emergency lighting system resulting in repeated functional failures. CR 200403877, issued in December 2004, documented that the emergency lighting system did not meet its reliability performance criteria; however, per direction of the expert panel, the system was not placed back into a(1) status because it had been determined that the performance criteria were not met due to resources not being assigned to repair/replace the units as they failed the monthly surveillance test. Resources were not assigned to repair/replace the units, as previously planned, to allow work to take place on other maintenance items of higher priority. After initial improvement in early 2005, the issue was compounded by failure of the newer style EBLUs that had been installed to replace older units with low electrolyte levels. Inadequate maintenance instructions led to improper adjustment of the battery charger output voltage during maintenance procedure 3.M.3-49, "Emergency Lighting Battery Maintenance / Preventive Maintenance Procedure." Improper charger output voltage caused the newly installed units to become inoperable due to dead batteries and/or failed self-test functions (CR200502895).

Entergy returned the emergency lighting system to a(1) status in June 2005 and approved an a(1) action plan in October to replace currently inoperable units in addition to replacing the remaining older units and correcting the charging output voltage setting for the newer units.

Analysis

The finding is more than minor because it affected the reliability objective of the Equipment Performance attribute under the Mitigating System Cornerstone. Portions of the emergency lighting system were not available to perform their intended function of supporting operator actions to mitigate the consequences of fires upon loss of all other lighting. The finding is of very low safety significance (GREEN) because there is no design deficiency, the finding does not represent an actual loss of safety function, and did not screen as risk significant for fire, flood, seismic, or severe weather initiating events, in accordance with MC-0609, Safety Determination Process, Phase 1 worksheet. A cross-cutting aspect of the finding related to problem identification and resolution in that effective corrective action was not taken for the failed emergency lights due to deferral of corrective maintenance and improper maintenance instructions.

Enforcement

No violation of regulatory requirements was identified. **FIN 05000293/2005-005-2, Lack of Effective Maintenance for the Emergency Lighting System.**

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

a. Inspection Scope (3 samples)

The inspector evaluated on-line risk management for planned and emergent work. The inspector reviewed maintenance risk evaluations, work schedules, recent corrective

actions, and control room logs to verify that other concurrent planned and emergent maintenance or surveillance activities did not adversely affect the plant risk already incurred with the out of service components. The inspector evaluated whether Entergy took the necessary steps to control work activities, took actions to minimize the probability of initiating events and maintained the functional capability of mitigating systems. The inspector assessed Pilgrim's risk management actions during plant walkdowns. The inspector also discussed the risk management with maintenance, engineering and operations personnel as applicable for the activities. References used for the inspection are identified in the attachment to this report. The inspection covered the following three samples:

- Entergy's risk assessment for the week of October 23, 2005 and subsequent actions to manage risk in response to severe weather on October 24-25;
- Emergent work on the off-site power supply line 342, on November 14, 2005; and
- Yellow risk condition on 11/21/05 for emergent work on HPCI in addition to pre-planned HPCI maintenance and testing.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions (71111.14)

a. Inspection Scope (2 samples)

The inspector assessed the control room operator performance during the following planned non-routine evolutions. The inspector evaluated personnel performance during a power maneuver (i.e., adequacy of personnel performance, procedure compliance, use of the corrective action process, etc.) against the requirements contained in station procedure 2.1.14. The inspectors evaluated personnel performance based on control room observations and reviews of operator logs, alarm response procedures, operating procedures, and interviews. This review covered two inspection samples.

- The plant power reduction to 62% full power on October 26 per procedure 2.1.14 to perform a control rod pattern exchange and power suppression testing per procedure 9.32, "Power Suppression Testing." The inspector also used power maneuvering plan MAN.C16-07 as a reference for this review. The inspector reviewed licensee actions to identify a potential leaky fuel bundle (Condition Report 200504580), suppress the power at core location 42-19, and revise fuel pre-conditioning operating guidelines. The inspectors observed the crew response for a loss of feedwater heating event which occurred during the power transient.

- The operator actions to implement procedure 5.2.1 on November 17, 2005, in response to a seismic event experienced in Plymouth, MA. The event was centered 2 miles south of Plymouth center and measured 2.5 on the Richter scale. The licensee and NRC residents completed a walkdown of plant buildings

and monitored plant operating parameters. Although felt by some personnel onsite, there was no damage to the plant. The inspector reviewed licensee actions to address deficiencies in the site seismic monitoring instrumentation (Condition Reports 200504278, 200504998 and 200505008). Other references used in this review are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (4 samples)

The inspector reviewed selected operability determinations to assess the adequacy of the evaluations, the use and control of compensatory measures, compliance with the technical specifications, and the risk significance of the issues. The inspector used the technical specifications, Final Safety Analysis Report, associated Design Basis Documents, Procedure ENN-OP-104 "Operability Determinations," and the additional references listed in the attachment to this report for Section 1R15. This review covered four inspection samples.

