April 30, 2002

Mr. Robert M. Bellamy
Site Vice President
Entergy Nuclear Generation Company
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, Massachusetts 02360-5599

SUBJECT: PILGRIM NUCLEAR POWER STATION - NRC INSPECTION REPORT 50-293/02-02

Dear Mr. Bellamy:

On March 30, 2002, the NRC completed an inspection at your Pilgrim reactor facility. The enclosed report documents the inspection findings which were discussed on April 9, 2002, with yourself 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. No findings of significance were identified.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of your response to these advisories and your ability to respond to terrorist attacks with the capabilities of the current design basis threat (DBT). On February 25, 2002, the NRC issued an Order to all nuclear power plant licensees, requiring them to take certain additional interim compensatory measures to address the generalized high-level threat environment. With the issuance of the Order, we will evaluate Entergy Nuclear Generation Company compliance with these interim requirements.

In accordance with 10 CFR 2.790 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 Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Clifford Anderson, Chief
Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 50-293/02-02

Attachment: Supplemental Information

cc w/encl: M. Krupa, Director, Nuclear Safety & Licensing
W. Riggs, Director, Nuclear Assessment Group
D. Tarantino, Nuclear Information Manager
B. Ford, Regulatory Affairs Department Manager
J. Fulton, Assistant General Counsel
R. Hallisey, Department of Public Health, Commonwealth of Massachusetts
The Honorable Therese Murray
The Honorable Vincent deMacedo
Chairman, Plymouth Board of Selectmen
Chairman, Duxbury Board of Selectmen
Chairman, Nuclear Matters Committee
Plymouth Civil Defense Director
D. O'Connor, Massachusetts Secretary of Energy Resources
J. Miller, Senior Issues Manager
Office of the Commissioner, Massachusetts Department of Environmental Quality Engineering
Office of the Attorney General, Commonwealth of Massachusetts
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Region I Docket Room (with concurrences)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-293
License No:	DPR-35
Report No:	50-293/02-02
Licensee:	Entergy Nuclear Generation Company
Facility:	Pilgrim Nuclear Power Station
Location:	600 Rocky Hill Road Plymouth, MA 02360
Dates:	February 17, 2002, through March 30, 2002
Inspectors:	R. Arrighi, Acting Senior Resident Inspector W. Raymond, Senior Resident Inspector (Indian Point) J. Furia, Senior Health Physicist F. Paul Bonnett, Project Engineer R. Summers, Senior Project Engineer
Approved By:	Clifford Anderson, Chief Projects Branch 5 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000293-02-02, on 02/17-03/30/2002, Entergy Nuclear Generation Company, Pilgrim Nuclear Power Station, Resident Inspection Report.

The inspection was conducted by resident inspectors, a project engineer, a senior project engineer, and a radiation safety inspector. This inspection identified no significant findings. 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 are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html

A. Inspector Identified Findings

None

B. Licensee Identified Violations

None

Report Details

SUMMARY OF PLANT STATUS

Pilgrim Nuclear Power Station began the period at 100 percent reactor power. On March 29, 2002, power was reduced to 55 percent to perform a thermal backwash of the main condenser. On March 30, 2002, the licensee was in the process of returning the unit to 100 percent reactor power.

1. REACTOR SAFETY
(Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity)

1R04 Equipment Alignment

a. Inspection Scope

1. The inspector conducted a complete system walkdown on the accessible portions of the salt service water (SSW) system and the associated sodium hypo-chlorination system. The walkdown included reviews of the system operating procedure 2.2.32, "Salt Service Water System," piping and instrument drawing M212, Updated Final Safety Analysis Report Sections 10.5, "Reactor Building Closed Cooling Water," and 10.7, "SSW," the Design Basis Document (SBDB-29), and plant technical specifications. In addition, the inspector performed a system line-up review including verifying that valves and electrical breakers were in the proper line-up condition. The inspector reviewed and discussed with the system engineer the status of open work orders, problem reports, temporary modifications, the system health report, and operability evaluations to assess any outstanding SSW equipment and/or component deficiencies.

