

August 1, 2006

Mr. Michael A. Balduzzi  
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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 05000293/2006003

Dear Mr. Balduzzi:

On June 30, 2006, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Pilgrim reactor facility. The enclosed integrated inspection report documents the inspection findings, which were discussed on June 30, 2006, with you and 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, reviewed your emergency preparedness program, observed activities, and interviewed personnel.

This report documents one NRC-identified finding of very low safety significance. The finding involved a violation of NRC requirements which was classified at Severity Level IV in accordance with the NRC's Enforcement Policy. 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. If you contest the 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 will be available electronically for public inspection in the NRC Public Document

M. Balduzzi

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Sincerely,

***/RA/***

Raymond J. Powell, Chief  
Projects Branch 5  
Division of Reactor Projects

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

Enclosure: Inspection Report 50-293/06-03  
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: 05000293/2006003

Licensee: Entergy Nuclear Operations, Inc.

Facility: Pilgrim Nuclear Power Station

Location: 600 Rocky Hill Road  
Plymouth, MA 02360

Inspection Period: April 1, 2006 through June 30, 2006

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Approved By: Raymond J. Powell, Chief  
Projects Branch 5  
Division of Reactor Projects

Enclosure

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## SUMMARY OF FINDINGS

IR 05000293/200603; 04/01-06/30/2006; Pilgrim Nuclear Power Station; Maintenance Risk Assessments and Emergent Work Control.

The report covered a 13-week period of inspection by resident inspectors, an announced inspection by a regional specialist in health physics, and in-office reviews of emergency plan changes and grid reliability issues. One finding, which was a non-cited violation (NCV), was 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 nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### A. Inspector Identified and Self-Revealing Findings

#### Cornerstone: Mitigating Systems

Severity Level IV. The inspectors identified a Severity Level IV Non-Cited Violation associated with the licensee's failure to perform an adequate safety evaluation per 10 CFR 50.59. Contrary to 10 CFR 50.59, a screening safety evaluation for handling of a 35 ton cask in the Reactor Building did not provide an adequate basis to demonstrate that the evaluation for use of a heavier cask did not change the evaluation methods approved by the NRC staff in 1985 for the control of heavy loads per NUREG 0612 commitments, as described in the UFSAR and the Pilgrim licensing basis. The licensee made significant enhancements to the original 50.59 safety evaluation and entered this issue into the corrective action program.

The finding was determined to be more than minor because the inspectors could not reasonably determine that the methodology used to evaluate the use of a heavier cask did not constitute a change that would have required NRC approval. The conditions associated with the finding (i.e., the potential drop of a loaded cask) were determined to be of very low safety significance because they did not result in the loss of operability of a safety system. Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process and was classified at Severity Level IV because the violation of 10 CFR 50.59 involved conditions evaluated as having very low safety significance by the SDP. This finding has a cross-cutting aspect in the area of human performance because Entergy did not fully evaluate the licensing basis to develop the 50.59 safety evaluation, and thereby failed to assure a design document was complete and accurate. (Section 1R.13)

### B. Licensee Identified Violations

None.

## REPORT DETAILS

### Summary of Plant Status

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

#### **1. REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R04 Equipment Alignment (71111.04)

##### .1 Partial System Walkdowns

##### c. Inspection Scope (4 samples)

The inspectors completed a partial system review of the risk significant systems listed below to determine whether the systems were correctly aligned to perform their designed safety function. 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 (UFSAR), and the Technical Specifications (TS). The references used for this review are listed in the attachment to this report. This inspection activity represented four samples.

- High pressure core injection (HPCI) system during reactor core isolation cooling (RCIC) testing on April 11-12, 2006;
- Residual heat removal (RHR) "A" and "B" trains, following maintenance and testing on April 24, 2006;
- RCIC system during HPCI testing on May 22-23, 2006; and
- "B" Emergency Diesel Generator (EDG) during "A" EDG maintenance on June 14, 2006.

##### b. Findings

No findings of significance were identified.



1R05 Fire Protection (71111.05).1 Quarterly Fire Protection Inspectiona. Inspection Scope (9 samples)

The inspectors 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 inspectors verified adequate material condition of active and passive fire protection systems features and their operational line up and readiness. The inspectors also reviewed the applicable fire hazard analysis fire zone data sheets. The references used for this review are listed in the attachment to this report. This inspection activity represented nine samples.

- Fire Zone 1.16, Reactor Building Open Area at El. 91, North Half;
- Fire Zone 1.20, Refueling Floor;
- Fire Zone 1.18, Contaminated Equipment and Skimmer;
- Fire Zone 1.17, Clothing Change Area;
- Fire Zone 1.15, Standby Liquid Control;
- Fire Zone 1.10B, B RHR and HPCI Pipe Room;
- Fire Zone 2.1, B Switchgear and Load Center Room;
- Fire Zone 4.1, B Train Diesel Generator Room; and
- Fire Zone 4.2, B Train Diesel Day Tank Room.

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observationn. Inspection Scope (1 sample)

The inspectors observed a training fire drill conducted on April 28, 2006 per procedure 1.4.23, "Fire Brigade Training Drill." The unannounced drill involved a simulated fire in the onsite two-story Butler Building, which contained a simulated radiologically controlled area. The unannounced drill involved the combined response of the onsite fire brigade (FB) and the Plymouth Fire Department (PFD). The inspectors observed fire personnel performance, and confirmed that the licensee's fire fighting pre-plan strategies per procedure 5.5.2, "Special Fire Fighting Procedure," were utilized, the pre-planned drill scenario was followed, and the drill objectives were met. The inspectors verified the joint use of the Incident Command System by the FB and PFD. The inspectors confirmed that proper security and radiological controls were applied; proper 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 confirmed the drill critique identified areas to

enhance fire brigade performance. The inspectors verified that the licensee identified appropriate corrective actions for identified deficiencies and entered the issues into the corrective action program. This activity represented one inspection sample.

o. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Licensed Operator Simulator Training

a. Inspection Scope (1 sample)

The inspectors observed the performance of an operator crew during a simulator training session on May 11, 2006. The training was conducted as part of licensed operator just-in-time (JIT) training for the planned movement of a 35 ton shipping cask inside the reactor building. Licensee evaluations in UFSAR Section 10.3.6 concluded that the postulated drop of the shipping cask could constitute a severe plant event that would result in an operational transient and impact plant safety systems. The inspectors verified the JIT training scenario developed was adequate to ensure the crew's ability to safely shutdown the plant. The inspectors evaluated whether the crew met the training scenario objectives, performed the critical tasks, and properly used abnormal operating procedures and emergency operating procedures. The inspectors verified that the post-scenario critique discussed items for improvement with the crew to enhance performance. The references used for this review are listed in the attachment to this report. This inspection activity represented one sample.

b. Findings

No findings of significance were identified.