- CR200502245 and 200501886; Standby Liquid Control storage tank concentration possibly out of Technical Specification Figure 3.4.1 limits;
- CR200504762, 200503468, 200401182 Reactor Building tour noted a standby liquid control pump discharge accumulator pressure lower than expected;
- CR 200505144, RHR A Quad Hatches Not Sealed; and
- CR 200505188 and 200505195, CRHEAFS Air In Leakage in Excess of Design Basis Assumptions (Calculation 32-9005518-000).

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds (71111.16)

a. Inspection Scope (1 sample)

The inspector reviewed operator workarounds to assess: their effect on plant equipment reliability, availability, and the potential for mis-operation; their potential to affect multiple mitigating systems; and the potential for their cumulative effects to impact the operators' ability to respond in a correct and timely manner to plant transients and accidents.

The inspector reviewed procedure 1.3.34.4, "Compensatory Measures," the compensatory measures and disabled annunciator log books, operation's standing orders, the predictive maintenance watch list, the Daily Plant Status Report lists of operations equipment problems, operability evaluations, temporary alterations, top ten

equipment reliability issues, and top ten safety MRs. The top ten equipment reliability action plans and third quarter system health reports were reviewed to ascertain a better understanding of the fire protection impairments, station communications, and feedwater level control issues.

The inspector reviewed the corrective action program to verify the licensee was identifying equipment issues at an appropriate threshold and to evaluate the licensee's resolution. The inspector selected CR200503818 and verified corrective action to eliminate a procedure work around associated with operation of the liquid nitrogen system that had been implemented via revision 93 to procedure 2.2.70.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (6 samples)

The inspector reviewed post-maintenance test activities on risk significant systems to verify that the effect of the test on the plant had been evaluated adequately, the test was properly performed in accordance with procedures, the test data met the required acceptance criteria, and the test activity was adequate to verify system operability and functional capability following maintenance. The inspector verified that systems were properly restored following testing and that discrepancies were appropriately documented in the corrective action process. The inspection activity represented six samples:

- MR 02107674, Inspect/Upgrade Barton Switch Assembly PS-4058;
- MRs P9800772 & P9800773, replace RHR system agastat relays 10A-K1001-7B and 10A-K1001-7D;
- MRs 02118349 & 02118344, replace RHR pump motors P-203D and P-203B motor lead bushings;
- MRs 05103046 & 05103048, replace RHR system control power fuses for MO-1001-43B and MO-1001-7B;
- MR 05119731, troubleshoot and repair remote trip system per 3.M.1-34 (replace solenoid valve SV-2301-246); and
- MR05115286, troubleshoot and repair alternate shutdown panel HPCI flow controller.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (5 samples)

The inspector reviewed and/or observed surveillance testing to verify that the test acceptance criteria was consistent with Technical Specifications, ASME Code inservice test requirements, and Updated Final Safety Analysis Report requirements and the components were capable of performing their intended safety functions. The inspector also confirmed that the test was performed in accordance with the written procedure, the test data was complete and met procedural requirements, and the system was properly returned to service following testing. The inspector observed pre-job briefs for the test activities. The inspection activity represented five inspection samples:

- B Core Spray Pump quarterly operability testing per procedure 8.5.1.1, Core Spray System Operability - Pump Quarterly and Biennial Comprehensive Flow Rate Tests and Valve Tests;
- 8.E.30.1, Closed Cooling Water System (CCWS) Instrumentation Calibration and Functional Test;
- 8.5.4.1, High Pressure Coolant Injection (HPCI) System Pump and Valve Quarterly and Biennial Comprehensive Operability (Section 8.2 Bi-Comp test);
- Temporary Procedure TP03-010, Control Room Tracer Gas Testing; and
- 8.5.4.6, HPCI Pump and Valve Operability from Alternate Shutdown Panel.

b. Findings

No findings of significance were identified. A licensee identified finding is addressed in Section 40A7 of this report.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope (2 samples)

The inspector reviewed the temporary modifications identified below to verify that the licensing bases and performance capability of the associated risk significant system had not been degraded through the modification. The references used for this review are listed in the attachment to this report. This inspection activity represented two samples.

