



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I**
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

October 31, 2012

Mr. Robert Smith
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 05000293/2012004**

Dear Mr. Smith:

On September 30, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Pilgrim Nuclear Power Station (PNPS). The enclosed inspection report documents the inspection results, which were discussed on October 9 with you and other members of your staff.

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

This report documents one self-revealing finding of very low safety significance (Green). This self-revealing finding was determined to not involve a violation of NRC requirements. If you disagree with the cross-cutting aspect assigned to the finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Senior Resident Inspector at PNPS.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the

NRC's Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Ronald R. Bellamy, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Docket Nos.: 50-293

License Nos.: DPR-35

Enclosure: Inspection Report 05000293/2012004
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

NRC's Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Ronald R. Bellamy, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Docket Nos.: 50-293
License Nos.: DPR-35

Enclosure: Inspection Report 05000293/2012004
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

Distribution (via email)

W. Dean, RA
D. Lew, DRA
D. Roberts, DRP
J. Clifford, DRP
C. Miller, DRS
P. Wilson, DRS

C. Santos, RI OEDO
R. Bellamy, DRP
T. Setzer, DRP
J. DeBoer, DRP
E. Keighley, DRP
E. Andrews, DRP

M. Schneider, DRP, SRI
B. Smith, DRP, RI
S. Campbell, Resident AA
RidsNrrPMPilgrim Resource
RidsNrrDorLLPL1-1 Resource
ROPReports.Resource

DOCUMENT NAME G:\DRP\BRANCH5\Reports\Final\PILGRIM 2012004.docx

ADAMS ACCESSION NUMBER: **ML12305A220**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRP	RI/DRP	RI/DRP		
NAME	MSchneider	TSetzer/via email	RBellamy		
DATE	10/25/12	10/25	10/31/12		

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.: 50-293

License Nos.: DPR-35

Report No.: 05000293/2012004

Licensee: Entergy Nuclear Operations, Inc.

Facility: Pilgrim Nuclear Power Station (PNPS)

Location: 600 Rocky Hill Road
Plymouth, MA 02360

Dates: July 1, 2012 through September 30, 2012

Inspectors: M. Schneider, Senior Resident Inspector, Division of Reactor Projects (DRP)
B. Smith, Resident Inspector, DRP
T. Moslak, Health Physicist, Division of Reactor Safety (DRS)
M. Patel, Reactor Engineer, DRS
S. Rutenkroger, Senior Resident Inspector at Vermont Yankee, DRP
G. Smith, Physical Security Inspector, DRS

Approved By: Ronald R. Bellamy, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS	3
1. REACTOR SAFETY	4
1R04 Equipment Alignment	4
1R05 Fire Protection	5
1R07 Heat Sink Performance	6
1R11 Licensed Operator Requalification Program	6
1R12 Maintenance Effectiveness	7
1R13 Maintenance Risk Assessments and Emergent Work Control	7
1R15 Operability Determinations and Functionality Assessments.....	8
1R19 Post-Maintenance Testing.....	8
1R22 Surveillance Testing).....	9
2. RADIATION SAFETY	10
2RS1 Radiological Hazard Assessment and Exposure Controls	10
2RS5 Radiation Monitoring Instrumentation.....	10
4. OTHER ACTIVITIES.....	15
4OA1 Performance Indicator Verification	15
4OA2 Problem Identification and Resolution.....	16
4OA3 Follow-Up of Events and Notices of Enforcement Discretion	17
4OA5 Other Activities	20
4OA6 Meetings, Including Exit	21
ATTACHMENT: SUPPLEMENTARY INFORMATION.....	21
SUPPLEMENTARY INFORMATION	A-1
KEY POINTS OF CONTACT	A-1
LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED.....	A-2
LIST OF DOCUMENTS REVIEWED	A-3
LIST OF ACRONYMS.....	A-12

SUMMARY OF FINDINGS

IR 05000293/2012004; 07/01/2012–09/30/2012; Pilgrim Nuclear Power Station; Follow-Up of Events and Notices of Enforcement Discretion.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. One finding of very low safety significance (Green) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspect for this finding was determined using IMC 0310, "Components Within Cross-Cutting Areas." Findings for which the SDP does not apply may be Green, or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Initiating Events

Green. A finding of very low safety significance (Green) was identified for personnel not adequately classifying work in regards to processing an emergent work order. Specifically, personnel classified work on a reach rod position indication for valve 1-HO-163, Steam Jet Air Ejector (SJAE) steam supply valve, as "minor" maintenance, which resulted in the failure to identify and correct the reach rod indicator and position. This resulted in a degraded vacuum during a power maneuver and a subsequent reactor scram. Entergy entered this issue in the corrective action program (CR-PNP-2012-2304).

The finding was determined to be more than minor because it was associated with the Configuration Control (i.e., Operating Equipment Lineup) attribute of the Initiating Events cornerstone, and adversely affected the cornerstone's objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The inspectors screened the issue for significance using IMC 0609.04, "Phase 1 – Initiating Screening and Characterization of Findings" and IMC 0609 Appendix A, Exhibit 1, "Initiating Events Screening." The finding was determined to be of very low safety significance (Green) because although the performance deficiency did result in a reactor scram, it did not cause a reactor scram combined with the loss of mitigating equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. This finding has a cross-cutting aspect in the Human Performance cross-cutting area, Work Control component, because Entergy did not appropriately plan and coordinate the repair of the SJAE steam supply valve by incorporating the operational impact of the work activity consistent with nuclear safety. [H.3(b)] (Section 4OA3)

REPORT DETAILS

Summary of Plant Status

Pilgrim Nuclear Power Station began the inspection period operating at 33 percent reactor power. On July 2, 2012, Pilgrim returned to 100 percent reactor power following repairs to the main generator rectifier bank cooling system. On July 3, operators reduced reactor power to 76 percent to support a control rod pattern adjustment and returned to 100 percent reactor power later that same day. On July 12, operators reduced reactor power to 99 percent to support a brush replacement on the Vital Motor-Generator Set and returned to 100 percent reactor power following the evolution. On July 19, operators reduced power to 60 percent to perform a deep/shallow control rod sequence exchange and returned to 100 percent reactor power. Following the deep/shallow sequence exchange, on July 20, operators reduced power to 91 percent to support a subsequent control rod pattern adjustment and then returned to 100 percent reactor power. On August 22, operators reduced reactor power to 50 percent to perform a thermal backwash of the main condenser. On August 23, Pilgrim returned to 100 percent reactor power. On August 24, operators reduced reactor power to 88 percent to perform a control rod pattern adjustment and returned to 100 percent reactor power later that same day. On September 22, operators reduced reactor power to 68 percent in response to a fast transfer of the 120VAC non-safety related bus and loss of a feedwater heater. Pilgrim returned to 100 percent reactor power and remained at or near 100 percent through the end of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q – 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- 'B' emergency diesel generator (EDG) during maintenance on the 'A' core spray (CS) system
- 'A' CS system during testing on the 'B' CS system
- Station blackout diesel generator manual fuel oil transfer system

The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the Updated Final Safety Analysis Report (UFSAR), technical specifications (TS), work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether Entergy staff had properly identified equipment

issues and entered them into the corrective action program for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

.2 Full System Walkdown (71111.04S – 1 sample)

a. Inspection Scope

During the week of September 24, the inspectors performed a complete system walkdown of accessible portions of the salt service water system to verify the existing equipment lineup was correct. The inspectors reviewed operating procedures, drawings, equipment line-up check-off lists, and the UFSAR to verify the system was aligned to perform its required safety functions. The inspectors also reviewed electrical power availability, hangar and support functionality, applicable temporary modifications, and operability of support systems. The inspectors performed field walkdowns of accessible portions of the system to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. Additionally, the inspectors reviewed a sample of related condition reports and work orders to ensure Entergy appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

Resident Inspector Quarterly Walkdowns (71111.05Q – 5 samples)

a. Inspection Scope

The inspectors performed tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that Entergy controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out-of-service, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Fire Area 1.9, Fire Zone 1.6, control rod drive (CRD) pump quadrant
- Fire Area 1.9, Fire Zone 1.9, CRD hydraulic control units, east side
- Fire Area 1.10, Fire Zone 2.11, feedwater pump 'A' area
- Fire Area 3.3, Fire Zone 3.3, plant computer room
- Fire Area 5.3, Fire Zone 5.3, 'C' salt service water pump room

b. Findings

No findings were identified.