.2 Licensed Operator Simulator Exams

a. Inspection Scope (1 sample)

The inspectors observed an evaluated licensed operator simulator training exercise on May 22, 2006. The training was performed using scenario SES-00-00-152 and involved both operational transients and design basis events. The inspectors evaluated both the crew's performance and evaluators' assessments. Specifically, the inspectors evaluated whether the crew met the scenario objectives, accomplished the critical tasks, demonstrated proper use of abnormal and emergency operating procedures, demonstrated proper command and control, communicated effectively, and implemented the emergency plan in-terms of event classification and notification. The inspectors reviewed the post-scenario critique and confirmed lessons learned and items for improvement were discussed with the crew to enhance future performance.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule (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 NRC 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. These inspection activities represented three samples:

- Proper classification of equipment issues for System 50 - Primary Containment, including the Operational Decision Management Issue (ODMI) for drywell leakage (Condition Report (CR) 200503299). The inspectors reviewed Entergy's basis for placing the system in maintenance rule (a)(2) status.
- Proper classification of equipment issues for System 54 - Reactor Pressure Vessel, including the core shroud tie down bolts (CR 200601849).
- The inspectors reviewed Entergy's basis for placing the system in maintenance rule (a)(2) status.
- Proper classification of equipment issues for System 66 - Process Radiation Monitors C19A/B. The inspectors reviewed Entergy's basis for placing the system in maintenance rule (a)(2) status.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)a. Inspection Scope (5 samples)

The inspectors evaluated on-line risk management for planned and emergent work. The inspectors 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 inspectors 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 inspectors assessed Pilgrim's risk management actions

during plant walkdowns. The inspectors also discussed risk management activities with maintenance, engineering and operations personnel as applicable. References used for the inspection are identified in the attachment to this report. The inspection covered the following five samples:

- The elevated (Yellow) risk associated with the RHR logic system functional test on April 17, 2006;
- The elevated (Yellow) risk condition on May 11, 2006, associated with logic system functional test of the "A" EDG and "A" RHR system;
- The elevated (Orange) risk associated with the inspection of salt service water pump P208E per maintenance request (MR) 06107824 on June 1, 2006;
- The elevated (Yellow) risk condition the week of June 11 for planned maintenance activities on the A emergency diesel generator; and
- The risk associated with the control of heavy loads while handling a CNS 3-55 waste shipment cask in the Reactor Building as part of the spent fuel pool cleanup activities: MR 05118433, "Clean Spent Fuel Pool, Ship Irradiated Hardware;" and, engineering request (ER) 05120679, "Provide NUREG 0612 Heavy Loads Evaluation / Safe Load Path for the CNS 3-55 Shipping Cask and the Crusher Shearer Tool and Stand to be used in the Fuel Pool Cleanup Project."

b. Findings

Introduction:

The inspectors identified a Severity Level IV Non-Cited Violation associated with the licensee's failure to perform an adequate safety evaluation (SE) as required by 10 CFR 50.59 for changes made to the facility.

Description:

The Pilgrim UFSAR describes the methods for controlling heavy loads and the evaluations used to determine the consequences of a dropped cask in the spent fuel pool. The methods were described in License Amendments 20, 24 and 29, which were incorporated in UFSAR Section 10.3.6. In response to NRC requests for additional information in 1980, the licensee described additional evaluations and methods to meet the NUREG 0612 criteria to control heavy loads and mitigate the consequences of a cask drop event. The evaluations were described in letters to NRC dated June 25, 1981; October 8, 1981; and July 13, 1983. The NRC staff approved the licensee's methods and evaluations in an SE dated March 6, 1985. The 1981 and 1983 evaluations became part of the licensing basis established in UFSAR Sections 10.3.6 and 12.2.3.7 as the methods accepted by the NRC staff for the control of heavy loads. The loads evaluated for the NUREG 0612 licensing basis included a shipping cask with a loaded weight of 26 tons.

Entergy planned to use a CNS 3-55 shipping cask to transport radioactive waste from Pilgrim Station during a spent fuel pool clean-up project in 2006. The CNS 3-55 cask

has a maximum loaded weight of 35 tons. The licensee completed ER 05120679 because "...shipping casks previously evaluated for licensing basis NUREG 0612 compliance addressed a spent fuel shipping cask with a loaded weight of 26 tons. Since the proposed CNS 3-55 cask is heavier than the approved casks, it must be evaluated for NUREG 0612 compliance." ER 05120679 further defined requirements to assure that equipment and procedures used for the spent fuel pool cleanup were in accordance with the NUREG 0612 licensing commitments regarding safe load paths, lifting devices and load drop consequences.

Entergy performed a 10 CFR 50.59 screening review for ER 05120679, dated March 24, 2006. Entergy concluded that a complete 50.59 evaluation was not required because the proposed activity screened out based on a determination that ER 05120679 did not change a "method of evaluation" described in the UFSAR or used in establishing the licensing basis. The inspector identified several issues which indicated ER 05120679 had made changes to the evaluation methods used in the licensing basis approved by the NRC staff in 1985, and questioned whether the licensee needed prior NRC review per 10 CFR 50.59(c)(2)(viii).