- Temporary Alteration 05-1-050 to install a 12 amp slow blow fuse in place of a 15 amp slow blow fuse for FUSE 5A-F18H in the Reactor Protection System (RPS) channel B power supply. When the 15 amp fuse failed, the operators verified the proper status of the RPS. The licensee evaluations were described in Condition Report 200504346. The temporary alteration was needed to restore indication to the Group 4 scram valve indicating lights on control room panels C905 and C917. The licensee provided a circuit analysis as part of the technical justification for TA 05-1-050. The inspector reviewed drawings M1N9-12, M1N21-9, Revision E9 “Elementary Diagrams - Reactor Protection System,” and

discussed the temporary alteration with cognizant licensee engineering personnel and reviewed the changes to plant drawings.

- Temporary Alteration 05-1-052 to install a replacement card in the position indication circuit for control rod 14-31 on October 24, 2005. The temporary alteration was developed after a short developed in the position indication circuitry for rod 14-31, which resulted in a green "full-in" indication to be displayed on control room panel 905 even though rod 14-31 was fully withdrawn. The temporary alteration was needed to prevent a fault from being generated in the rod worth minimizer due to the erroneous position indication. The licensee provided an analysis as part of the technical justification for TA 05-1-052. The inspector reviewed procedure 2.2.89, Revision 15, and discussed the temporary alteration with licensee personnel. The licensee documented the rod 14-31 issue in Condition Report 200503887. The licensee issued MR 05118042 to repair the position indication for rod 14-31 during the next plant shutdown.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope (1 sample)

An in-office inspection that reviewed recent changes to the emergency plan and implementing procedures was conducted on December 27, 2005. These changes were made in accordance with 10 CFR 50.54(q), since the licensee had determined that they did not decrease in effectiveness to the Plan and concluded that the changes continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. During this inspection, the inspector conducted a sampling review of the changes which could potentially result in a decrease in effectiveness. This review does not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4, and the applicable requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope (7 samples)

The inspector reviewed radiological work activities and practices and procedural implementation during observations and tours of the facilities and inspected procedures, records, and other program documents to evaluate the effectiveness of Pilgrim's access controls to radiologically significant areas. This inspection activity represents the completion of seven samples relative to this inspection area (i.e., inspection procedure sections 02.01, 02.02.e, 02.05.c, 02.06.a and b, and 02.07.a and b) in complete fulfillment of the annual inspection requirements.

Inspection Planning (02.01)

The inspector verified that there were no licensee Performance Indicator (PI) events for the Occupational Exposure Cornerstone which required follow-up. During this and previous inspections during this calendar year, the inspector reviewed issues identified in the corrective action program and discussed selected occurrences related to this PI with radiation protection personnel. Also, during this inspection, the inspector met with the radiation protection person who was responsible for tracking and reporting the status of this PI within the site organization.

Plant Walkdowns and RWP Reviews (02.02.e)

The inspector reviewed and assessed the adequacy of the licensee's internal dose assessment for any actual internal exposures greater than 50 millirems of committed effective dose equivalent (CEDE) during a previous inspection which included a similar inspection requirement (i.e., Section 02.04(a) in Attachment 03 of inspection procedure 71121). Therefore, this inspection requirement was not duplicated during this inspection.

High Risk Significant, High Dose Rate HRA and VHRA Controls (02.05.c)

During this inspection, the inspector verified the adequate posting and locking of all reasonably accessible entrances to all high-dose-rate high radiation areas (HDR-HRAs) and very high radiation areas (VHRAs). The inspector reviewed the status board list of current locations posted as VHRAs, locked high radiation areas (LHRAs), and high radiation areas (HRAs). Using this list, the inspector physically toured and examined postings and physical controls in the reactor building, the turbine building, and the radioactive waste areas.

Radiation Worker Performance (02.06.a and b)

During this inspection, the inspector observed maintenance technicians removing a chiller from the chemistry sample sink, a posted high radiation and contaminated area, in the reactor building and observed work on the component in the hot machine shop. These work activities were performed under a radiation work permit (RWP) with periodic surveillance by a radiation protection technician. During previous inspections during this calendar year, which included a refueling outage, the inspector had several opportunities to observe radiation worker job performance with respect to stated radiation protection work requirements. Based on these observations, the inspector confirmed that radiation workers were aware of the significant radiological conditions in their workplace and the RWP controls/limits in place and that their performance took into consideration the level of radiological hazards present. In addition, the inspector reviewed several radiological problem reports which found that the cause of the event was due to radiation worker errors. The inspector confirmed that there was no observable pattern traceable to a similar significant cause and reviewed the licensee corrective actions to resolve the reported problems.