1R07 Heat Sink Performance (711111.07A – 1 sample)

a. Inspection Scope

The inspectors reviewed one sample of Entergy's program for maintenance, testing, and monitoring of risk significant heat exchangers (HXs) to assess the capability of the HXs to perform their design functions. The inspectors also evaluated whether potential common cause problems could affect multiple HXs. Based on its risk significance and performance history, the 'B' residual heat removal heat exchanger was selected for detailed review by the inspectors.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program (71111.11Q – 2 samples)

.1 Regualification Review by Resident Inspectors

a. Inspection Scope

The inspectors observed licensed operator simulator "as found" training on August 20, which included a loss of offsite power event complicated by the loss of an emergency diesel generator and a small break loss of coolant accident. The inspectors evaluated operator performance during the simulated events and verified completion of risk significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors verified that emergency classifications within the scenario were declared accurately and timely. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the Control Room Supervisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems. Finally, the inspectors performed a simulator fidelity review to determine if the arrangement of the simulator instrumentation, controls, and tagging closely paralleled that of the control room.

b. Findings

No findings were identified.

.2 Main Control Room Review by Resident Inspectors

a. Inspection Scope

The inspectors observed main control room activities during replacement of a vital motor generator set DC brush, a control rod pattern adjustment, repair of main generator rectifier bank #4, and the restoration from the loss of a feedwater heater during a

120VAC power supply fast transfer. See section 4OA3 for specific discussion of these activities. The inspectors reviewed procedural guidance for station power changes and the power maneuver plan, and observed control room conduct and control of these evolutions.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 2 samples)

a. Inspection Scope

The inspectors reviewed the two samples listed below to assess the effectiveness of maintenance activities on structures, systems, and components (SSC) performance and reliability. The inspectors reviewed system health reports, corrective action program documents, maintenance work orders, and maintenance rule basis documents to ensure that Entergy was identifying and properly evaluating performance problems within the scope of the maintenance rule. For each sample selected, the inspectors verified that the SSC was properly scoped into the maintenance rule in accordance with 10 CFR 50.65 and verified that the (a)(2) performance criteria established by Entergy staff was reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2). Additionally, the inspectors ensured that Entergy staff was identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- (a)(1) evaluation of emergency lighting exceeding functional failure performance criteria
- (a)(1) evaluation for repeat failures of the K-117 diesel driven air compressor

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 4 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that Entergy performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that Entergy personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When Entergy performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Green risk during Y1 on its alternate power supply and the second point feedwater heater 'B' out of service
- Yellow risk for maintenance and testing on the 'B' residual heat removal system
- Yellow risk for maintenance and testing on the shutdown transformer and station blackout diesel generator
- Yellow risk for the high pressure coolant injection system out of service and in the presence of main generator rectifier bank leakage.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 5 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- Drywell floor sump monitoring equipment not functioning properly
- First point feedwater heater leak and Operational Decision-Making Issue (ODMI)
- Increased hotwell conductivity ODMI
- Standby liquid control tank level increased approximately 300 gallons
- Three local power range monitors failed calibration

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to Entergy's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by Entergy. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 6 samples)

a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with

the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- 'A' control room high efficiency air filtration system temperature switch replacement
- Reactor water clean-up motor operated valve maintenance
- Rebuild 'B' standby gas treatment system damper actuators
- Replacement of vital motor generator set brushes
- Residual heat removal torus cooling isolation valve MO-1001-34B maintenance
- Removal of temporary modification and installation of thermal overloads for the 'A' salt service water pump

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 5 samples)

a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TS, the UFSAR, and Entergy's procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

- Vital bus protective relay functional test
- 'A' salt service water flow rate monthly surveillance
- 'B' core spray pump quarterly inservice test (IST)
- 'A' low pressure coolant injection system pump and valve quarterly IST
- Main steam isolation valve operability (CIV)

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

a. Inspection Scope

During the period August 13 through 16, the inspector performed activities to verify that Entergy was evaluating, monitoring, and controlling radiological hazards for work performed, in locked high radiation areas (LHRA) and other radiological controlled areas. Implementation of these controls was reviewed against the criteria contained in 10 CFR Part 20, TS, and Entergy's procedures.

Radiological Hazards Control and Work Coverage

The inspector identified work performed in radiological controlled areas and evaluated Entergy's assessment of the radiological hazards. Specific work activities evaluated included calibrating a high activity source; i.e., forty-five (45) curies of Iridium-192 (Ir-192), and using this source to calibrate high range instruments, such as the turbine building vent monitors and the steam jet air ejector (SJAЕ) monitors. These activities were classified by Entergy as an Infrequently Performed Test/Evolution (IPTE) and additional administrative controls were implemented.

The inspector attended the pre-job briefings for these tasks and evaluated the survey maps, postings, barrier controls, electronic dosimeter dose/dose rate alarm setpoints, and associated radiation work permits (RWP), to determine if the exposure controls were acceptable. The inspector assessed the adequacy of instructions given to workers regarding the radiological conditions near the source location and the contingency plans.

Additionally, the inspector walked down the job sites and observed the work-in-progress for calibrating the radioactive source in the trash compactor building, and the calibration of the SJAЕ high range monitors in the turbine building.

b. Findings

No findings were identified.

2RS5 Radiation Monitoring Instrumentation (71124.05)

This area was inspected August 13 through 16, to verify that Entergy is assuring the accuracy and operability of radiation monitoring instruments used to protect occupational workers and to protect the public from nuclear power plant operations. The inspector used the requirements in 10 CFR Part 20, 10 CFR Part 50, Appendix A, Criterion 60, "Control of Release of Radioactivity to the Environment," and Criterion 64 "Monitoring Radioactive Releases;" 10 CFR 50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation to meet the Criterion As Low as is Reasonably Achievable for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents;" 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations;" NUREG-0737, "Clarification of Three Mile Island Corrective Action

Requirements;” TS/Offsite Dose Calculation Manual; applicable industry standards; and Entergy’s procedures required by TS, as criteria for determining compliance.

