

DESIGNATED ORIGINAL

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Certified By

*J. McLean*

Docket No. 50-293

MEMORANDUM FOR: Joe DelMedico, Congressional Affairs Officer, Office of  
Congressional Affairs

FROM: Thomas Rehm, Assistant for Operations, Office of  
Executive Director for Operations

SUBJECT: HISTORY OF REGULATORY PERFORMANCE AT PILGRIM NUCLEAR POWER  
STATION

In response to Richard Udell's request of June 5, 1986, this memorandum forwards a history of regulatory problems relative to the Pilgrim Nuclear Power Station. This history includes a tabulation of the more significant milestones and enforcement actions, such as; shutdown orders, major technical milestones, civil penalties/orders, significant management meetings, enforcement conferences, and Immediate/Confirmatory Action letters.

I also acknowledge his supplemental request for five specific items; however, since it will require more time to develop, we have decided not to delay this tabulation and we will provide the other items in about a week.

Original Signed By:

Thomas Rehm, Assistant for Operations  
Office of Executive Director For  
Operations

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PILGRIM STATION

Docket No. 50-309

REGULATORY PERFORMANCE HISTORY

A tabulation of significant milestones and enforcement actions

June 1972	Issued operating license.
December 1973	Shutdown Order issued to inspect for and repair fuel channel box damage.
December 1974	Fuel failure: Hydriding and pellet-clad interaction failures resulted in high gaseous activity. Operation with the fuel cladding perforations resulted in high dose rates in locations requiring access for operation and maintenance. During 1975, 76 and 77, power was limited between 60-80% to maintain offgas activity within regulatory requirements. The last of the defective fuel bundles was replaced during the 1977 refueling outage.
May 1975	A civil penalty (\$12,000) was assessed for violations concerning Inservice Inspection activities identified during an inspection conducted December 1974 - February 1975.
July 1976	Management meeting to discuss concerns related to the management and implementation of the Health Physics Program.
October 1976	Management meeting to discuss concerns related to management and implementation of the Health Physics Program.
November 1977	Management meeting to review licensee efforts to strengthen Radiation Protection Program.
March 1978	A civil penalty (\$16,000) was assessed for violations identified in inspection report 50-293/77-31. The violations were: over-exposure of one individual; failure to instruct personnel in accordance with 10 CFR 19; failure to perform required air sampling; and failure to follow procedures.
September 1978	Management meeting to discuss concerns on recent inspection findings (all areas).
September 1979	Management meeting to discuss violation of primary containment integrity.
October 1979	A civil penalty (\$5,000) was assessed for a violation identified in inspection report 50-293/79-15 involving a failure to follow the Security Plan.

February 1980	A civil penalty (\$5,000) was assessed for shipping radioactive materials with external radiation levels in excess of regulatory limits.
March 1981 (SALP)	Management meeting to discuss the results of the SALP for the period January 1, 1980 to December 31, 1980.
April 1981	A civil penalty (\$13,000) was assessed for events surrounding movement of irradiated fuel without secondary containment as identified in inspection report 50-293/80-09.
July 1981	A management meeting was held in July 1981 to discuss concerns for TMI Action Plan Items involving post accident sampling procedures and equipment and an Immediate Action Letter was issued regarding implementation of these items. Meeting was prompted by a June 1981 radiation protection inspection (50-293/81-14) found the licensee failed to conform with NRC criteria in connection with 4 of the 5 NUREG-0578 Category A items inspected.
June - September 1981	Inspections 50-293/81-18 and 81-22 identified six problems; inoperable combustible gas control system; failure to perform an adequate 50.59 review; failure to provide appropriate procedures and drawings; failure to make a report required by Technical Specifications; failure to provide accurate information to NRC; and failure to satisfy an Limiting Condition for Operation (LCO) regarding primary containment isolation valves. These inspections were subsequently the subject of enforcement actions taken in January 1982.
July - August 1981	A Performance Appraisal Inspection (50-293/81-20) found 6 of 8 areas examined below average. These were: committee activities; quality assurance audits; maintenance; corrective action systems; licensed and non-licensed training; and procurement. Plant operations and design changes and modifications were found to be average; however, significant weaknesses were identified in both areas.