NRC concerns involved the movement of the cask in and out of the spent fuel pool and the movement of the cask across the operating floor. To evaluate the move of the CNS 3-55 cask across the refueling floor, ER 05120679 used energy balance methods to conclude that handling the 35 ton cask at a height of four inches above the floor was equivalent to the licensing basis of handling the 26 ton cask at six inches. ER 05120679 prescribed the use of wood cribbing to maintain the four inch distance when lifting the cask above interferences around the periphery of the spent fuel pool. ER 05120679 relied upon a 1993 analysis to evaluate spent fuel pool integrity following a cask drop. The 1993 methodology had not received previous NRC review and approval as part of the NUREG 0612 evaluations. Further, the 1993 analysis credited an impact limiter (Hexcel energy absorbing pad) in evaluating the cask drop consequences. The use of an energy absorber pad had not been reviewed by the NRC as part of the NUREG 0612 evaluations.

The inspectors' concerns were reviewed with licensee staff in meetings on March 24, April 6, April 7, May 5 and May 10, 2006. In response, the licensee first added details to the bases for the 10 CFR 50.59 screening, and then further researched the complete licensing basis for the control of heavy loads which was incorporated into a full 50.59 safety evaluation. The safety evaluation was issued in ER 05120679, SE 3402 Revision 1, dated May 10, 2006. Following a review on May 10, the inspectors concluded the safety evaluation dated May 10, 2006 fully described the licensing basis, showed the relevance of the 1993 analysis without relying on it for the NUREG 0612 commitments, and showed that a 35 ton cask and the Hexcel pad had been described in the licensing basis for the control of heavy loads. The licensee entered this issue into the corrective action program as CR 200602460.

Analysis:

A performance deficiency was identified in that Entergy had not developed an adequate basis to support the 10 CFR 50.59 screening safety evaluation dated March 24, 2006. The March 24 SE for ER 05120679 was inadequate because it did not fully describe the complete licensing basis for the control of heavy loads, and it used evaluation methods different than those approved by the NRC staff in 1985 for the control of heavy loads per NUREG 0612. The finding was determined to be more than minor because the inspectors could not reasonably determine that the methodology used to evaluate the use of a heavier cask did not constitute a change that would have required NRC approval. The conditions associated with the finding (i.e., the potential drop of a loaded cask) affected the objective of the Mitigating Systems cornerstone to ensure the availability of systems to respond to events. The conditions were assessed using the SDP and determined to be of very low safety significance because they did not result in the loss of operability of a safety system. Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated using the traditional enforcement process and was classified at Severity Level IV because the violation of 10 CFR 50.59 involved conditions evaluated as having very low safety significance by the SDP.

This finding has a cross-cutting aspect in the area of human performance because Entergy did not fully evaluate the licensing basis to develop the 10 CFR 50.59 SE, and thereby failed to assure a design document was complete and accurate.

Enforcement:

10 CFR 50.59(a)(1) defines changes to the facility as described in the UFSAR to include changes to evaluations that demonstrate that intended functions will be accomplished. 10 CFR 50.59(c)(1) states a licensee may make changes to the facility and procedures as described in the UFSAR without obtaining a license amendment pursuant to 10 CFR 50.90 only if the change does not meet any of the criteria in paragraph (c)(2). 10 CFR 50.59(c)(2)(viii) states a licensee shall obtain a license amendment pursuant to 10 CFR 50.90 prior to implementing a proposed change if the change results in a departure from a method of evaluation described in the UFSAR used in establishing the design bases. 10 CFR 50.59(a)(2)(ii) defines departures from a method of evaluation as changing a method described in the UFSAR to another method, unless that method has been approved by NRC for the intended application. 10 CFR 50.59(d)(1) requires a written evaluation which provides the bases for the determination that the change does not require a license amendment.

Contrary to the above, in a 50.59 screening evaluation for ER 05120679, dated March 24, 2006, Entergy failed to provide an adequate basis for the determination that the handling of heavy loads for the spent fuel pool cleanup project did not result in a change in the UFSAR method of evaluation per NUREG 0612 commitments as described in UFSAR Sections 10.3.6 and 12.2.3.7. Because the violation is classified at Severity Level IV and has been entered into Entergy's corrective action program (CR 200602460), this violation is being treated as a Non-Cited Violation (NCV),

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consistent with Section VI.A of the NRC Enforcement Policy. **NCV 0500293/2006003-001: Failure to perform an adequate 50.59 evaluation for the control of heavy loads.**

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (4 samples)

The inspectors 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 inspectors used the Technical Specifications, UFSAR, 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:

- CR 200601849, General Electric Safety Communication 06-07, Core Shroud Repair Tie Rod Upper Support Cracking;
- CR 200602122, Station blackout diesel generator jacket water expansion tank contains small amount of oil;
- CR 200602271, "A" EDG gear box back lash out-of-tolerance; and
- CR 200602222, "A" EDG inner and outer slip ring tolerance out-of-tolerance.

The inspectors verified Entergy was identifying problems with operability determinations at an appropriate threshold and entering them into the corrective action program.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (7 samples)

The inspectors 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 inspectors confirmed that systems were properly restored following testing and that discrepancies were appropriately documented in the corrective action process. The inspection activity represented seven samples:

- Replacement of RHR system motor operated valve fuses per MR Nos.: 05119912, 05119913, 05119914, 05119829, 05119830, 05119831, 05119832, 05119834, 05119835, 05119836, 05119851, 05119853, and 05120313;

- HPCI testing per licensee procedure 8.5.4.1 following high flow and temperature testing;
- Seismic monitor calibration and functional testing following repairs per MR 05117438;
- Replacement of "A" EDG governor droop relay per MR 06103224;
- Replacement of "A" EDG M2 starting air pressure regulator (PCV-4592) and solenoid (SV-4586A) per MR 06102280;
- Emergent work for Alarm 3L-D1 (Voltage/Frequency Abnormal) per MR 06104965; and
- Testing of the "A" EDG following two, four, and six year preventive maintenance activities performed in accordance with licensee procedures 3.M.3-61.5, 3.M.3-61.9, and 3.M.3-61.10, respectively. MRs 04117873, 06108858, 06104077, 04107062, P9901178, 02114113, 05104966, 06108840, 04109587, 06107595, 06103632.