.1 Inspection Planning

a. Inspection Scope

The inspector reviewed the UFSAR to identify radiation instruments associated with monitoring area radiation, airborne radioactivity, process streams, effluents, materials/articles, and workers. Additionally, the inspector reviewed the associated TS requirements for post-accident monitoring instrumentation. The inspector reviewed a list of in-service survey instrumentation including air samplers and small article monitors (SAM), along with radiation monitoring instruments used to detect and analyze workers’ external contamination as well as external dose. Additionally, the inspector reviewed personnel contamination monitors and portal monitors including whole-body counters used to detect workers’ surface and internal contamination. The inspector assessed whether an adequate number and type of instruments were available to support operations.

The inspector reviewed Entergy and third-party evaluation reports of the radiation monitoring program since the last inspection.

The inspector reviewed procedures that govern instrument source checks and calibrations, focusing on instruments used for monitoring transient radiological conditions. The inspector reviewed the calibration and source check procedures for adequacy. The inspector reviewed the area radiation monitor alarm setpoint values and bases as provided in the TS and the UFSAR.

The inspector reviewed effluent monitor alarm setpoint bases and the calculation methods provided in the Offsite Dose Calculation Manual.

b. Findings

No findings were identified.

.2 Walkdowns and Observations

a. Inspection Scope

The inspector walked down the SJAE gaseous effluent radiation monitoring system (1705-3A/B) and the liquid radwaste monitor (1705-30). The inspector determined that the effluent/process monitor configurations aligned with descriptions contained in the UFSAR and Offsite Dose Calculation Manual.

The inspector selected seven portable survey instruments in use or available for issuance and assessed calibration and source check stickers for currency, instrument material condition and operability.

The inspector observed Entergy staff performance for source checks for three different types of portable survey instruments. These instruments included Ludlum 3/12, RO-20, and telepoles. The inspector assessed whether high-range instruments were source checked on all appropriate scales.

The inspector walked down three area radiation monitors and three continuous air monitors to determine whether they were appropriately positioned relative to the radiation sources or areas they were intended to monitor.

The inspector selected four personnel contamination monitors and two small article monitors and evaluated whether the periodic source checks were performed in accordance with Entergy procedures and the manufacturer's recommendations.

b. Findings

No findings were identified.

.3 Calibration and Testing Program

Process and Effluent Monitors

a. Inspection Scope

The inspector selected three effluent monitor instruments and evaluated whether channel calibration and functional tests were performed consistent with TS and the Offsite Dose Calculation Manual. The inspector assessed whether (a) Entergy calibrated its monitors with National Institute of Standards and Technology traceable sources; (b) the primary calibrations adequately represented the plant nuclide mix; (c) when secondary calibration sources were used, the sources were verified by comparison with the primary calibration source; and (d) Entergy's channel calibrations encompassed the instrument's alarm set-points.

The inspector assessed whether the effluent monitor alarm setpoints were established as provided in the Offsite Dose Calculation Manual and station procedures. For changes to effluent monitor setpoints, the inspector evaluated the basis for changes to ensure that an adequate justification exists.

b. Findings

No findings were identified.

.4 Laboratory Instrumentation

a. Inspection Scope

The inspector assessed laboratory instruments used for radiological analyses to determine whether daily performance checks and calibration data indicated that the frequency of the calibrations was adequate and there were no indications of degraded performance. The instrumentation inspected included three gamma spectroscopy systems and a scintillation counter.

The inspector assessed whether appropriate corrective actions were implemented in response to indications of degraded performance.

b. Findings

No findings were identified.

.5 Whole Body Counter

a. Inspection Scope

The inspector reviewed the methods and sources used to perform functional checks on the whole body counter (FastScan) before use and assessed whether check sources were appropriate and align with the plants' isotopic mix.

The inspector reviewed calibration records for the whole body counter since the last inspection and evaluated whether calibration sources were representative of the plant radionuclide mix and that an appropriate calibration phantom was used. The inspector looked for anomalous results or other indications of instrument performance problems.

b. Findings

No findings were identified.

.6 Post-Accident Monitoring Instrumentation

a. Inspection Scope

The inspector reviewed the calibration documentation for the reactor building vent (RT-1001-609) high-range monitor. The inspector assessed whether an electronic calibration was completed for all range decades and was calibrated using an appropriate radiation source. The inspector assessed whether calibration acceptance criteria were reasonable, considering the large measuring range and the intended use of the instrument.

The inspector selected two high range effluent monitors, the reactor building vent and SJAE monitors, and evaluated the calibration and availability of these instruments, and observed the radiation source calibration of the SJAE detectors. The inspector reviewed Entergy's capability to collect high-range, post-accident effluent samples.

b. Findings

No findings were identified.

.7 Portal Monitors, Personnel Contamination Monitors, and Small Article Monitors

a. Inspection Scope

The inspector selected two PM-7 and two ARGOS 4B portal monitors, two small article monitors (SAM), and observed the daily source checks and verified that the alarm setpoint values were reasonable under the circumstances to ensure that licensed material is not released from the site.

The inspector reviewed the calibration documentation for each selected instrument and reviewed the calibration methods to determine consistency with the manufacturer's recommendations.

b. Findings

No findings were identified.

.8 Portable Survey Instruments, Area Radiation Monitors, Electronic Dosimetry, and Air Samplers/Continuous Air Monitors

a. Inspection Scope

The inspector reviewed calibration documentation for a variety of portable instruments having ion chamber, Geiger tube, and sodium iodide detectors. For these portable survey instruments, the inspector reviewed detector measurement geometry and calibration methods and reviewed the source characterization data for the calibrator.

The inspector reviewed the calibration records for selected electronic dosimeters, continuous air samplers, and area monitors to determine that the instruments were calibrated within the required frequency and met the calibration acceptance criteria. Area monitors reviewed included the spent fuel pool area, new fuel storage area, standby gas treatment system area, control room area, and condensate pump room.

b. Findings

No findings were identified.

.9 Instrument Calibrator

a. Inspection Scope

The inspector reviewed the current radiation output values for Entergy's portable survey and area radiation monitor instrument calibrator units, a bench calibrator (N-273) and a box calibrator (N-360). The inspector assessed whether Entergy periodically verified calibrator output over the range of the exposure rates/dose rates using an ion chamber or an electrometer. The inspector assessed whether the measuring devices had been calibrated by a facility using National Institute of Standards and Technology (NIST) traceable sources and whether decay correction factors for these measuring devices were properly applied by Entergy in its output verification.

b. Findings

No findings were identified.

.10 Calibration and Check Sources

a. Inspection Scope

The inspector reviewed Entergy's source term or waste stream characterization per 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," to assess whether calibration sources used were representative of the types and energies of radiation encountered in the plant.

b. Findings

No findings were identified.

.11 Problem Identification and Resolutiona. Inspection Scope

The inspector evaluated whether problems associated with radiation monitoring instrumentation were being identified by Entergy at an appropriate threshold and were properly addressed for resolution in Entergy's corrective action program (CAP). The inspector assessed the appropriateness of the corrective actions for a selected sample of problems documented by Entergy that involve radiation monitoring instrumentation.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES4OA1 Performance Indicator Verification (71151 – 3 samples)**Cornerstone: Mitigating Systems**a. Inspection Scope

The inspectors reviewed Performance Indicator (PI) data to determine the accuracy and completeness of the reported data. The review was accomplished by comparing reported PI data to confirmatory plant records and data available in plant logs, CRs, Licensee Event Reports (LERs), and NRC inspection reports. The acceptance criteria used for the review included Nuclear Energy Institute (NEI) 99-02, Revision 6, "Regulatory Assessment Performance Indicator Guidelines," and NUREG-1022, Revision 2, "Event Report Guidelines 10 CFR 50.73." The following performance indicators were reviewed:

- High pressure coolant injection system from the third quarter of 2011 through the second quarter of 2012 [MS07]
- Heat removal system from the third quarter of 2011 through the second quarter of 2012 [MS08]
- Residual heat removal system from the third quarter of 2011 through the second quarter of 2012 [MS09]

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 2 samples)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, “Problem Identification and Resolution,” the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that Entergy entered issues into the corrective action program at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the corrective action program and periodically attended condition report group (CRG) screening meetings.

b. Findings

No findings were identified.