Radiation Protection Technician Proficiency (02.07.a and b)

During this inspection, the inspector observed maintenance technicians removing a chiller from the chemistry sample sink, a posted high radiation and contaminated area, in the reactor building and observed work on the component in the hot machine shop. These work activities were performed under a radiation work permit (RWP) with periodic surveillance by a radiation protection technician. During previous inspections during this calendar year, which included a refueling outage, the inspector had several opportunities to observe radiation protection technician job performance with respect to all radiation protection work requirements. Based on these observations, the inspector confirmed that the radiation protection technicians were aware of the radiological conditions in their workplace and the RWP controls/limits and that their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities. In addition, the inspector reviewed several radiological problem reports which found that the cause of the event was due to radiation protection technician error. The inspector confirmed that there was no observable pattern traceable to a similar significant cause and reviewed the licensee corrective actions to resolve the reported problems.

Related Activities

The inspector performed a selective examination of documents (as listed in the List of Documents Reviewed section) to evaluate the adequacy of radiological controls. The review in this area was against criteria contained in 10 CFR 19.12, 10 CFR 20 (Subparts D, F, G, H, I, and J), Technical Specifications, and licensee procedures.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02)

a. Inspection Scope (3 samples)

The inspector reviewed the effectiveness of the licensee's program to maintain occupational radiation exposure as low as is reasonably achievable (ALARA). This inspection activity represents the completion of three samples relative to this inspection area (i.e., inspection procedure sections 02.02.f*, 02.05.b*, and 02.08.d) in complete fulfillment of the biennial inspection requirements.

Radiological Work Planning (02.02.f*)

The inspector compared the person-hour estimates, used by the radiation protection group for work activities by maintenance and other work groups, with the actual work activity time requirements and evaluated the accuracy of these time estimates. The inspector reviewed the estimated and actual person hours for outage work activities in the ALARA report for refueling outage (RFO) 15 (April - May 2005) and the explanation for divergences between the two. The inspector confirmed that the accuracy of the time estimates was reasonable under the outage planning circumstances.

Source-Term Reduction and Control (02.05.b*)

The inspector reviewed the ALARA five-year plan document, revised as of July 2005, and held discussions with the ALARA supervisor and the Radiation Protection Manager to confirm that the licensee had developed an understanding of the plant source-term, including a knowledge of input mechanisms which would allow them to reduce the source term. The inspector also confirmed that the licensee had a source-term control strategy in place.

Problem Identification and Resolutions (02.08.d)

The inspector, during this inspection and during previous inspections over the last two calendar years, reviewed selected repetitive ALARA deficiencies identified in the corrective action program. During the same time frame, the inspector also reviewed the licensee's self-assessment activities regarding the radiation protection program which included the ALARA program. Based on these reviews, the inspector confirmed that the licensee's self-assessment activities were also identifying and addressing the type of ALARA deficiencies which were being identified in the corrective action program.

Related Activities

The inspector performed a selective examination of documents (as listed in the List of Documents Reviewed section) for regulatory compliance and for adequacy of control of radiation exposure. The review was against criteria contained in 10 CFR 20.1101 (Radiation protection programs), 10 CFR 20.1701 (Use of process or other engineering controls), and licensee procedures.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator Verification (71151)

e. Inspection Scope (2 samples)

Occupational Exposure Control Effectiveness (OECE)(02.01)

The inspector selectively examined records used by the licensee to identify occurrences involving high radiation areas, very high radiation areas, and unplanned personnel exposures for the time period from the fourth quarter of 2004 through September 2005. The reviewed records included selected corrective action program records and the periodic PI data records for this PI. This review was conducted against the applicable criteria specified in Nuclear Energy Institute's (NEI) Regulatory Assessment Performance Indicator Guideline No. 99-02 (Revision 3, with an effective date of April 1, 2005).

This review and examination were conducted to verify the accuracy and completeness of this performance indicator. This inspection activity represents the completion of one (1) sample relative to this inspection area (i.e., inspection procedure section 02.01) for one performance indicator (i.e., OECE).

Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM REOs)(02.01)

The inspector selectively examined records used by the licensee to identify any occurrences involving gaseous or liquid effluent releases for the time period from the fourth quarter of 2004 through September 2005. The reviewed record types included selected corrective action program records, and the periodic PI data records for this PI. This review was conducted against the applicable criteria specified in Nuclear Energy Institute's (NEI) Regulatory Assessment Performance Indicator Guideline No. 99-02 (Revision 3, with an effective date of April 1, 2005).