October 1981

Enforcement conference to discuss management controls of safety related activities including the violations identified during inspections 50-293/81-18 and 81-22, the Performance Appraisal Inspection results, and an interim SALP review (period September 1, 1980 - August 31, 1981).

January 1982

Civil penalty (\$550,000) assessed for failure to comply with requirements of 10 CFR 50.44; submittal of false information to NRC and subsequent delay of notification to NRC of known inaccurate information; and failure to comply with LCO for RCIC containment isolation valves.

(PIP)

Order modifying license required licensee to submit a comprehensive plan of action that would yield an independent appraisal of site and corporate management, recommendations for improvements in management controls and oversight, and a review of previous compliance with NRC requirements.

Management meeting to discuss implementing requirements of the NOV/proposed civil penalty and order modifying license regarding the independent appraisal of Boston Edison Company (BEC) management practices.

January 1982

Inspection report 50-293/81-26 identified a severity level III violation for transportation of radioactive materials with liquid in the containers. This violation was based on an inspection in August 1981 by the State of South Carolina which resulted in issuance of a civil penalty (\$1,000).

March 1982

Boston Edison Company (BEC) submitted the Performance Improvement Program (PIP) required by the January 1982 Order.

NRC Management meetings to review status of the Performance Improvement Program were held approximately every six weeks until September 1984.

June 1982	A special inspection (50-293/82-20) conducted of licensee actions after radioactive spent resin was found on roof tops and pavement within the protected area. No violations identified. Confirmatory Action Letter issued concerning actions to be taken regarding the spent resin.
July 1982	Enforcement Conference to discuss exceeding an LCO associated with the Reactor Protection System water level instrumentation.
August 1982	Enforcement Conference to discuss exceeding an LCC associated with the Vacuum Breaker Alarm System.
September 1982 (SALP)	Management meeting to discuss the results of the SALP for the period September 1, 1981 to June 30, 1982.
August 1983	A shutdown order was issued requiring the licensee to shutdown in December 1983 and inspect the recirculation system piping for Intergranular Stress Corrosion Cracking. It required them to remain in cold shutdown until authorized to restart by the Director of NRR. The licensee replaced the recirculation system piping and was authorized to restart in December 1984.
September 1983 (SALP)	Management meeting to discuss the results of the SALP for the period July 1, 1982 to June 30, 1983.
November 1983	Management meeting to discuss refueling/pipe replacement preparations.
January 1984	Confirmatory Action Letter issued regarding licensee actions relative to health physics practices following the discovery of small, highly radioactive sources in the control rod drive repair room.
February 1984	Enforcement conference regarding the uncontrolled handling of small, highly radioactive sources in the control rod drive repair room.

April 1984

A civil penalty (\$40,000) was assessed for problems in connection with the uncontrolled handling of small, highly radioactive sources in the control rod drive repair room between January 14 and 18, 1984. The violation involved identified problems with the labeling of containers, the use of extremity dosimetry, and the adequacy of instructions given to individuals working in the repair room.

September 1984

Management meeting to discuss a second instance of the uncontrolled presence of small, highly radioactive sources in the control rod drive repair room.

October 1984

Enforcement conference on the unplanned extremity exposure (within regulatory limits) connected with the small, highly radioactive sources in the control rod drive repair room. (Follow-up to September 1984 management meeting on same subject)

Confirmatory Action Letter issued in connection with recurring radiation protection program weaknesses. The letter outlined licensee plans for evaluating and correcting these weaknesses.

November 1984

An order modifying the license was issued in connection with recurring weaknesses in the radiation protection program. The order required the licensee to complete an independent contractor assessment of the radiological controls program and to submit to NRC review and approval a Radiological Improvement Plan (RIP) for upgrading the radiological controls program. Followup inspections conducted in May, August, and November 1985 and April 1986.

A Severity Level III violation (no civil penalty) was issued for failure to perform radiation surveys; failure to instruct workers in accordance with 10 CFR 19; and failure to properly implement a procedure in connection with the unplanned exposure noted above.