The inspectors verified Entergy was identifying post-maintenance testing problems at an appropriate threshold and entering them into the corrective action program.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (8 samples)

The inspectors observed and/or reviewed surveillance testing results to determine whether the test acceptance criteria was consistent with Technical Specifications (TS) and related Performance Indicators (PI), that the test was performed in accordance with the written procedure, the test data was complete and met procedural requirements, and the components were capable of performing their intended safety functions. The inspection activity represented eight samples:

- 2.1.15, RCS Leakage Rate Measurements for April - May 2006;
- 8.5.2.2.1, LPCI System Loop "A" Operability - Pump Quarterly and Biennial (Comprehensive) Flow Rate and Valve Tests, 4/21/06;
- 8.5.2.3, LPCI and Containment Cooling Motor-Operated Valve Operability Test, 4/21/06;
- 8.M.2-2.10.2-16, LPCI Break Detection Logic Functional Tests Injection Valves Interlock Test - Division "A";
- 8.M.2-2.10.2-17, LPCI Break Detection Logic Functional Tests Injection Valves Interlock Test - Division "B";
- 8.5.4.1, HPCI System Pump and Valve Quarterly Test (IST), 5/23/06;
- 8.9.1, Emergency Diesel Generator and Associated Emergency Bus Surveillance; and
- 8.M.2-2.10.8.1, Diesel Generator "A" Initiation by RHR Logic.



b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)a. Inspection Scope (1 sample)

The inspectors reviewed Temporary Alteration 06-1-08 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 one sample.

Temporary Alteration 06-1-08 installed a temporary 24 vdc power system for the neutron monitoring and process radiation monitoring instrumentation while replacing the existing 24 volt batteries. The licensee provided an analysis as part of the technical justification for TA 06-1-08. The inspectors discussed the temporary alteration with licensee personnel and observed work activities in progress. The inspectors reviewed the controls used by the licensee to assure the 24 vdc system remained operable. The inspectors reviewed the changes to applicable plant drawings and confirmed the modifications were installed per TA 06-1-08.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)a. Inspection Scope (1 sample)

An in-office inspection to review recent changes to the Pilgrim Nuclear Power Station Emergency Plan (revision 32) was conducted on June 22 - 23, 2006. These changes were made in accordance with 10 CFR 50.54(q). The licensee had determined that the changes did not decrease the effectiveness of the Plan and concluded that the Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. During this inspection, the inspectors conducted a sampling review of the changes that could potentially result in a decrease in effectiveness. This review did 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.

1EP6 Drill Evaluation (71114.06)

.1 Event Classification During Operator Simulator Training

b. Inspection Scope (1 sample)

The inspectors observed an evaluated licensed operator simulator training exercise on May 22, 2006, and evaluated the crew's ability to implement the emergency plan. Specifically, the inspectors confirmed the crew properly classified the event, activated the notification system, and appropriately completed and transmitted the event notification forms in a timely manner.

c. Findings

No findings of significance were identified.

.2 Combined Functional Drill

a. Inspection Scope (1 sample)

The inspectors reviewed the combined functional drill scenario (06-01) conducted on June 1, 2006, and observed portions of the drill at the technical support center and the emergency operation facility. The inspection focused on the ability of Entergy personnel to properly conduct classification, notification, and protective action recommendation activities, and on the evaluators' ability to identify observed weaknesses and/or deficiencies within these areas. The inspectors attended the player post-drill critiques to compare NRC identified deficiencies against the licensee's identified findings to determine whether Entergy was properly identifying weaknesses in these areas. The inspectors reviewed licensee actions to address issues in the corrective action program. The references used in this review included the Controller Manual Combined Functional Drill (06-01) dated June 1, 2006.

b. Findings

No findings of significance were identified.

## 2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

### 2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (7112201)

#### a. Inspection Scope (10 samples)

The inspectors reviewed the most current Pilgrim Nuclear Power Station Radiological Effluent and Waste Disposal Report to verify that the program was implemented as described in the Radiological Effluent Technical Specification/Offsite Dose Calculation Manual (RETS/ODCM). The inspectors reviewed the report for significant changes to the ODCM and radioactive waste system design and operation to determine whether the changes to the ODCM were made in accordance with Regulatory Guide 1.109 and NUREG-0133 and were technically justified and documented, and to determine whether the modifications made to radioactive waste system design and operation changed the dose consequence to the public. The inspectors also verified that technical and design change reviews, such as 10 CFR 50.59 reviews, were performed as required and determined whether radioactive liquid and gaseous effluent radiation monitor setpoint calculation methodology changed since completion of the modifications. The inspectors also reviewed the report to assure that any anomalous information was effectively reported and explained. The inspectors reviewed the RETS/ODCM to identify the effluent radiation monitoring systems and associated flow measurement devices; reviewed effluent radiological occurrence performance indicator incidents for onsite follow-up; and reviewed licensee self assessments, audits, and licensee event reports that involved unplanned releases of radioactive material. The inspectors noted there had been no changes made by the licensee to the ODCM or to the liquid or gaseous radioactive waste system design or operation since the last inspection in 2004.

The inspectors walked down the major components of the gaseous and liquid release systems (e.g., radiation and flow monitors, demineralizers and filters, tanks, and vessels) to observe ongoing activities, current system configuration with respect to the description in the UFSAR, and equipment material condition.

The inspectors reviewed the liquid discharge permit used since the previous inspection, including the projected doses to members of the public. The inspectors also observed the routine sample collection and analysis for the continuous release of radioactive gaseous effluent to verify that appropriate treatment equipment was effectively used and that the radioactive gaseous effluent was processed and released in accordance with RETS/ODCM requirements. The inspectors reviewed the release records to confirm that adequate controls were in place to prevent an unmonitored or unanticipated release of radioactive material to the environment.

The inspectors reviewed a selection of monthly, quarterly, and annual dose calculations to ensure that the licensee had properly calculated the offsite dose from radiological effluent releases and to determine if any annual Technical Specification/ODCM (i.e., Appendix I to 10 CFR Part 50) values were exceeded and, if appropriate, a PI report was issued.