.2 Annual Sample: Fitness For Duty

a. Inspection Scope

The inspector examined activities performed under Fitness-For-Duty (FFD) hours as an inspection sample for in-depth review to assess the corrective actions taken by Entergy when granting security officers FFD waivers under 10 CFR 26.207. The sample of FFD waivers reviewed was documented in Entergy’s corrective action program for evaluation and appropriate corrective actions were taken.

The inspector reviewed CRs, FFD waivers, fatigue assessments, work schedules, and interviewed security officers. The inspector assessed Entergy’s problem identification, evaluation, and corrective action effectiveness to ensure security force personnel were not assigned to duty while in a fatigued condition that could have reduced their alertness or ability to perform functions necessary to identify and promptly respond to plant security threats.

b. Findings and Observations

Entergy granted FFD waivers in accordance with 10 CFR 26 207(a) (1)(i). However, Entergy did not document the specific circumstances on the FFD waiver requiring waivers to be granted. CR-PNP-2012-3906 was issued to document this observation. The inspectors determined that this did not represent a violation of NRC requirements.

.3 Annual Sample: Operator Workarounds

a. Inspection Scope

The inspectors performed the annual review of operator workarounds to verify Entergy was identifying operator workaround problems at an appropriate threshold and entering them into the corrective action program. The inspectors reviewed identified workarounds to determine whether the mitigating system function was affected, whether

the operator's ability to implement abnormal and emergency operating procedures was affected, and whether appropriate procedures had been updated to reflect actual plant conditions. The inspection was accomplished through personnel interviews, plant tours, and review of station documents.

b. Findings and Observations

No findings were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 7 samples)

.1 Operator and Maintenance Performance during a Downpower to Support Vital Motor Generator (MG) Set DC Brush Replacement

a. Inspection Scope

The inspectors observed an infrequently performed evolution on July 12. Specifically, the inspectors observed an approximate one percent downpower to support locking up the recirculation pumps scoop tube positioner in order to preclude an increase in recirculation pump speed and resultant power increase should the alternating current (AC) power supply to the vital MG set be lost. In addition, the inspectors observed the brief, reviewed electrician qualifications, and observed the work in the field.

b. Findings

No findings were identified.

.2 Operator Performance during a Downpower to Support a Control Rod Pattern Adjustment

a. Inspection Scope

The inspectors observed a planned downpower on July 19 to approximately 60 percent reactor power to support a control rod pattern adjustment. The inspectors reviewed procedural guidance for station power changes and the power maneuver plan, and observed control room operator conduct and control of the evolution.

b. Findings

No findings were identified.

.3 Operator and Maintenance Performance during a Repair of Main Generator Rectifier Bank #4

a. Inspection Scope

The inspectors observed an infrequently performed evolution on August 19. Specifically, the inspectors observed maintenance perform a repair on main generator rectifier bank #4, which included installing a "patch" to secure a stator cooling water leak. In addition, the inspectors observed the brief, reviewed the contingency plan and operations procedures, and observed the work in the field.

b. Findings

No findings were identified.

.4 Operator Performance during the loss of the 'B' 2nd point Feedwater Heater during Y1 fast transfer

a. Inspection Scope

The inspectors observed operator performance following the loss of the 'B' 2nd point feedwater heater. On September 22, Pilgrim's Y1 120 VAC electrical bus automatically transferred from its normal to its alternate power supply. During the transfer, the "B' 2nd point feedwater heater isolated and operators responded by lowering reactor power to 70 percent. The inspectors observed portions of the power maneuver back to 100 percent reactor power, reviewed operations procedures, and observed the evolutions in the control room.

b. Findings

No findings were identified.

.5 (Closed) Licensee Event Report (LER) 05000293/2012-001-00: Safety Relief Valves' Test Pressure Exceeded Setpoint Limits

The inspectors reviewed Entergy's actions and reportability criteria associated with LER 05000293/2012-001-00, which is addressed in CR-PNP-2011-5228. On March 28, Pilgrim was notified that three of four two-stage Target Rock Safety Relief Valve (SRV) pilot assemblies had exceeded the TS tolerance limit. These two stage SRVs were replaced with three-stage SRVs during Refueling Outage 18 (April 2011) to address sticking SRVs due to "setpoint variance" and "corrosion bonding". In addition, the tolerance limit for the new SRVs was increased to 3 percent. This LER is closed.

.6 (Closed) Licensee Event Report (LER) 05000293/2012-002-00: Manual Reactor Scram Due to Degraded Condenser Vacuum

a. Inspection Scope (1 sample)

The inspectors reviewed Entergy's actions associated with LER 05000293/2012-002-00, which are addressed in the corrective action program as CR-PNP-2012-2304. The event was discussed in NRC Inspection Report 05000293/2012003. The documents reviewed during the inspection are listed in the Attachment. This LER is closed with the following finding.

b. Findings

Introduction. A finding of very low safety significance (Green) was identified for personnel not adequately classifying work in regards to processing an emergent work order. Specifically, personnel classified work on a reach rod position indication for valve 1-HO-163, SJAЕ steam supply valve, as "minor" maintenance which resulted in the

failure to identify and correct the reach rod indicator and position. This resulted in a degraded vacuum during a power maneuver and a subsequent reactor scram.

Description. On May 22, 2012, Entergy initiated a manual reactor scram while performing a thermal backwash on the main condenser when degrading condenser vacuum conditions became apparent (See NRC inspection report 05000293/2012003, Section 4OA3). Following the reactor scram, a root cause was performed and identified the cause of the scram to be a partially open SJAE steam supply valve, 1-HO-163. The partially open valve contributed to the loss of the SJAE inter-condenser loop seal and subsequent degrading main condenser vacuum. For the May 22 thermal backwash configuration, 1-HO-163's correct position would have been closed.

A discrepancy between 1-HO-163's reach rod position and actual position had been identified during the December 2011 forced outage. A work package was processed to correct this discrepancy; however, the classification of the package was inappropriately processed as "minor" maintenance. The work package did not contain sufficient work plan steps or post work test criteria to adequately address and correct the deficiency. Furthermore, for a work package to be classified as "minor" maintenance per Entergy's work process, the work requires that no complex work be performed and no plant configuration changes take place. This was not the case. The discrepancy was not resolved and the SJAE steam supply valve was left partially open during the planned thermal backwash.