This review and examination were conducted to verify the accuracy and completeness of this performance indicator. This inspection activity represents the completion of one (1) sample relative to this inspection area (i.e., inspection procedure section 02.01) for one performance indicator (i.e., RETS/ODCM REOs).

f. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

Reactor Safety Cornerstone

.1 Review of Corrective Action Program Issues

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspector performed a screening of each item entered into the licensee's corrective action program. This review was accomplished by reviewing printouts of each condition report, attending daily screening meetings and/or accessing the licensee'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 Corrective Action Program Semi-annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspector performed the semi-annual trend review to identify trends, either Entergy or NRC identified, that might indicate the existence of a more significant safety issue. Included within the scope of this review were condition reports from June 2005 - November 2005, the 3rd quarter 2005 corrective action trend report, and the daily plant status report listings of operations equipment problems, operability evaluations, and temporary alterations.

b. Findings

No findings of significance were identified. The majority of the repetitive issues / trends identified by the inspector had also been recognized by Entergy and were captured in adverse trend CRs, including emerging trends in emergency diesel generator performance (CR 200504082, 200503871), operational issues (200503036), REMP equipment (200504010, 200504024), drywell leakage (200504023), fire system impairments and corrective actions (200504143), and personnel contamination during outage work (200503252), as well as adverse trends in change management (200504390) and rework issues (200504389). The issues are currently being evaluated by Entergy to identify additional actions to prevent recurrence. No trends were noted which suggested the presence of a more significant safety issue.

.3 Review of Corrective Actions associated with Notice of Violation (NOV) EA-05-039

a. Inspection Scope

In a letter (Letter Number 2.05.056) to the USNRC from Entergy Nuclear Operations, Inc., dated August 9, 2005, Entergy specified corrective actions to be taken to address violations associated with an inattentive control room supervisor and inappropriate response by other control room staff (NOV EA-05-039). On October 24 - 26, 2005, the inspectors reviewed the status of those actions. The inspectors interviewed members of the licensee staff, reviewed procedures to determine if the stated changes had been implemented, observed licensed operator classroom and simulator training, and reviewed licensee internal and external Operating Experience (OE) notices related to the NOV. The inspectors also reviewed reviewed training documents and attendance records to verify that the corrective actions were taken and completed as described.

The following documents were reviewed:

- Condition Report (CR) 2004-2535 - Potential operator inattentiveness;
- Draft Revision of Procedure 1.3.34 - Conduct of Operations;
- Root Cause Analysis Report - Licensed Operator Inattentiveness, 10-25-2004;
- Fitness for Duty training module C-GT-01-01-29, Rev.6, 8/26/05;
- Operations Crew Team Building Workshop - 9/9/2005 thru 10/6/05;
- Shift Work Lifestyle Seminar - completed 10/13/2005; and
- Notice of Violation - EA-05-039, July 14, 2005.

b. Findings and Observations

The licensee root cause evaluation determined that the Senior Reactor Operator (SRO) failed to exercise appropriate and prudent judgement with respect to fitness-for-duty self-determination prior to and while executing licensed duties. The inspectors found that the evaluation was thorough and that corrective actions taken communicated and addressed the issues described in the evaluation and the NOV. Based on the staff interviews, and observation of team building training the inspectors found that the issues related to operator attentiveness were understood and were reiterated in the associated classroom and simulator training. Additionally, the inspectors verified that the required corrective actions were either complete or scheduled for completion, as specified, in the letter noted above. NOV EA-05-039 (VIO 50-293/2005003-02) is closed.

Radiation Safety Cornerstone

.4 Occupational Radiation Safety

a. Inspection Scope

During the inspection week of November 7, 2005, the inspector selected twelve issues/condition reports (CRs) identified in the Corrective Action Program (CAP) for detailed review (i.e., CR-PNP-2005-04226, -04231, -04305, -04308, -04357, -04433,

-04444, -04501, -04543, -04635, -04760, and -04822). The issues were associated with the following: a lack of readout for the upper wind sensor on the main meteorological tower, delta temperature indications on the new meteorological instrumentation system, an ALARA suggestion to eliminate unnecessary maintenance activity, a contaminated liquid leak from an instrument air valve, data drop-out/vendor interface issues with the new meteorological instrumentation system, cell phone communications and an associated ALARA issue, another aspect related to the contaminated liquid leak from an instrument air valve, another cell phone communications and an associated ALARA issue, an ALARA action item to review work flow, a highly radioactive object recovered from a tool box, controls for designated high noise areas, and conditional release after alarming personnel contamination monitor, respectively. The documented reports for the issues were reviewed to determine whether the full extent of the issues were identified, appropriate evaluations were performed, and appropriate corrective actions were specified and prioritized.

b. Findings

No findings of significance were identified.