The inspectors reviewed air cleaning system surveillance test results and licensee specific methodology to ensure that the system was operating within the licensee's acceptance criteria. The inspectors also reviewed surveillance test results and the methodology the licensee uses to determine the stack and vent flow rates and evaluated whether the flow rates are consistent with RETS/ODCM or UFSAR values.

The inspectors reviewed records of instrument calibrations performed since the last inspection for each point of discharge effluent radiation monitor and flow measurement device, and reviewed any completed system modifications and the current effluent radiation monitor alarm setpoint value for agreement with RETS/ODCM requirements. The inspectors also reviewed calibration records for radiation measurement (i.e., counting room) instrumentation associated with effluent monitoring and release activities and reviewed quality control records for the radiation measurement instruments.

The inspectors reviewed the results of the interlaboratory comparison program to verify the quality of radioactive effluent sample analyses performed by the licensee; reviewed the licensee's quality control evaluation of the interlaboratory comparison test and associated corrective actions for any deficiencies identified; and reviewed the results from the licensee's QA audits to verify that the licensee met the requirements of the RETS/ODCM.

The inspectors reviewed the licensee's Licensee Event Reports, Special Reports, audits, and self assessments related to the RETS/ODCM program performed since the last inspection. The inspectors confirmed that identified problems were entered into the corrective action program for resolution. The inspectors also reviewed corrective action reports related to environmental sampling, sample analysis, or meteorological monitoring instrumentation.

b. Findings

One unresolved item was identified related to the licensee's particulate sampling process for the reactor building vent and main stack.

Description: TS 5.5.4.c requires the licensee to monitor, sample and analyze radioactive effluents in accordance with the methodology and parameters in the ODCM. The ODCM, in section 7.2.2, Main Stack Gas Monitoring System, and section 7.2.3, Reactor Building Exhaust Vent Monitoring System, specifies that samples are drawn through an isokinetic probe which is located to assure representative sampling. **(An isokinetic probe captures an air sample moving at the same velocity as the bulk air**

is moving. This allows for an accurate particle count to be made. A sample that is collected at a different velocity than the rest of the air is considered anisokinetic.)

The inspectors requested information relative to the licensee's basis for the sample flow rate range of 1.6 to 1.8 cfm, as specified in procedure PNPS 7.3.37 for the reactor building vent. In response, the licensee reviewed the calculation that was performed in 1986 to determine the air velocity needed to attain an isokinetic sample of the vent stream. The licensee realized that the calculation contained an error that caused the flow rate specified in the procedure to be too high, resulting in the collection of anisokinetic samples. Specifically, a sample obtained at the flow rate specified in the procedure would be at a higher velocity than the rest of the stream, and would not necessarily be representative of the total stream composition.

The licensee initiated CR -PNP-2006-02282 on June 15, 2006 to perform a detailed evaluation of the reactor building and main stack sampling probes, and determine the impact of the non-representative sampling of past releases, including assessment of the calculated doses from the reactor building vent and the main stack, and the proper sample flow settings necessary to achieve representative samples. Accordingly, this matter is considered unresolved pending completion of the licensee's analysis and determination of the consequence of this condition. **URI 050000293/2006003-02: Anisokinetic sampling of reactor building vent and main stack gaseous effluents.**

#### 4. OTHER ACTIVITIES [OA]

##### 4OA1 Performance Indicator Verification (71151)

##### .1 Reactor Safety Cornerstones

##### a. Inspection Scope (3 samples)

The inspectors reviewed PI data to confirm the accuracy and completeness of the reported data. The review was accomplished by comparing reported PI data to confirmatory plant records and data available in plant logs, the chemistry data base (WinCDMS), maintenance rule records, Licensee Event Reports, condition reports and NRC inspection reports. The inspection activity represents three samples.

- Mitigating System Cornerstone, Safety System Functional Failures from the third quarter of 2004 through first quarter of 2006;
- Barrier Integrity Cornerstone, Reactor Coolant System Specific Activity from the third quarter of 2004 through the first quarter 2006; and
- Barrier Integrity Cornerstone, Reactor Coolant System Unidentified Leakage from the third quarter of 2004 through the first quarter 2006.

##### b. Findings

No findings of significance were identified.

.2 Public Radiation Safety Cornerstone

a. Inspection Scope (1 sample)

The inspectors sampled licensee data for the RETS/ODCM Radiological Effluent Occurrences PI. PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 2, were used to verify the accuracy of the PI data reported.

The inspectors reviewed the Radiological Control Effluent Release Occurrences PI results for the Public Radiation Safety Cornerstone. For the assessment period, the inspectors reviewed selected out of service effluent radiation monitor and compensatory sampling data, any abnormal release results as reported in the 2004 and 2005 Annual Effluent Reports, procedural guidance for reporting PI information, and selected condition reports related to RETS/ODCM issues. In addition, the inspectors reviewed cumulative and projected doses to the public for the period October 2004 through May 2006. Documents reviewed are listed in sections 2PS1 and 4OA1 of the report attachment.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

1. Routine Review of Corrective Action Program Issues

a. Inspection Scope

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

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors 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 October 2005 through June 2006, the 4<sup>th</sup> quarter 2005 corrective action trend reports, and the daily plant status report listings of operations equipment problems, operability evaluations, and temporary alterations.

b. Findings and Observations

No findings of significance were identified. Several trends were identified, but none that suggested the presence of a more significant safety issue. The majority of the trends identified by the inspectors had been recognized by Entergy and captured in adverse trend CRs, including an emerging adverse trend in instrument air system performance (CR 2005-4706) which is being evaluated by Entergy. The inspectors identified that adverse trends noted by Entergy in the areas of communication equipment and meteorological tower performance appear to be further degrading. Adverse trends not captured by the current licensee trend report were noted regarding augmented off-gas system spikes and/or pre-treat HI RAD alarms, expired chemicals/reagents in the chemistry lab, and water in the station blackout fuel oil storage tanks. The licensee noted these items for further consideration.