2. The inspector conducted a partial system review of the emergency diesel generator systems on March 22, 2002, at a time the “B” emergency diesel generator was undergoing preparations for testing. The inspection included reviewing applicable plant and information drawings and normal operating procedures. The inspector reviewed breaker static mimics in the control room. The inspector confirmed that the systems were properly aligned to support normal and emergency plant operations.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

Quarterly Fire Protection Inspection

a. Inspection Scope

Two plant areas important to reactor safety were toured to observe conditions related to: (1) transient combustibles and ignition sources; (2) the material condition and readiness of fire protection systems and equipment; and (3) the condition and status of fire barriers used to prevent fire damage or fire propagation. The areas toured included the cable spreading room and the “B” switchgear room. The inspector verified that adequate compensatory measures were in place for degraded fire protection equipment, and that deficiencies were entered into the licensee’s corrective action program.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspector reviewed the implementation of the maintenance rule (10 CFR 50.65) for selected systems and components. The review included applicable maintenance rule basis documents and the Updated Final Safety Analysis Report (UFSAR) and included the following specific equipment issues:

- Proper classification of equipment failures for the automatic depressurization system (ADS). The inspector reviewed problem reports (PR) issued within the last two years and reviewed the ADS maintenance rule basis document. Problem reports reviewed included several problems with leaking pilot valves and incorrect set points of the pilot valves. These concerns did not affect the ADS function of the main steam relief valves and therefore, were not considered a functional problem of the ADS. A listing of PRs reviewed are included in Attachment B of this report.

- Proper classification of equipment failures for the instrument air (IA) system. The inspector reviewed problem reports issued within the last two years and reviewed the IA maintenance rule basis document. Several PRs were reviewed indicating that the reliability of the Class 1E powered, instrument air compressors was degrading. The largest contribution to the unavailability time of the system was several extensive outages to conduct corrective maintenance on the air compressors. The inspector noted that the licensee had properly classified this system as (a)1. The inspector also reviewed the draft "(a)1 corrective action plan" and noted appropriate planned improvements to replace the current instrument air compressors with a different design, using a diesel powered system, were in progress. A listing of PRs reviewed are included in Attachment B of this report.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspector reviewed the following on-line maintenance work plan/activities to assess the adequacy of the licensee's risk assessment process. The inspector reviewed the plan against the criteria contained in licensee procedures 1.5.21, "Work Control Scheduling Activities And Guidelines," and 1.5.22, "Risk Assessment Process." The inspection included a review of the risk assessments and contingencies established, and verified that the increase in plant risk and protected equipment was conveyed to operations personnel and that the plan was posted throughout the site.

- Overhaul of the high pressure coolant injection pump unit cooler per MR P9800832,
- Reviewed the licensee work plan for the week of March 3, 2002,
- Replacement of the diesel fire pump per MR 01120857, and
- Surveillance testing of the reactor core isolation cooling system.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspector reviewed the following post maintenance testing activities:

- MR 01120857, Overhaul of the diesel fire pump,
- MR P9800832, Overhaul of the high pressure coolant injection pump unit cooler breaker, and
- MR P9700121, Re-sleeve the reactor building closed cooling water heat exchanger.

The review included ensuring that the effect of the test on the plant had been evaluated adequately, verifying the test data met the required acceptance criteria, and that the test activity was adequate to verify system operability and functional capability following maintenance.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspector reviewed the results of the following surveillance tests:

- 8.E.47.1, "Control Room/Radwaste Filtration System Instrumentation Calibration/Logic Functional Test,"
- 8.M.2-2.6.1, "RCIC Steam Line High Flow Instrument Functional Test,"
- 8.M.2-2.6.1, "RCIC Steam Line Low Pressure Test."

The inspector verified that the test acceptance criteria was consistent with technical specifications and Updated Final Safety Analysis Report requirements, the test was performed in accordance with the written procedure, the test data was complete and met procedural requirements, and the system was properly returned to service following testing.

b. Findings

No findings of significance were identified.

2OS1 Access Control

a. Inspection Scope

The inspector identified exposure significant work areas (e.g., high radiation areas, and potential airborne radioactivity areas) in the turbine and reactor buildings and reviewed associated controls and surveys of these areas to determine if the controls (i.e., radiological surveys, postings, barricades) were adequate to identify and control radiation exposures. For these areas, the inspector: reviewed radiological job requirements and attended job briefings; determined if radiological conditions in the work area were adequately communicated to workers through briefings and postings; verified the implementation of radiological job coverage and contamination controls; and verified the accuracy of surveys and applicable posting and barricade requirements. The inspector determined if prescribed radiation work permit (RWP) controls were in-place, procedure and engineering controls were in place, whether licensee surveys and postings were complete and accurate, and whether air samplers were properly located. The inspector reviewed electronic pocket dosimeter alarm set points (both integrated dose and dose rate) for conformity with survey indications and plant policy. Plant technical specification (TS) 5.7 and the requirements contained in 10 CFR 20, Subpart G, were utilized as the standard for necessary barriers.