Enforcement conference to discuss weaknesses in the control and monitoring of neutron instrumentation during refueling operations.

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January 1985 (SALP)

Management meeting to discuss the results of the SALP for the period July 1, 1983 to September 30, 1984.

Enforcement conference to discuss an unplanned occupational radiation exposure within regulatory limits associated with sludge-lancing operations on a waste tank as identified in inspection 50-293/84-44.

August 1985

Enforcement conference to discuss licensee's action on abnormal surveillance test results and a degraded vital area barrier.

October 1985

A civil penalty (\$50,000) was assessed for the degradation of a vital area barrier.

November 1985

A safety system functional team inspection (50-293/85-30) was conducted by the Office of Inspection and Enforcement to assess the operational readiness and function of selected safety systems. The inspection identified that the licensee had not effectively mitigated a water hammer problem associated with the HPCI turbine exhaust line which had been occurring since the beginning of plant operation. Weaknesses were also identified with the licensee's design change process; control of plant instrumentation; handling of vendor information; program for approving and validating emergency operating procedures; capability to conduct a plant shutdown from outside the control room; and maintenance program for motor operated valves.

February 1986

Inspection report 50-293/86-04 identified a severity level III violation for failure to meet packaging requirements for low specific activity radioactive materials. This violation was based on an inspection in January 1986 by the State of South Carolina which resulted in issuance of a civil penalty (\$1,000).

March 1986 (SALP)

Management meeting to discuss the results of the SALP for the period October 1, 1984 - October 31, 1985.



February - March 1986

A special diagnostic team inspection (50-293/86-06) was conducted to determine the underlying reasons for the licensee's poor performance described in the most recent SALP and to ascertain whether they could have an adverse impact on the safety of plant operations.

April 1986

An Augmented Inspection Team (AIT) conducted an inspection of recent operational events which included 1) the spurious group one primary containment isolations (and associated reactor scrams) that occurred on April 4 and 12, 1986, 2) the failure of the main steam isolation valves to promptly reopen after the containment isolations, and 3) the recurring pressurizations of the residual heat removal system. The AIT found the licensee's evaluations following the second event to be carefully structured and thorough. A Confirmatory Action Letter concerning the events was issued which required the licensee to provide a written report prior to restart containing the results of the evaluation and corrective actions. The CAL also required Regional Administrator authorization for restart.

Inspection (50-293/86-10) reviewed implementation of the RIP. The inspection found the licensee adequately addressed 13 of the 34 items reviewed.

May 1986

Management meeting to discuss evaluations and corrective actions concerning the operational events of April 4 and 12, 1986.

June 1986

The first in a planned series of management meetings scheduled to review BECo management oversight of the implementation of the licensee improvement programs in progress.

### Description of Improvement Program

#### I. Performance Improvement Program (PIP)

- a) Required by Order in January 1982
- b) Areas for Improvement
  - 1) Independent Review and Evaluation (MAC)
  - 2) Organization Review/Revision
  - 3) Management Control System Review/Revision
  - 4) Training on Changes
- c) 126 milestones established
  - examples - Procedure Update Program  
(660 procedures)
  - Update Design Documents Program  
(450 drawings)
- d) Status - Complete

Licensee QA verification of final commitment performed October 1985

#### II. Radiological Improvement Program

- a) Required by Order in November 1984
- b) Areas for Improvement
  - 1) Independent Assessment of Program
  - 2) Radiological Organization Review/Revision
  - 3) Radiological Controls Review/Revision
  - 4) Management Oversight and Corrective Actions
  - 5) Training on Changes
- c) 209 Milestones Established

As of December 1985 one item remains open  
(reconfigure access control)

### III. Continuous Improvement Program

- a) Initiated by BECo in June 1985
- b) Actions
  - 1) Visited plants with good SALP evaluations
  - 2) Conducted internal survey to identify problems/cause
  - 3) Issued report of findings in December 1985
- c) Problem Areas Identified
  - 1) Attitude
  - 2) Accountability
  - 3) Weak Root Cause Analysis
  - 4) Communication
  - 5) Effectiveness Assessment
- d) Status
  - Implementation of sixteen of eighteen recommendations in progress