.3 Annual Sample Review - Operator Workarounds

a. Inspection Scope (1 sample)

The inspectors reviewed the cumulative effect of operator workarounds on the reliability, availability, and potential mis-operation of systems with particular focus on issues that had the potential to affect the ability of operators to respond to plant transients and events. The inspectors reviewed the Operator Compensatory Measure Log, the Operator Aggregate Impact Index for April 2006, and Operations Performance Indicators, as well as the related operator workarounds, operator burdens, control room deficiencies, system lineup deviations, protective and caution tagouts, and disabled or illuminated control room alarms. For selected issues, the inspectors discussed the issues with responsible operations personnel to ensure they were appropriately categorized, prioritized and tracked for resolution.

b. Findings and Observations

No findings of significance were identified. The inspectors found that Entergy ensured that appropriate attention was placed on conditions that could impact operator actions, including conditions that would require compensatory actions (workarounds and burdens), control room deficiencies and alarms, and components tagged out-of-service or with caution tags, through periodic management review of performance indicators. Appropriate actions were taken to ensure that operators were aware of the issues, and corrective actions were scheduled for completion commensurate with each item's significance.



4OA3 Event Follow-up (71153)Licensee Event Report Review and Closeout (1 sample)

- a. (Closed) LER 05000293/2006-001-00, Manual Scram due to High Offgas Recombiner Temperature Resulting from Inadequate Preventive Maintenance of recombiner Preheater Pressure Control Valve Controller. The inspectors reviewed Entergy's actions associated with Licensee Event Report (LER) 50-293/2006-001. Entergy's actions were addressed in the corrective action program as CR 20060977. The event was also described in NRC report 2006-002, which documented a Green NCV (NCV 05000293/2006002-001). The LER provided an accurate description of the event and follow-up actions, taken or planned, were appropriate to address the event. This LER is closed.

4OA5 Other.1 Implementation of Temporary Instruction (TI) 2515/165 - Operational Readiness of Offsite Power and Impact on Plant Riska. Inspection Scope

The objective of TI 2515/165, "Operational Readiness of Offsite Power and Impact on Plant Risk," was to gather information to support the assessment of nuclear power plant operational readiness of offsite power systems and impact on plant risk. The inspectors evaluated licensee procedures against the specific offsite power, risk assessment and system grid reliability requirements of TI 2515/165. They also discussed the attributes with licensee personnel.

The information gathered while completing this TI was forwarded to the Office of Nuclear Reactor Regulation for further review and evaluation on April 3, 2006.

b. Findings

No findings of significance were identified.

.2 Strike Contingency Planning (92709)a. Inspection Scope (1 sample)

Entergy developed a staffing contingency plan to continue Pilgrim Station security operations should union personnel engage in a job action. Using the guidance of Inspection Procedure 92709, the inspectors reviewed licensee plans to address a potential job action. The inspection included an evaluation of the strike contingency plan content and the actions needed to implement the plan; and, a review to determine if facility security would be maintained as required with a sufficient number of qualified personnel. NRC review of this area continued at the end of the inspection.



b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On June 30, 2006, the inspectors presented the inspection results to members of Entergy management led by Mr. Michael Balduzzi. The inspectors confirmed that there was no information that Entergy considered proprietary included in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

**SUPPLEMENTAL INFORMATION****KEY POINTS OF CONTACT**Licensee personnel:

S. Bethay	Director, Nuclear Assessment
K. Bronson	General Manager Plant Operations
G. Dykeman	Design Engineering
B. Ford	Licensing Manager
B. Grieves	Quality Assurance Manager
P. Leavitt	Chemistry
D. Landeche	Special Projects Manager
W. Lobo	Licensing Specialist
J. McClellan	Quality Specialist-Quality Assessment
B. McDonald	Radiation Protection Specialist (Support)
P. McNulty	Radiation Protection Manager
D. Noyes	Assistant Operations Manager
E. Olson	Operations Manager
C. Pitts	Design Engineer
M. Santiago	Training Supervisor
K. Sejkora	Effluent Engineer
D. Selig	Programs and Components Supervisor
J. Taormina	Work Control Supervisor
T. Trask	System Engineering Manager

NRC personnel:

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

**LIST OF ITEMS OPENED, CLOSED AND DISCUSSED**Opened

05000293/2006003-02	URI	Anisokinetic sampling of reactor building vent and main stack gaseous effluents
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Closed

05000293/2006-001-00	LER	Manual Scram due to High Offgas Recombiner Temperature Resulting from Inadequate Preventive Maintenance of Recombiner Preheater Pressure Control Valve Controller.
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Open and Closed

05000293/2006-003-01      NCV      The inspectors identified a Severity Level IV Non-Cited Violation associated with the failure to perform an adequate safety evaluation as required by 10 CR 50.59 for changes made to the facility as described in the UFSAR.

**LIST OF DOCUMENTS REVIEWED**

**References for Section 1R04**

Procedure 2.2.19, Residual Heat Removal (RHR) System  
P&ID M241, Residual Heat Removal  
P&ID M219, Diesel Generator Air Start System  
P&ID M223, Diesel Oil Storage and Transfer System  
Procedure 2.2.8, Standby AC Power System (Diesel Generators)  
Procedure 8.9.1, Emergency Diesel Generator and Associated Emergency Bus Surveillance

**References for Section 1R05**

Procedure 1.4.23, Fire Brigade Training Drill  
Condition Reports 2006-1751, 2006-01758, 2006-01759  
Fire Hazards Analysis (Fire Zones 2.1, 4.1, 4.2)  
5.5.2, Special Fire Fighting Procedure

**References for Section 1R11**

UFSAR Section 10.3.6, Consequences of a Dropped Fuel Cask  
Safety Evaluation SE3402, Revision 1 for ER 05120679 dated 5/10/06  
ER 05120679, Use of Duratek Supplied CNS-55 Shipping Cask  
EP-IP-100, Emergency Classification and Notification  
Emergency Event notification Form 20060522002  
Emergency Operating Procedures EOP -1, RPV Control  
Emergency Operating Procedures EOP -3, Primary Containment Control  
Emergency Operating Procedures EOP -5, Radioactivity Release Control  
Emergency Operating Procedures EOP -17, Emergency RPV Depressurization  
Procedure 2.1.6, Reactor Scram, Revision 58  
Procedures 2.1.14, 2.2.46, 2.4.36, and 5.5.3  
Condition Reports 2006-01917, 200601923