The inspector also examined Quality Assurance Oversight Program Review 01-04, "Radiation Protection Program," to evaluate the licensee's implementation of its program for self-evaluation, problem identification and resolution.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls

a. Inspection Scope

The inspector reviewed ALARA job evaluations, reviewed exposure estimates and exposure mitigation requirements, and reviewed ALARA plans. The inspector conducted a review of: the integration of ALARA requirements into work procedures and RWP documents; the accuracy of person-hour estimates and person-hour tracking; and the generation of shielding requests including their effectiveness in dose rate reduction. The inspector examined exposure performance for 2001 (goal of 195 person-rem, actual exposure of 176.463 person-rem) including the "Refueling Outage 13 ALARA Report," dated January 12, 2002, the exposure goal for 2002 (45 person-rem) and preparations underway for the 2003 refueling outage (RFO14).

For the work areas identified in section 2OS1 (above), the inspector: evaluated the licensee's use of engineering controls to achieve dose reductions; determined if workers utilized the low dose waiting areas and were effective in maintaining their doses ALARA; determined if workers received appropriate on-the-job supervision to ensure ALARA requirements were met; and reviewed individual exposures of selected work groups.

The inspector conducted a review of actual exposure results versus initial exposure estimates including comparison of estimated and actual dose rates and person-hours expended; determination of the accuracy of estimations to actual results; and determination of the level of exposure tracking detail, exposure report timeliness and exposure report distribution. The review was against requirements contained in 10 CFR 20.1101(b).

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope

The inspector reviewed field instrumentation utilized by health physics technicians and plant workers to measure radioactivity including; portable field survey instruments, friskers, portal monitors and small article monitors. The inspector conducted a review of instruments observed, specifically verification of proper function and certification of appropriate source checks for these instruments, which were utilized to ensure that occupational exposures were maintained in accordance with 10 CFR 20.1201. The inspector reviewed documentation related to the maintenance, inspection and testing of respiratory protection devices and associated equipment used in the respiratory protection program.

The inspector examined the committed effective dose equivalent (CEDE) exposure results for workers who sustained intakes of radioactive materials during calendar year 2001 and reviewed the total effective dose equivalent (TEDE) exposure results for all workers during calendar year 2001.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Robert M. Bellamy, Site Vice President, and other members of licensee management at the conclusion of the inspection on April 9, 2002. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered propriety. No propriety information was identified.

Public Meeting Summary

A public meeting was conducted with Mr. Robert M. Bellamy, Pilgrim Site VP, and other members of licensee management at the John Carver Inn, Plymouth, Massachusetts on March 28, 2002. The meeting was held to discuss End of Cycle assessment. A copy of the slides can be found in ADAMS (Accession Number ML021080240).

ATTACHMENT

SUPPLEMENTAL INFORMATION

a. List of Items Opened, Closed and Discussed

b. List of Documents Reviewed

ADS system/component Problem Reports (PRs): 01.9836, 01.9305, 01.9289, 01.8049, 01.2629, 01.2566, 01.2565, 01.2475, 01.2110, 01.0983, 00.9471, 00.3218, 00.3100, 00.2777

IA system/component PRs: 00.0884, 00.1526, 00.2483, 00.3235, 00.3424, 00.9084, 00.9150, 00.9243, 00.9299, 01.0038, 01.0175, 01.0892, 01.1051, 01.2469, 01.2544, 01.3060, 01.4154, 01.4155, 01.4179, 01.5041, 01.5075, 01.8000, 01.8001, 01.9037, 01.9102, 01.9147, 01.9975

Instrument Air System and Service Air System Maintenance Rule SSC Basis Document Manual, MRSSC28, Rev 1.

Main Steam System Maintenance Rule SSC Basis Document Manual, MRSSC00, Rev 1.

c. List of Acronyms

ADS	Automatic Depressurization System
ALARA	As Low As Reasonable Achievable
CEDE	Committed Effective Dose Equivalent
CFR	Code of Federal Regulations
DBT	Design Basis Threat
IA	Instrument Air
MR	Maintenance Request
PR	Problem Report
RCIC	Reactor Core Isolation Cooling
RFO	Refueling Outage
RWP	Radiation Work Permit
SBDB	Design Basis Document
SSW	Salt Service Water
TEDE	Total Effective Dose Equivalent
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report