Analysis. The inspectors determined that not adequately classifying work for reach rod 1-HO-163 to the SJAE steam supply valve was a performance deficiency within Entergy's ability to foresee and correct, and should have been prevented. This condition did not impact the regulatory process and did not contribute to any actual consequences; therefore, Traditional Enforcement did not apply. The finding was determined to be more than minor because it was associated with the Configuration Control (i.e., Operating Equipment Lineup) attribute of the Initiating Events cornerstone, and adversely affected the cornerstone's objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The inspectors screened the issue for significance using IMC 0609.04, "Phase 1 – Initiating Screening and Characterization of Findings," and IMC 0609 Appendix A, Exhibit 1, "Initiating Events Screening." The finding was determined to be of very low safety significance (Green) because although the finding did cause a reactor scram, it did not cause a reactor scram combined with the loss of mitigating equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. This finding has a cross-cutting aspect in the Human Performance cross-cutting area, Work Control component, because Entergy did not appropriately plan and coordinate the repair of the SJAE steam supply valve by incorporating the operational impact of the work activity consistent with nuclear safety. [H.3(b)]

Enforcement. This finding does not involve enforcement action because no violation of a regulatory requirement was identified. Corrective actions (CR-PNP-2012-2304) included applying a caution tag to the steam supply valve reach rod stating to verify position locally when position is changed, and incorporating into pre-outage training a case study that will enforce the expectation for effective work order screening in accordance with

the requirements of Entergy's work process. Because this finding does not involve a violation and has very low safety significance, it is identified as a finding (FIN). **FIN 05000293/2012004-01, Inadequate Processing of Work Package Results in Reactor Scram**

.7 (Closed) Licensee Event Report (LER) 05000293/2009-002-01: Failure to Meet Technical Specification Requirements for Secondary Containment

The inspectors reviewed Entergy's actions and reportability criteria associated with LER revision 05000293/2009-002-01, which is also addressed in CR-PNP-2009-5295, CR-PNP-2009-5309 and in NRC Inspection Report 05000293/2010002. The revision updated the 10 CFR 50.73 reportability criteria section of the LER to reflect the appropriate reportability coding. This LER is closed.

4OA5 Other Activities

1. IP 92709 Licensee Strike Contingency Plans, IP 92711 Continued Implementation of Strike Plans During an Extended Strike, and IP 92712 Resumption of Normal Operations after a Strike

a. Inspection Scope

Entergy developed a Staffing Contingency Plan to ensure a sufficient number of qualified personnel were available to continue operations in the event that the Utility Workers Union of America (UWUA), Local 369 personnel engaged in a job action upon the expiration of their contract on May 15, 2012. Using the guidance contained in NRC Inspection Procedure (IP) 92709, "Licensee Strike Contingency Plans," the inspectors reviewed Entergy's plans to address a potential job action at the site. The inspection included an evaluation of the Staffing Contingency Plan content and the actions needed to implement the plan; a review to determine whether the number of qualified personnel needed for the proper operation of the facility would be available; a review to determine if reactor operations would be maintained, as required, and; a review to determine if the plan complied with TS requirements and other NRC requirements. On May 15, Entergy and UWUA, Local 369 had not come to an agreement on a new contract. The existing contract was subsequently extended until a May 25 deadline. On May 25, Entergy and UWUA, Local 369 had not come to an agreement on a new contract and further extended the existing contract until June 5.

On June 5, Entergy and UWUA, Local 369 engaged in a job action. Using the guidance contained in IP 92711, "Continued Implementation of Strike Plans during an Extended Strike," the resident inspectors, with supplemental inspectors from the Region 1 office, reviewed Entergy's long term implementation of the strike contingency plans and verified that operations were proceeding in a safe manner during the strike. The inspectors implemented continuous coverage as specified in IP 92711 and observed contingency crews for operations, maintenance, health physics, and chemistry. By June 30, an agreement on a new contract between Entergy and UWUA, Local 369 had not been reached and the job action was still in place. The inspectors continued to implement IP 92711.

On July 7, Entergy and UWUA, Local 369 tentatively agreed to a new contract and union members approved the contract on July 8. During the reintegration of Entergy

employees, the inspectors implemented IP 92712, "Resumption of Normal Operations after a Strike," and verified that operations were proceeding in a safe manner.

b. Findings

No findings were identified.

.2 Temporary Instruction 2515/187 – Inspection of Near-Term Task Force Recommendation 2.3 – Flooding Walkdowns

On September 24, inspectors commenced activities to independently verify that Entergy conducted external flood protection walkdown activities using an NRC-endorsed walkdown methodology. These flooding walkdowns are being performed at all sites in response to Enclosure 4 of a letter from the NRC to licensees entitled, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 (ADAMS Accession No. ML12053A340). The results of this temporary instruction will be documented in a future inspection report.

.3 Temporary Instruction 2515/188 – Inspection of Near-Term Task Force Recommendation 2.3 – Seismic Walkdowns

On September 24, inspectors commenced activities to independently verify that Entergy conducted seismic walkdown activities using an NRC-endorsed seismic walkdown methodology. These seismic walkdowns are being performed at all sites in response to Enclosure 3 of a letter from the NRC to licensees entitled, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 (ADAMS Accession No. ML12053A340). When complete, the results of this temporary instruction will be documented in a future inspection report.

4OA6 Meetings, Including Exit

On August 16, the inspector performed a radiation protection exit meeting and presented the results to Mr. Al Dodds, Nuclear Safety Assurance Director. At the exit meeting, the inspector confirmed that no proprietary information was provided to the inspector.

On October 9, the inspectors presented the inspection results to Mr. Robert Smith, Site Vice President, and other members of the PNPS staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Entergy Personnel

G. Blankenbiller	Chemistry Manager
G. Bradley	Component Engineering
D. Brugman	Supervisor, ALARA/Technical Support
D. Burke	Protective Service Department Section Manager
B. Chenard	System Engineering Manager
B. Clow	Radiation Protection Technician
S. Colburn	Supervisor Access Authorization and Fitness for Duty
J. Cox	Supervisor Radiation Protection Operations
J. Dent	General Manager Plant Operations
A. Dodds	Director Nuclear Safety Assurance
K. Drown	Nuclear Oversight Manager
V. Fallacara	Engineering Director
A. Felix	Auxiliary Operator
J. Fitzsimmons	Radiation Protection Supervisor
M. Gatslick	Sr. Security Compliance Supervisor
R. German	Reactor Operator
R. Hargat	Senior Radiation Protection Technician
T. Hatch	I&C Superintendent
R. Heckman	Senior Radiation Protection Technician
J. House	Superintendent Initial Operations Training
W. Lobo	Licensing Engineer
J. Lynch	Licensing Manager
J. Macdonald	Assistant Operations Manager-Shift
J. McClellan	Quality Assurance Assessor
M. McDonnell	Assistant Operations Manager, Support
T. McElhinney	Training Manager
D. Mannai	Senior Manager, Nuclear Safety and Licensing
W. Mauro	Supervisor Radiation Protection Support
J. Miketa	Senior Radiation Protection Technician
A. Muse	Superintendent, Operations Training
D. Noyes	Operations Manager
J. Priest	Radiation Protection Manager
S. Purdy	Superintendent, Plant Security
R. Smith	Site Vice President
W. Smith	Chemistry Supervisor
J. Taormina	Maintenance Manager
M. Thornhill	Radiation Protection Supervisor
D. Twomey	Senior Radiation Protection Technician
J. Whalley	Operations Shift Manager
T. White	Emergency Planning Manager
J. Yingling	Senior Engineer, Systems Engineering

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATEDOpened/Closed

05000293/2012004-01	FIN	Inadequate Processing of Work Package Results in Reactor Scram (Section 4OA3)
---------------------	-----	---

Closed

05000293/2012001-00	LER	Safety Relief Valves' Test Pressure Exceeded Setpoint Limits (Section 4OA3)
---------------------	-----	---