**References for Section 1R12**

PNPS Maintenance Rule (a)(1) Systems Status  
Pilgrim System Health Reports Systems 50, 54, 66 1<sup>st</sup> Quarter 2006  
Top Ten Action Plan - System Backlogs, Update 5/1/2006  
ENN-DC-171, Maintenance Rule Monitoring  
ENN-DC-121, Maintenance Rule  
Maintenance Rule System Structure Component (SSC) Basis Document - NE16.03,  
System 54 Reactor Vessel Maintenance and Condition Reports 2005-2006  
System 50 Primary Containment Maintenance and Condition Reports 2005-2006

System 66 C19A/B System Maintenance and Condition Reports 2005-2006  
Condition Reports 200601272, 200503299, 200601442  
ODMI Action Plan Unidentified Drywell Leakage

**References for Section 1R13**

Maintenance Request 05118433, Clean Spent Fuel Pool, Ship Irradiated Hardware  
6 Day Cask Handling Plan  
Temporary Procedure TP06-011, Handling Procedure for the Duratek Transport Cask CNS 3-55, Certificate of Compliance 5805  
Duratek Procedure TR-OP-019, Handling Procedure for the Duratek Transport Cask CNS 3-55, Certificate of Compliance 5805  
Procedure 3.M.1-14, General Maintenance Procedure for Heavy Load Handling Operations  
UFSAR Section 10.3.6, Consequences of a Dropped Fuel Cask  
Safety Evaluation SE3402, Revision 1 for ER 05120679 dated 5/10/06  
ER 05120679, Use of Duratek Supplied CNS-55 Shipping Cask, Crusher Shear Tool/Stand and associated Rigging for Spent Fuel Pool Cleanup Project Activities dated 4/24/06  
ER 05120679 5059 Screen Evaluation dated March 24, 2006  
ER 05120679 5059 Screen Evaluation Updated (white paper) dated April 11, 2006  
Procedure 1.3.34.15, Protected Area Postings  
Procedure 1.5.22, Risk Assessment Process  
Procedure 2.1.12.2, Station Blackout Diesel Generator Daily Surveillance  
Scheduler's Evaluation for "A" EDG Overhaul during the week of 6/11/06  
Condition Reports 200601809, 200601824, 200602460  
Radiation Work Permit 2006-072  
Pilgrim License Application Amendments #20, #24, #29 dated 3/29/71  
NRC Generic Letter 78-17 dated 5/17/78, Control of Heavy Loads Near Spent Fuel  
NRC RIS 2005-25, Clarification of NRC Guidelines for Control of Heavy Loads  
NRC Bulletin 96-02, Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core, or Over Safety Related Equipment  
NUREG 0612, Control of Heavy Loads  
NRC Generic Letter dated 12, 22, 1980, Control of Heavy Loads  
BECo Letter 81-242, NUREG 0612 Control of heavy Loads  
BECo Letter 81-141 dated 6/25/81, NUREG 0612 Control of Heavy Loads  
BECo Letter 83-181 dated 7/13/83, NUREG 0612 Control of Heavy Loads (Enclosures 1 and 2)  
NRC Letter dated 3/6/85, Control of Heavy Loads (Phase I) and Safety Evaluation  
Franklin Research Center Technical Evaluation Report dated 1/31/85, Control of Heavy Loads  
BECO Response to Bulletin 96-02, Letter 96-053 dated 5/28/96  
BECo Letter #78-109 dated 6/26/78, Cask Handling Evolutions Associated with the Spent Fuel Pool Modification  
BECo Letter #78-123 dated 7/17/78, Response to Request for Information on Movement of Heavy Loads Near Spent Fuel  
License Amendments #33 dated 8/17/1978; #155 dated 6/22/94;  
BECo Letter dated 2/11/93, Proposed Technical Specification Change PNPS Spent Fuel Storage Capacity Expansion  
Holtec Report HI-93971 dated 3/4/93, Analysis of Cask Drop in Pilgrim Spent Fuel Pool to Establish Maximum Cask Allowable Weight  
Drawings A709, M20

Calculation C15.0.3445, use of Duretek Supplied CNS 3-55 and CNS 8-120 Shipping Casks,  
5.5 Ton Transfer Bell and the Crusher Shear Tool/stand in the Spent Fuel Pool Cleanup  
Project dated 4/20/06

Radiological Survey Form Map #80 dated 5/5/06, Disposal Liner Survey (under water)

Radioactive Material Shipment Truck Survey Form dated 5/17/06, Shipment 06-04 - Outgoing  
Survey of SFP Project Waste

**References for Section 1R15**

CR 200601849, Core Shroud Repair Tie Rod Upper Support Cracking

GE Safety Communication SC06-07, Core Shroud Repair Tie Rod Upper Support Cracking

Drawing M1B51, Sheet 2 of 4, Reactor Modification Shroud Repair

Drawing M1B53, Stabilizer Support Assembly Shroud Repair

GE Safety Communication SC06-01, Single Failure Suppression Pool Temperature Analysis  
Condition Report and OE 20060254

Standing Order 06-06, Suppression Pool Temperature Post LOCA with loss of B17 or B18

MR06107824, Inspection of Salt Service Water Pump P208E on 6/1/06

EOOS Risk assessment dated 6/1/06 for proposed SSW configuration

Maintenance procedure 3.M.4-85, Station Diving Procedure for Underwater Work and  
Inspections

Tagout 1-Cycle-16-04887 and 04904

1.3.34.5, Protected Areas on 6/1/06

Technical Specification 3.5.B.4

**References for Section 1R19**

MR05117438, Seismic Monitor Event Indicator and Recorder Did Not Function When Tested

3.M.3-51, Electrical Termination Procedure

Kinometrics Inc Form #343083, Channel Calibration of Strong Motion Time History Acceleration  
Recorder SMA-3/SMP-1, 3/30/06