.5 Cross-References to PI&R Findings Documented in the Report

A cross-cutting aspect of the finding related to problem identification and resolution, adequate corrective action was not taken to restore the A RHR quadrant floor plugs to their required design configuration. (1R06)

A cross-cutting aspect of the finding related to problem identification and resolution, adequate corrective action was not taken for the failed emergency lights due to deferring corrective maintenance in support of other higher priority work items. (1R12)

4OA3 Event Follow-up (71153)

.1 Licensee Event Report Review and Closeout (1 sample)

a. (Closed) LER 50-293/2005-03: Target Rock Relief Valve Test Pressures Exceed Technical Specification Tolerance Limit. The inspector reviewed Entergy's actions associated with Licensee Event Report (LER) 50-293/2005-03. The report describes set point drift in the Target Rock, two-stage main steam safety relief valves. The as-found popping pressures would have exceeded the Technical Specification allowable set points, but would not have resulted in exceeding the code allowable pressure for the reactor vessel. The licensee analyses described in LER 2005-03 showed that previous analyses crediting Safety Relief Valves (SRVs) operation remained bounding, and thus the consequences on plant safety were minimal. Similar events were reported in LERS 2001-04, 2004-01 and 2004-03. The root cause was determined to be oxidation (corrosion bonding) of the pilot valve seats and discs, with loose insulation as a contributing cause. Corrective actions included installing certified tested pilot assemblies, re-fitting loose insulation and enhancing valve tolerances for pilot valve manufacture and testing. Based on industry experience, Entergy had already replaced

the disc materials and installed a different type of insulation to improve performance. Licensee evaluations were described in Condition Reports 200502559 and 200403047, and Engineering Study ER 04107452, "SRV Reliability Improvements." The licensee was evaluating a potential design change that would operate the SRVs using a signal derived from a pressure switch, which was described in Topical Report NEDC-32121P and has been previously reviewed by the NRC staff (reference NRC Safety Evaluation Letter dated October 24, 1995 to the Boiling Water Reactor Owners Group). A violation of Technical Specification 3.6.D.1 is described in Section 4OA7 of this report. The LERs provided an accurate description of the event and followup actions. This LER is closed.

4OA6 Meetings, Including Exit

Resident Exit

On January 12, 2006, the resident inspectors presented the inspection results to Mr. M. Balduzzi and other members of his staff, who acknowledged the findings. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by Entergy and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy for being dispositioned as Non-cited Violations.

.1 Technical Specification 3.6.D.1 specifies the opening pressure of main steam safety relief valves to be within 1% of the nominal setpoint range. Contrary to the above, the licensee determined through routine testing on May 11, 2005, that main steam safety relief valves SRVs had lift pressures that exceeded the TS limit, as follows: 1161 psig for SRV with serial number (SN) 1046, 1139 psig for SRV with SN 1048, and 1172 psig for SRV with SN 1040. The licensee reported this event as licensee event report LER 2005-03, which is discussed further in Section 4OA3 above. The licensee corrective actions included evaluating a potential design change that would operate the SRVs despite corrosion bonding between the pilot disc and seat. The licensee addressed this matter, including immediate and long term corrective actions, along with actions to prevent recurrence, in Condition Report 200502559. This issue is also described in Section 4OA3 above.

.2 Technical Specification 5.4.1 requires that written procedures be established and implemented for the activities described in Regulatory Guide 1.33, which includes procedures for plant operations and emergency operations. Procedure 1.3.34, Conduct of Operations, Section 6.13, describes operability requirements for Safety Enhancement Program (SEP) modifications, including the backup nitrogen supply trailer X-168. Emergency Operating Procedure EOP-3 and 5.4.6 provide instructions for the use of the backup nitrogen supply (X-168) for post-accident hydrogen control inside the containment. Contrary to the above, on October 8, 2005, the licensee determined that backup nitrogen trailer X-168 had been out of service since May 31, 2005, when it was

isolated due to a faulty pressure/level gage, and no action had been taken to return trailer X-168 to an operable status in a timely manner as required by procedure 1.3.34. The licensee completed actions by November 10, 2005, to repair the faulty gage and place nitrogen trailer X-168 back into service. This issue and the licensee corrective actions are described in Condition Report 200504457. NRC review of this matter is also described in Section 1R04S above.