05000293/2012002-00	LER	Manual Reactor Scram Due to Degraded Condenser Vacuum (Section 4OA3)
---------------------	-----	--

05000293/2009002-01	LER	Failure to Meet Technical Specification Requirements for Secondary Containment (Section 4OA3)
---------------------	-----	---

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures

- 2.1.26, Inventory of Alternate Shutdown and EOP Support Tools and Materials, Revision 40
- 2.2.8, Standby AC Power System (Diesel Generators), Revision 101
- 2.2.8, Standby AC Power System (Diesel Generators), Revision 100
- 2.2.20, Core Spray, Revision 78
- 2.2.32, Salt Service Water System (SSW), Revision 85
- 8.E.29, SSW Instrumentation Calibration, Revision 25
- 8.5.3.2.1, SSW Pump Quarterly/Biennial (Comprehensive) Tests, Rev. 26
- 8.5.3.11, SSW Valve Operability Test, Revision 15
- 8.9.19, Diesel Fuel Oil Emergency Transfer Skid Aging Management Surveillance, Revision 0

Condition Reports

- CR-PNP-2008-1527, Level limits for the fish impingement event that occurred on 9/14/2007 were not evaluated
- CR-PNP-2008-1722, Procedure 5.3.3, Loss of all SSW, actions in attachment 1 might be more appropriate for attachment 2
- CR-PNP-2012-3428, SBO DG fuel oil transfer hose in the field does not match Procedure 8.9.19 or Drawing M100C76
- CR-PNP-2012-3990, Regulator 24-A-2 for outside damper VD-101B is leaking through its tell tale

Miscellaneous

- Drawing C20, Yardwork Underground Piping and Culverts Plan, Revision 12
- Drawing C64-1-1, Underground Storage Tanks, T-126A & B and T-129A & B, Revision 7
- Drawing C64A1-1, Blackout Diesel Generator Fuel Oil Storage Tanks T-160A and T-160B, Revision E1
- Drawing M100C70, Station Blackout Diesel Generator Diesel Oil Storage Tanks Fill & Vent Piping, Revision E1
- Drawing M100C76, Emergency Diesel Fuel oil Transfer Skid – SBO D/G T160 A&B to EDG T-126A and B, Revision 2
- Final Safety Analysis Report (FSAR), Chapter 8.5, Standby AC Power Source
- FSAR, Chapter 8.10, Blackout AC Power Source
- Marine Biocontrol Corporation Inspection, West SSW Bay 8/21/12
- Training Diagrams – Core Spray System
- V-0322 Vendor Manual, Core Spray System
- V-1011 Vendor Manual, SSW Sluice Gates & Steamseal Butterfly Valves, Revision 5
- Work Planning Schedule for week of 9/10/12

Section 1R05: Fire Protection

Procedures

- EN-DC-161, Control of Combustibles, Revision 6
- 5.5.2, Special Fire Procedure, Attachment 1, Reactor Building Quads, Revision 49
- 8.B.14, Fire Protection Technical Requirements, Revision 46

Condition Reports

- CR-PNP-2012-2970, Tornado/Fire Door 83A upper hinge broken

CR-PNP-2012-3687, Appendix R Fire Barrier contained two anchor bolt holes that penetrated several inches into the barrier and had not been filled in
CR-PNP-2012-3706, The Fire Hazards Analysis for Fire Zone 5.3 is not correct

Maintenance Orders/Work Orders

WO 00304652, CRD Pump-B, Monitor leakage on pump P-208B, assigned to system engineer

Technical Specifications

Technical Specification 3/4.5, Core and Containment Cooling Systems

Miscellaneous

BECO Letter 2.88.120, Change to walls with ratings less than 3-hours
Final Safety Analysis Report (FSAR), Chapter 10.7, Salt Service Water System (SSW)
FSAR, Fire Zone Data Sheet, Fire Area 1.9, Fire Zone 1.6 CRD Pump
 Quadrant Fire Protection Engineering Evaluation (FPPE) 120, Revision 2, Scupper
 (Flap Valves) in Walls of SSW Pump Cubicles Fire Zones 5.1, 5.2, and 5.3
FPPE-11, Unfilled Block Walls, Intake Structure, Revision 1
FPPE-17, Exterior Walls, Revision 2
FPPE-81, Plastic Pipe Penetrations – Intake Structure and Radwaste Building, Revision 1

Section 1R07: Heat Sink Performance

Procedures

8.5.3.14.3, Residual Heat Removal (RHR) Heat Exchanger Thermal Performance
 Test, Revision 2

Condition Reports

CR-PNP-2003-3111, While performing PSV-4031 change-out, E-207A carbomastic lining
 is degrading
CR-PNP-2010-0659, Ultimate Heat Sink Self Assessment identified difference in fouling factors
CR-PNP-2011-2211, Boroscope inspection of E-207 'B' RHR Heat Exchanger Carbomastic
 lining is degrading

Maintenance Orders/Work Orders

WO 52265643, Thermal Performance Test in RFO18

Miscellaneous

EPRI NP-7552, Heat Exchanger Performance Monitoring Guidelines
Generic Letter 89-13, Service Water Problems Affecting Safety-Related Equipment
RHR System Health Report

Section 1R11: Licensed Operator Requalification Program

Miscellaneous

Equipment Out of Service (EOOS) Tool
LORT/NRC Simulator Exam Scenario SES-174, Revision 1, LOOP with a Small Break
 LOCA and Loss of an EDG
Risk Profile for Week 8/20/12

Section 1R12: Maintenance Effectiveness

Procedures

EN-DC-203, Maintenance Rule Program, Revision 1
EN-DC-205, Maintenance Rule Monitoring, Revision 4
EN-DC-206, Maintenance Rule (a)(1) Program, Revision 1

Condition Reports

CR-PNP-2011-1093, Emergency light system has exceeded performance criteria
CR-PNP-2012-2366, K-117 Trouble/trip alarm due to engine oil temperature
CR-PNP-2012-3321, Compressor high outlet temperature RTD TT-21 failure
CR-PNP-2012-3789, K-117 would not start because a shortened wire blew a fuse
CR-PNP-2012-4539, K-117 would not start because CB5 was found open

Miscellaneous

Emergency Light System (a)(1) Action Plan
Emergency Light System Performance Indicator Data 2010-2012
K-117(a)(1) Action Plan, Revision 2
NRC Enforcement Manual, Section 8.1.11, Actions Involving the Maintenance Rule
10 CFR 50.65 Expert Panel Meeting, August 22, 2012 Agenda

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Miscellaneous

Equipment Out of Service Quantitative Risk Assessment Tool
On-Line Risk Assessment Schedule
Risk Profiles
Schedule Evaluation of Risk for the week of August 27, 2012
Y1 and Y2 Training Drawings

Section 1R15: Operability Determinations and Functionality Assessments

Procedures

EC-38882, Feedwater Heater E-105A Leak Evaluation, Revision 0
EN-OP-104, Operability Determination Process, Revision 5
EN-OP-111, Operational Decision-Making Issue (ODMI) Process, Revision 9
2.5.2.71, Radwaste Collection System, Revision 33

