



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

October 21, 1996

EA 96-271

E. Thomas Boulette, PhD
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, Massachusetts 02360-5599

SUBJECT: NOTICE OF VIOLATION
(NRC INSPECTION REPORT NO. 50-293/96-07)

Dear Mr. Boulette:

This letter refers to the NRC inspection conducted from July 8 to July 12, 1996, and July 22 to July 26, 1996, at the Pilgrim Nuclear Power Station facility to review the circumstances surrounding an event reported to the NRC in Licensee Event Report (LER) 96-04, dated May 9, 1996, involving the potential degradation of primary containment integrity. The findings of the inspection were discussed with you and members of your staff during a telephone exit meeting on September 3, 1996. In addition, the NRC inspection report was sent to you with our letter, dated September 20, 1996. On October 3, 1996, a Predecisional Enforcement Conference was conducted with you and members of your staff to discuss the related violations, their causes, and your corrective actions.

Based on the information developed during the inspection, and the information provided during the conference, and by the LER, two violations of NRC requirements were identified. The violations are set forth in the enclosed Notice of Violation. The first violation involved the failure to maintain primary containment integrity in accordance with Technical Specification Section 3.7.A, in that two electrical containment penetrations were not properly protected due to improper trip-settings of 12 electrical penetration circuit breakers. Under certain high-impedance fault conditions during a postulated design basis accident, the trip settings, which were too high, could allow excessive current to pass through the electrical penetration circuits, thereby damaging the penetration seals, and causing the loss of primary containment integrity. This condition was discovered by your staff on April 9, 1996, following an investigation of a failed drywell-unit-cooler fan motor that was powered by electrical circuits passing through one of the two penetrations. When you discovered this condition, you declared primary containment inoperable and entered a 24-hour limiting condition for operation (LCO).

The second violation involved the failure to identify and correct this condition sooner, even though it existed as early as 1988 (and may have existed as far back as 1972). This constitutes a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" which requires, in part, that measures shall be established to assure conditions adverse to

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quality are promptly identified and corrected. For example, during a self-assessment that you performed in July 1991 of Pilgrim's electrical distribution system, your staff identified that electrical penetration protection for potential electrical faults within the primary containment had not been addressed. Although your staff later performed an operability evaluation to address this problem, the problem was not corrected because of an incorrect assumption regarding thermal overload of the motor starter, as described in the Notice. Therefore, the incorrect breaker trip-setting problem was not corrected. Later, in 1992, while performing a calculation for the purpose of evaluating the penetration under normal plant operation, your engineers noted that some of the circuits protected from overload by thermal relays were not adequately protected from short-circuits because the settings of magnetic-trip-only breakers exceeded National Electric Code (NEC) limits. Your engineers failed to pursue this further, and did not recognize that the circuit breaker manufacturer's technical manual required adherence to the NEC limits. In July 1993, your staff mischaracterized the corrective action for replacing the magnetic-trip-only breakers as enhancements, and therefore, the affected circuit breakers were not replaced until 1996.

The failure to maintain containment integrity under certain conditions, as well as the failure to identify this condition sooner, represent significant regulatory concerns. Therefore, these violations have been classified in the aggregate as a Severity Level III problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG-1600.

The NRC commends the technical inquisitiveness of the electrical engineer who identified this problem in 1996 during his follow-up review of a starter problem with a drywell area cooler. If not for his inquisitiveness, this problem likely would have remained uncorrected. Nonetheless, if similar inquisitiveness had been exhibited by your staff when opportunities existed in 1991, 1992, and 1993, this problem could have been corrected sooner. These findings demonstrate the need for management taking appropriate action to assure that your staff in general, and your engineers in particular, are sensitive to the importance of performing comprehensive evaluations whenever potential problems surface at the facility. Such reviews are needed to assure that all potentially degraded features are promptly identified and corrected.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is considered for a Severity Level III problem. Your facility has been the subject of escalated enforcement actions within the last 2 years (namely, a Severity Level III violation without a civil penalty issued on March 3, 1995, for failure to maintain containment integrity for approximately 30 days while the reactor was critical (EA 95-010)). Therefore, the NRC considered whether credit was warranted for *Identification and Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Credit is warranted for identification since you identified the violation of Technical Specification Section 3.7.A. Credit is warranted for corrective action because your corrective actions were both prompt and comprehensive once the violations were identified in 1996. Your corrective actions included, but were not limited to (1) immediately entering the Technical Specification Limiting Condition of Operation; (2) correcting the trip-setting of the

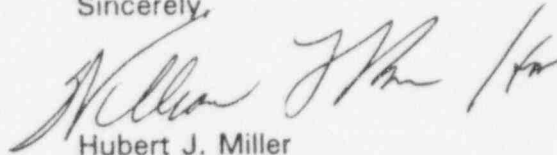
affected circuit breakers within four hours; (3) replacing all 12 magnetic-trip-only circuit breakers with thermal-magnetic type circuit breakers; and (4) completing a root cause evaluation, which identified additional corrective actions to be taken in the near future, namely establishing an improved tracking mechanism for periodic Long Term Plan (LTP) review, revising the calculation procedure to require verification that corrective actions are tracked, reviewing other calculations to determine if similar conditions exist, and reviewing the electrical engineering design guide to determine whether improvements should be made.

Therefore, to encourage prompt and comprehensive identification and correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure will be placed in the NRC Public Document Room (PDR).

Sincerely,

A handwritten signature in dark ink, appearing to read 'H. Miller', followed by a large, stylized flourish or 'H'.

Hubert J. Miller
Regional Administrator

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

Enclosure: Notice of Violation

cc w/encl:

L. Olivier, Vice President - Nuclear and Station Director
T. Sullivan, Plant Department Manager
N. Desmond, Regulatory Relations
D. Tarantino, Nuclear Information Manager
R. Hallisey, Department of Public Health, Commonwealth of Massachusetts
The Honorable Therese Murray
The Honorable Linda Teagan
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