.3 The Control Room High Efficiency Air Filtration System (CRHEAFS), in conjunction with shielding, functions to limit radiation exposure to personnel in the control room. Based on Pilgrim's analysis of record using TID14844 source term, Technical Specification 3.7, and Updated Final Safety Analysis Report (FSAR)10.17., by-pass in-leakage of unfiltered air at a maximum of 10 CFM is allowed. Contrary to the above, tracer gas testing conducted in December 2005 identified unfiltered by-pass in leakage into the control room was in excess of 10 CFM, preliminary values were approximately 100 CFM and 150 CFM respectively for the A and B trains of CREAFS (CR 200505195). Entergy's revised analysis, using the alternate source term methodology (AST), showed radiological dose consequence acceptable per the original licensing basis. This issue and the licensee corrective actions are described in Condition Reports 200505188 and 200505195. NRC review of this matter is also described in Sections 1R15 and 1R22 above.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:

P. Dietrich	General Manager Plant Operations
D. Noyes	Assistant Operations Manager
V. Fallacara	Training Manager
J. Fitzsimmons	Radiological Operations Supervisor
B. Ford	Licensing Manager
L. Foreaker	Radiological Support Supervisor
M. Gatslick	Licensing Engineer
W. Lobo	Licensing Specialist
W. Mauro	ALARA Supervisor
J. McClellan	Quality Specialist-Quality Assessment
B. McDonald	Radiation Protection Specialist (Support)
P. McNulty	Radiation Protection Manager
F. Pasqule	Nuclear Superintendent
M. Santiago	Nuclear Training Superintendent
R. Scannel	QA Supervisor
K. Sejkora	Effluent Engineer
J. Wheeler	Manager, Training Standards
G. Zavaski	Radiation Protection Specialist (Projects)

NRC Personnel:

W. Raymond, Senior Resident Inspector
C. Welch, Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Open and Closed

0500293/2005-005-001	NCV	Untimely Problem Resolution of an Internal Flood Control Deficiency
05000293/2005-005-002	FIN	Lack of Effective Maintenance for the Emergency Lighting System

Closed

50-293/2005-03	LER	Target Rock Relief Valve Test Pressures Exceed Technical Specification Tolerance Limit
05000293/2005-003-02	VIO	Inattentive Control Room Supervisor with Willful Inappropriate Response by Other Control Room Licensed Staff

LIST OF DOCUMENTS REVIEWED

References for Section 1R01

2.1.37, Costal Storms-Preparations and Actions.
5.2.2, High Winds (Hurricane).
2.4.154, Intake Structure Fouling.
2.1.42, Operation During Severe Weather.

References for Section 1R04

2.2.70, Primary Containment Atmospheric Control System.
2.2.143, Liquid Nitrogen Vaporizer Trailer X-168.
1.3.34, Conduct of Operations, Section 6.13.
2.2.105, Backup Nitrogen Supply system.
1.12.1, Receiving, Recording, and Monitoring of Consumable Deliveries.
5.4.6, Primary Containment Venting and Purging Under Emergency Conditions.
8.C.37, Standby Compressed Air/Nitrogen Bottle Surveillance, 11/8/05.
2.1.15, Attachment 2 (OPER 9) Surveillances August - October 2005.
SAG-02, Containment and Reactivity Release Control.
PDC 83-24, Nitrogen Purge Vaporizer X-205 Replacement.
FRN 01-01-81, Nitrogen Storage Tank T212 Replacement.
FSAR Section 5.4, Control of Combustible Gas Concentrations In Containment.
Second Quarter 2005 System Health Report, System 09, PCAC.
SDBD-09A, PCAC System Design Basis Document.
Condition Reports 200503959, 200501219, 200504457, 200504481.
Drawings M227, M242.
NRC Letter dated 10/12/88, Supplemental Assessment of Pilgrim SEP Program.
NRC Letter dated 8/21/87, Initial Assessment of Pilgrim SEP Program.