Condition Reports

CR-PNP-2012-2873, Hotwell conductivity has increased since the May 2012 forced outage
CR-PNP-2012-3125, Drywell floor pump sump low level alarm is acting erratically
CR-PNP-2012-3152, Observed water leak from Feedwater Heater E-105A
CR-PNP-2012-3167, During performance of 2.5.2.71, P-305A started in auto and began pumping
CR-PNP-2012-3500, Three local power range monitors not functioning
CR-PNP-2012-3730, Standby liquid control tank level increased approximately 300 gallons

Technical Specification

Technical Specification 3.1, Reactor Protection System
Technical Specification 3.4/4, Standby Liquid Control System
Technical Specifications, Section 3.6.C, Coolant Leakage

Miscellaneous

Average Power Range Monitor Operability Determination
Hotwell Conductivity Operational Decision Making Process
Unidentified leakage data from control logs

Section 1R19: Post-Maintenance Testing

Procedures

EN-WM-107, Post Maintenance Testing, Revision 4
3.M.3-24.14, Valve Stem Lubrication, Revision 9
3.M.3-51, Electrical Termination, Revision 29
3.M.3-60, Infrared Thermography, Revision 7
3.M.4-131, GH-Bettis Actuator Refurbishment, Revision 20
8.E.47.1, Control Room/Radwaste Filtration System Instrumentation Calibration/Logic Functional Test, Revision 40
8.Q.3-3, 480V AC Motor Control Center Testing and Maintenance, Revision 58
8.Q.3-8.2, Limitorque Type HBC, SB/SMB-0 Through SB/SMB-3 Valve Operator Maintenance, Revision 18
8.6.5.2, Reactor Water Cleanup Valve Quarterly Operability, Revision 17
8.7.2.10, Standby Gas Treatment System Dampers' Quarterly Operability, Revision 9

Condition Reports

CR-PNP-2012-3066, IPTE Briefing Deficiencies
CR-PNP-2012-3086, Procedure 2.2.16.1 improvements identified
CR-PNP-2012-3661, Overload alarm came in after stroking MO-1001-34B
CR-PNP-2012-3928, Issues noted during removal of temp mod 52M-1541
CR-PNP-2012-4013, AC isolation valve overload alarmed after pushing the MO-1201-80 overload rest push button

Maintenance Orders/Work Orders

WO 00291128 02, Remove Temp Mod EC on 52M-1541
WO 00315078 01, Replace vital MG set G23 Brushes
WO 00315078 04, Electrical post work test G23 Brush replacement
WO 00315078 06, Inspect/correct brush contact vital MG Set G23
WO 00326574 01, Received overload alarm when reset push button depressed
WO 52313914 01, EC36426, 3.M.4-121 Rebuild actuator (AO-N-106)
WO 52313914 02, EC36426, Post maintenance test (AO-N-106)
WO 52313914 03, 3.M.4-121, Temporary modification package installation
WO 52313914 04, EC36426, Temporary modification removal (AO-N-106)
WO 52313914 11, 3.M.4-121, Rebuild standby gas train 'B' supply damper actuator
WO 52313914 12, 3.M.4-121, Remove temp alt per 3.M.4.121 to cross tie dampers
WO 52313916 01, 3.M.4-121, Rebuild SBGT train 'B' discharge damper (AO-N-112)
WO 52313916 02, Post maintenance test (AO-N-112)
WO 52313961 01, MOV maintenance & inspection (MO-1001-34B)
WO 52314375 01, Stem lube for MO-1001-34B
WO 52314306 01, MO-1201-80 MOV Stem Lubrication
WO 52324929 01, 8.Q.3-8.2 MOV Maintenance and Inspection (MO-1201-80)
WO 52324929 03, MOV Post Maintenance Testing
WO 52417086 01 & 02, 8.E.47.1 Att.5 CRHEAF 'A' Temperature Switch Calibration
WO 52417293 01, Temperature Switch Post Cal

Miscellaneous

Drawing E-217, Connection Diagram 480 Volt B15 Breakers B1541, B1544, B1546, Revision E7
Drawing E8-11-8, Arrangement Diagram Motor Control Center B15, Revision 29
Drawing E8-19-9, Arrangement Diagram Motor Control Center B20, Revision 42
Drawing 5022, Electrical Schematic Diagram Reactor Water Cleanup System Isolation Valve, Revision E10
Drawing MMOV2, Motor Operated Valves Information Table, Revision 36
EC31959, Jumper Out TOL Heater Trip for Salt Service pump P-208A
EC34581, EC to Change Overload Heater in B1541 for SSW P-208A, Reference Base EC34580
EC36426, Supply Temporary Modification to Gag Damper AO-N-106
PNP-On-Line Master Schedule for 8/6/12
Scheduler's Evaluation for week of 8/19/12

Section 1R22: Surveillance Testing

Procedures

3.M.3-1, A5/A6 Buses 4KV Protective Relay Calibration/Functional Test and Annunciator Verification, Revision 132
8.5.1.1, Core Spray System Operability, Revision 58
8.5.2.2.1, LPCI System Loop 'A' Operability- Pump Quarterly and Biennial (Comprehensive) Flow Rate Tests and Valve Tests
8.5.3.14, Salt Service Water (SSW) Flow Rate Operability Test, Revision 32
8.7.4.4, Main Steam Isolation Valve Operability 60% Power, Revision 24

Condition Reports

CR-PNP-2012-3891, Procedure 3.M.3-1, Att. 10 needs to be revised
CR-PNP-2012-3982, As-found timing of Agastat Relay 162-146B was found to be out of spec

Maintenance Orders/Work Orders

WO 52314604, Perform Shutdown Transformer A5/A6 Tie Relay Calibrations
WO 52412333 01, LPCI Loop 'A' Pump and Valve Quarterly Operability
WO 52414605, 8.5.1.1 (TS/IST) Sec. 8.2 Perf. CS Pump Oper. & Flow Rate Test

Miscellaneous

Agastat Timing Test Results from E-LAB
Pump Quarterly and Biennial Comprehensive Flow Rate Tests and Valve Tests
EC-22686, Create EC to Install Test Connections (Quick Connects) at PI-3854 on RBCCW HX E-209 'B', Revision 0
M-8362, RBCCW Heat Exchanger A & B and TBCCW Heat Exchanger A & B Pressure Instrument Tops, Revision 7

Section 2RS1: Radioactive Hazard Assessment

Procedures/RWP

EN-HU-102, Human Performance Traps and Tools
EN-OP-116, Infrequently Performed Tests and Evolutions
RP 6.1-210, RP Controls for Use of High Activity Sources Used for Instrument Calibration or Testing
RWP 2012-074, PRM/CHRM Calibrations with a High Activity Source

Section 2RS5: Radiation Monitoring InstrumentationProcedures

EN-CY-102, Chemistry Instrument Quality Control Limits
 EN-OP-116, Infrequently Performed Tests and Evolutions
 EN-HU-102, Human Performance Traps and Tools
 EN-RP-131, Air Sampling
 EN-RP-302, Operation of Radiation Protection Instrumentation
 EN-RP-303, Source Checking of Radiation Protection Instrumentation
 EN-RP-304, Operation of Counting Equipment
 6.1-222, Radiological Technical Evaluations and Calculations
 6.4-310, Operation of MDH Dose Measurement Devices
 6.4-331, Operation of Common Radiation Detectors and Air Samplers
 6.5-160, Calibration of the Area Monitoring System
 6.6-113, Source Calibration
 6.6-114, Issue and Control of RP Survey Instruments
 7.1-141, Tritium Analysis by Liquid Scintillation
 7.4-12, Calibration of the SJAE Process Radiation Monitors
 7.4-63, Process Radiation Monitor Setpoints
 7.9.12, Liquid Effluent Releases with RETDAS