UFSAR Section 12.2.3.5.2, Seismic Instrumentation

License Amendment 20 dated 2/11/71

Safety guide 12, Instrumentation for Earthquakes

Design Basis Document TDBD-11, Seismic Design

PDCR 78-24, Seismic Monitoring Instrumentation

Emergency Procedure 5.2.1, Earthquakes, Revision 24

Alarm Response Procedure ARP-C903R-B1

Condition Reports 200403582, 20050720, 200504278 and 200504998

Specification E576, PNPS Seismic Instrumentation

**References for Section 1R23**

TA-06-1-08, Temporary Power to Neutron and Process Radiation Monitoring Instrumentation

UFSAR Section 8.7 24 Volt DC Power System

Drawing E14, Schematic Diagram Vital and Radiation Protection AC System

Temporary Procedure TP06-015, Temporary 24 V DC Power Feed for the 24V DC System  
During Battery Testing/Replacement

Tags for TA-06-1-08

MR 05119395

**References for Section 2PS1 and 4OA1**

Procedure 7.3.25, Rev 33, Particulate and Iodine Monitoring at the Main Stack and Reactor Building Vent

Procedure 7.3.31, Rev. 17, Tritium Sampling

Procedure 7.3.36, Rev. 49, Offgas Sample Analysis

Procedure 7.3.37, Rev. 31, Determination of Conversion Factors for Gaseous PRMs

Procedure 7.3.48, Rev. 8, Airborne Effluent Monitoring of the turbine Deck and Reactor Feed Pump Bay

Procedure 7.4.12, Rev. 22, Calibration of the SJAE Offgas Process Rad Monitors

Procedure 7.4.42, Rev. 23, Calibration of the NUMAC Gaseous PRMs

Procedure 7.4.48, Rev. 4, Calibration of Turbine Building Gaseous Effluent Monitors (GEMS)

Procedure 7.4.49, Rev. 4, Operation of Turbine Building Gaseous Effluent Monitors (GEMS)

Procedure 7.4.63, Rev. 2, Process Rad Monitor Setpoints

Procedure 7.4.64, Rev. 2, Process Radiation Monitor Alarm Response

Procedure 7.4.42, Rev. 19, Process Radiation Monitor Calibrations

Procedure 7.8.13, Rev 2, Chemistry Actions During Plant Transients

Procedure 7.8.1, Rev. 41, Chemistry Sample and Analysis Program

Procedure 7.9.1, Retired, Gaseous Waste Discharge Procedure

Procedure 7.9.12, Rev. 3, Liquid Radwaste Verification and Discharge

Procedure 7.9.15, Rev. 0, Dose Assessment (2PS1 and 4OA1)

Procedure 7.10.3, Rev 17, PRM Cal Check (and test data generated 6/14/06)

Procedure EN-WM-100, Rev. 0, Work Request Generation, Screening, and Implementation

CR 2006-00134, 1/12/06, Augmented Offgas System out of service longer than necessary.

CR 2006-01059, 1/20/06, Procedural conflicts

CR 2006-00400, 1/31/06, Water management and sump discharge

CR 2006-02282, 6/15/06, Isokinetic sampling of Turbine Building Vent and Main Stack

CR 2006-02266, 6/14/06, ODCM does not include Turbine Building effluent monitoring system

Self-Assessment, Chemistry QC and Instrument Performance, Oct 26-27, 2004

Snapshot assessment for effluent dose, 6/22/05

Manager's Focused Assessment of Chemistry Instruments, 9/25/05

Pilgrim Nuclear Power Station Radiological Effluent and Waste Disposal Report, January 1 through December 31, 2005 (2PS1 and 4OA1)

Pilgrim Nuclear Power Station Radiological Effluent and Waste Disposal Report, January 1 through December 31, 2004 (2PS1 and 4OA1)

Calibration/Testing Procedure Records 7.4.42, Rev. 19, Process Radiation Monitor Calibrations, 1/22/04, 3/10/05, 3/17/05, 6/16/05

Calibration/Testing Procedure Records 3.M.2-6.4, Rev. 17, NUMAC Process Radiation Monitor Calibration

Calibration/Testing Procedure Records 8.E.8, Rev. 37, Offgas Instrument Calibration (electrical), 6/7/06, 1/23/06

Calibration/Testing Procedure Records 8.F.8, Rev 12, Offgas system Instruments Calibration, 3/16/04

Calibration/Testing Procedure Records 8.M.3-9, Rev. 24, Liquid Radwaste Effluent Discharge Monitor Functional Test, 4/26/06

Calibration/Testing Procedure Records 8.M.3-17.1, Rev. 6, Radioactive Liquid Effluent Alternate Flow Rate (Liquid Level) Instrument Functional and Calibration, 1/30/06

Calibration/Testing Procedure Records 8.M.2-4.1, Rev. 31, Air Ejector Offgas Log Radiation Monitor Calibration

**References for Section 40A2**

1.3.34.4, "Compensatory Measures," Rev. 14

**References for Section 40A5**

1.3.12, "Notification and Recall of Personnel", Rev 39

1.5.22, "Risk Assessment Process", Rev 8

2.1.15, "Daily Surveillance Log", Rev 178

2.4.16, "Distribution Alignment Electrical System Malfunctions", Rev 31

2.4.144, "Degraded Voltage", Rev 32

5.3.31, "Station Blackout", Rev 10

8.C.34, "Operations Technical Specifications Requirements for Inoperable Systems/Components", Rev 37

EN-WM-101, "On-line Work Management Process", Rev 0

**LIST OF ACRONYMS**

ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
CR	Condition Report
EDG	Emergency Diesel Generator
ER	Engineering Request
FB	Fire Brigade
HPCI	High Pressure Coolant Injection
IR	Inspection Report
JIT	Just-in-time
LER	Licensee Event Report
LPCI	Low Pressure Coolant Injection
NRC	Nuclear Regulatory Commission
OA	Other Activities
ODCM	Offsite Dose Calculation Manual
PFD	Plymouth Fire Department
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PNPS	Pilgrim Nuclear Power Station
RCIC	Reactor Core Isolation Cooling
RETS	Radiological Effluent Technical Specification
RHR	Residual Heat Removal
SDP	Significant Determination Process
SE	Safety Evaluation
TI	Temporary Instruction
TS	Technical Specification