Final Rule Change FR 54123 10 CFR 50.44, Combustible Gas Control In Containment.
MC 0609 Appendix H SDP for Containment Related SSC Considerations.
2.2.20, Core Spray System.
2.2.30, RBCCW System.
8.5.1.1, Core Spray Full Flow Test - Valve Stroke Trending (MO-1400-4A, 4B).
8.5.1.1, Core Spray Full Flow Test - Core Spray Pump Trending (p-215A, B).
8.5.1.3 - Core Spray Valve Stroke Trending (MO-1400-24A, B, 3A, 3V).
8.I.11.11, PIV Cold/SD Stroke Trending.
Third Quarter 2005 System Health Report, System 14, CS.
Condition Reports 200400820, 200501573, 200501893.
MR 02118355 (8/19/2003).
MR 05106765 (04/22/2005).
2.2.19, Residual Heat Removal.

References for Section 1R06

Vendor manual V-0367, G.E. Induction Motors.
NRC IE Circular No. 78-06 Potential Common Mode Flooding of ECCS Equipment Rooms At BWR Facilities.
NRC IN 2005-30, Safe Shutdown Potentially Challenged By Unanalyzed Internal Flooding Events and Inadequate Design.
NRC IN 98-31, Fire Protection System Design and Common-Mode Flooding of Emergency Core Cooling System Rooms At Washington Nuclear Project Unit 2.
NRC IN 2005-11, Internal Flooding/Spray-Down of Safety-Related Equipment Due to Unsealed Equipment Hatch Floor Plugs and/or Blocked Floor Drains.
Drawing M408, Reactor Building Radwaste Drainage.
Drawing M409, Reactor Building Radwaste Drainage.
Drawing M410, Reactor Building HPCI Area Radwaste Drainage.
Drawing M411, Reactor Building Plumbing and Drainage.
Calculation E536 Appendix E, Supplemental Submergence Information.
Procedure 3.M.4-96, Floor Plug and Vault Hatch Seals.
Calculation S&SA 61, Flood Level Calculations.
UFSAR Appendix O, Analysis of High Energy Piping Failures Outside Containment.
Pilgrim Nuclear Power Station Probabilistic Safety Assessment, Appendix E, Internal Flood Analysis.
Problem Report 97-9066, A Quad Plug Removed for Access.
EN-WN-100, Work Request (WR) Generation, Screening, and Classification.

References for Section 1R11

Simulator Exam Scenarios SES-149 and 150.
Procedures 2.4.17, 2.4.22, 2.4.44, 2.1.6, EOP-1, EOP-2, EOP-3.
EPIP-100, Emergency Classification and Notification.
Electronic Crew Notebook Crew Evaluation forms for SES-149 & 150.
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LIST OF ACRONYMS

ADAMS	Agency wide Documents Access and Management System
ALARA	As Low As Reasonable Achievable
ASME	American Society of Mechanical Engineers
AST	Alternate Source Term Methodology
BWR	Boiling Water Reactor
CAP	Corrective Action Program
CCWS	Closed Cooling Water System
CEDE	Committed Effective Dose Equivalent
CFM	Cubic Feet per Minute
CR	Condition Report
CRHEAFS	Control Room High Efficiency Air Filtration System
CRS	Control Room Supervisor
CS	Core Spray
DC	Direct Current
EBLU	Emergency Battery Operated Lighting Units
ED	Emergency Depressurization
EDG	Emergency Diesel Generators
EOP	Emergency Operating Procedure
EPG	Emergency Procedure Guidelines
EPRI	Electric Power Research Institute
FSAR	Final Safety Analysis Report
GDC	General Design Criteria
HDR-HRA	High Dose Rate - High Radiation Area

HPCI	High Pressure Coolant Injection
HRA	High Radiation Area
IR	Inspection Report
IST	Inservice Testing Results
LER	Licensee Event Report
LHRA	Locked High Radiation Area
MR	Maintenance Request
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NOV	Notice of Violation
OA	Other Activities
ODCM	Offsite Dose Calculation Manual
OE	Operating Experience
OECE	Occupational Exposure Control Effectiveness
OS	Occupational Radiation Safety
PARS	Publicly Available Records
PCAC	Primary Containment Atmospheric Control
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PNPS	Pilgrim Nuclear Power Station
PSTG	Plant-Specific Technical Guidelines
REO	Radiological Effluent Occurrence
RETS	Radiological Effluent Technical Specification
RFO	Refueling Outage
RHR	Residual Heat Removal
ROP	Reactor Oversight Process
RPS	Reactor Protection System
RPV	Reactor Pressure Vessel
RWP	Radiation Work Permit
SAG	Severe Accident Guidelines
SDP	Significant Determination Process
SEP	Safety Enhancement Program
SES	Simulator Exam Scenarios
SN	Serial Number
SRO	Senior Reactor Operator
SRVs	Safety Relief Valves
VHRA	Very High Radiation Area