Condition Reports

2011-4286	2012-3476
2011-4282	2012-1304
2011-4287	2012-0294
2012-3540	2012-1269
2012-3549	2012-3053
2012-3482	2012-3120
2012-3450	2012-2753

Nuclear Oversight Reports

Field Observations: O2C-PNPS-2012-0185, 0188, 0192, 0193, 0194, 0039
 Nuclear Oversight Fleet Trimester Audit Report: November 2011 – February 2012

Miscellaneous Reports

Daily Quality Control Checks for Gamma Spectrometers, Nos. 2, 3, 4
 Daily Quality Control Checks for Beta Scintillation Counter
 System Health Report for Process Radiation Monitors, System 45E
 Source Calibration for N-273 Bench Calibrator
 Source Calibration for N-360 Box Calibrator
 FastScan Calibration Record

Instruments Inspected

Electronic Dosimeters (Nos. 51510, 887154, 73073, 68350, 73338, 891397, 51447)

Portable Survey Instruments

RO-2 (no. 3468)
 RO-20 (No. 5081)

Telepole (Nos. 6608-135, 0910-146)
Ludlum 3 (No. 258510)
Ludlum 12 (No. 50764, 94159)

Contamination Monitors

ARGOS-4B (No. 52, 53)
SAM-9 (Nos. 308, 309)
PM-7 (No. 134, 600)
Ludlum Model 177 (No. 189609)
Frisker (No. 50252)

Area Monitors

Condensate Pump Area, RM1815-3A
Control Room Area, RIS-1815-2A
New Fuel Storage, RM1815-3D
Spent Fuel Pool Area, RM1815-3F
Standby Gas Treatment, RM1705-9

Laboratory Instruments

Gamma Spectroscopy System Detectors No. 2, 3, 4
Scintillation Counters Tri-Carb No. 3100TR

Airborne Monitors

AMS-4 (Nos. 2823, 103, 2687)

Calibrators

Shepherd Box Calibrator (No. N-360)
Shepherd Bench Calibrator (No. N-273)

Effluent Monitors

Gaseous - Steam Jet Air Ejector Monitors, (RM-1705-3A/3B)
Liquid - Radwaste Monitor, (LW-RM-1705-30)
Control Room Vent Monitor, (RM-1705-16)

Post-Accident Monitor

Reactor Building High Range Monitors (RI-1001-609)

Section 40A1: Performance Indicator Verification

Miscellaneous

MSPI Data Sheets for HPCI 3Q11-2Q12
MSPI Data Sheets for RCIC 3Q11-2Q12
MSPI Data Sheets for RHR 3Q11-2Q12
Control Room Logs

Section 40A2: Problem Identification and Resolution

Procedures

EN-FAP-OP-006, Operator Aggregate Impact Index Performance Indicator, Revision 0
EN-OM-123, Fatigue Management Program, Revision 4
EN-OP-117, Operations Assessments, Revision 4

Condition Reports

CR-PNP-2011-1326, EDG fuel oil storage tank fill and vent pipes susceptibility to missile strike
CR-PNP-2011-2934, Turbine building closed cooling water in-leakage
CR-PNP-2011-3712, Torus isolation valve alarm did not annunciate
CR-PNP-2011-3733, Failure to include seismic input in channel to central blade interference customs guidance
CR-PNP-2012-1647, Reactor water clean-up flow indicator drift
CR-PNP-2012-2015, B14 supply breaker overload assessment
CR-PNP-2012-3806, Pilgrim susceptibility to exceeding 'minimum critical power ratio during a loss of stator cooling'
CR-PNP-2012-4704, Pilgrim is impacted by the 'loss of stator cooling issue identified in CR-PNP-2012-3806'

Miscellaneous

Daily Work Schedule, June 2011, July 2011, August 2011, and December 2011
Operations Decision Making Issue Action Plans in Effect
Operations Performance Indicators
Compensatory Actions and Disabled Annunciators
Snapshot Assessment/Benchmark on Operator Aggregate Impact Review LO#
LO-PNPLO-2012-00142

Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion

Procedures

EN-OP-115, Conduct of Operations, Revision 12
EN-OP-116, Infrequently Performed Tests or Evolutions, Revision 9
EN-WM-100, Work Request Generation, Screening and Classification, Revision 8
1.3.34, Operations Administrative Policies and Processes, Revision 121
2.1.6, Reactor Scram, Revision 65
2.1.14, Station Power Changes, Revision 109
2.2.2, Main Generator and Main Transformer, Revision 35
2.2.16.1, Administrative Controls for Vital MG Set DC Motor Brush Replacement, Revision 0
2.4.11.1, CRD System Malfunctions, Revision 22
2.4.27, Reactor Water Cleanup System Malfunctions, Revision 18
2.4.49, Feedwater Malfunctions, Revision 41
2.4.150, Loss of Feedwater Heating, Revision 21
2.4.156, Stator Cooling Water Malfunctions, Revision 11
5.3.6, Loss of Vital AC, Revision 30
5.3.7, Loss of Instrument Power Bus Y1, Revision 34

Condition Reports

CR-2012-2304, Reactor scram due to degraded condenser vacuum
CR-2012-4146, Y1 Automatic transfer alarm received
CR-2012-4147, Y1 Loss deviation from expected response
CR-2012-4152, Coil on transfer switch Y12 had numerous cracks on its outer covering

Maintenance Orders/Work Orders

WO 00323889, Task 03, Rectifier Bank #4

Miscellaneous

Control Room Logs

Qualification Records

LER-2012-001-00, Safety Relief Valves' Test Pressure Exceeded Setpoint Limits

LER-2012-002-00, Manual Reactor Scram due to Degraded Condenser Vacuum

LER-2009-002-01, Failure to Meet Technical Specification Requirements for Secondary Containment

NEDE 30476, Setpoint Drift Investigation of Target Rock Two-Stage Safety/Relief Valve

Risk Profile for 8/19/12

Risk Profile for 9/22/12

Section 40A5: Other Activities

Miscellaneous

Licensee Strike Reintegration Plan

Strike Reintegration Training Presentations

Training and Qualifications Records

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
ALARA	as low as is reasonably achievable
CA	corrective action
CAP	corrective action program
CFR	code of federal regulations
CR	condition report
CRD	control rod drive
CRS	control room supervisor
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	emergency diesel generator
FFD	fitness-for-duty
FPEE	fire protection engineering evaluation
FSAR	final safety analysis report
HPCI	high pressure coolant injection
HX	heat exchangers
IMC	inspection manual chapter
IR	inspection report
LER	licensee event report
LPCI	low pressure coolant injection
LPRM	local power range monitor
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
ODMI	operational decision-making issue
PARS	publicly available records
PI	performance indicator
PNPS	Pilgrim Nuclear Power Station
RBCCW	reactor building closed cooling water
RCS	reactor coolant system
RCIC	reactor core isolation cooling
RHR	residual heat removal
RM	radiation monitor
RS	radiation safety
RWP	radiation work permit
SAM	small article monitor
SDP	significance determination process
SJAE	steam jet air ejector
SRV	safety relief valve
SSC	structure, system, or component
SSW	salt service water
TBCCW	turbine building closed cooling water
TS	technical specifications
UFSAR	updated final safety analysis report
WO	work order