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Docket No. 50-387
License No. NPF-14
EA No. 94-022

Mr. Robert G. Byram
Senior Vice President - Nuclear
Pennsylvania Power and Light Company
2 North Nine Street
Allentown, Pennsylvania 18101

Dear Mr. Byram:

SUBJECT: NOTICE OF VIOLATION
(NRC Inspection Report No. 50-387/93-80)

This letter refers to the NRC Augmented Inspection Team (AIT) inspection conducted between October 29 and November 9, 1993, at the Susquehanna Steam Electric Station, Unit 1 facility, to review the circumstances associated with four fuel handling incidents at the facility in October 1993. The AIT report was issued on December 21, 1993. Based on the review of the findings of the AIT report, apparent violations of NRC requirements were identified, and the issues related to these violations were described to you in the NRC letter, dated February 9, 1994. On March 16, 1994, an enforcement conference was held in the Region I office with you and other members of your staff to discuss the apparent violations, their causes and your corrective actions.

The incidents involved: (1) the inadvertent removal of a fuel assembly from the core and placement back into its reactor core location, contrary to an operating procedure, on October 6, 1993; (2) damage to the refueling mast because of inadequate clearance while traversing the refueling canal, resulting in scraping the flange protector, and subsequently the unexpected drop of a section of the refueling mast on October 26, 1993; (3) movement of a blade guide without sufficient clearance, resulting in contact with the vessel wall on October 27, 1993; and (4) improper functioning of the refueling mast on October 28, 1993, possibly due to damage to the mast following the October 27, 1993 event. Additionally, during core offload, on October 5, 1993, maintenance personnel replaced the grapple with a commercial grade component that was not dedicated prior to use. This was contrary to plant procedure.

A significant contributing factor in these events was insufficient management control and supervisory oversight of refueling activities.

The NRC is concerned that there were numerous instances of similar past occurrences during refueling activities, thereby demonstrating that your corrective actions were not effective in preventing recurrence. Reviews of, and corrective actions for, the previous occurrences were generally oriented towards training and counseling, and did not include a determination of root causes and consequent assessment of corrective measures to prevent recurrence. Consequently, previous incidents were treated as isolated events without an evaluation of previous similar occurrences. For example, the repetitive maintenance and replacement of the mast since 1984, was not trended or considered even though the most recent mast problems were similar in nature.

Although no damage to fuel bundles occurred during the fuel handling activities in October 1993, the NRC is concerned with the repetitive nature of these problems and the potential that existed for more significant events at the facility. We base our concerns on the fact that the same operating practices that led to the refueling mast impacting the vessel, were also in use when moving irradiated fuel bundles.

The failure to follow procedures during the first incident constitutes a violation of NRC requirements (Violation A.1 in the enclosed Notice). In addition, the failure by management and supervisory staff to identify and correct the conditions adverse to quality, namely operating practices that led to numerous fuel movement errors and impacts involving the mast, control blade guides and other structural components, constitutes a violation of the requirements set forth in 10 CFR Part 50, Appendix B, Criterion XVI (Violation B in the enclosed Notice). Further, the replacement of the grapple from the mast with a grapple that was not procured as a safety-related component, and was not dedicated prior to use, constitutes another violation of NRC requirements (Violation A.2 in the enclosed Notice).

Given the repetitive nature of the violations, as well as management's failure to identify and correct these problems, these violations represent a significant regulatory concern. Therefore, in accordance with the, "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1993), these violations, which are described in the enclosed Notice, are classified in the aggregate as a Severity Level III problem. In accordance with the Enforcement Policy, a civil penalty is considered for a Severity Level III problem.

The NRC recognizes that subsequent to the AIT inspection, corrective actions were taken or planned for these violations. These actions, which were described during the inspection and/or at the March 16, 1994, enforcement conference, included, but are not limited to: (1) operator training for improving control of fuel movements and prevention of refueling errors; (2) improving procedures to include enhanced bundle verification, confirmation of grapple alignment, limitations on the bridge movement, including restriction of movement in one direction at a time, and requiring that all initial fuel movements be slow and deliberate; (3) improving the technique and application of root cause evaluations relative to deficient performance in personnel, procedures, and hardware; (4) providing more specific guidance as

to conditions that require entry into off-normal procedures; (5) improving operator aids on the position encoder indicator; and (6) performing testing on the mast prior to core offload, core reload and following events causing damage. Planned long-term action includes upgrading the refueling platform, and fuel and component handling equipment.

Notwithstanding these corrective measures, I have considered issuance of a civil penalty for this Severity Level III problem in light of the recurrent nature of the refueling events to emphasize the importance of (1) strict adherence to procedural requirements, (2) timely identification and correction of conditions adverse to quality at the facility, and (3) ensuring appreciation of the need to maintain high levels of margin to safety in refueling operations. However, after consultation with the Director, Office of Enforcement, I have been authorized to issue the enclosed Notice of Violation for this Severity Level III problem without a civil penalty due to the consideration of the escalation and mitigation factors as set forth in the Enforcement Policy.

In this regard, no adjustments were made based on the identification factor, since some of the violations were identified by you and some by the NRC. Your corrective actions developed subsequent to identification of the violations are considered prompt and comprehensive to insure safety of refueling operations, and you have initiated action to address the long-term improvements. For this reason, 50% mitigation of the base civil penalty for this factor is appropriate. Also, 50% mitigation on the prior performance factor is considered appropriate based on your past SALP and enforcement history, which consisted of a Category 1 performance in the area of operations in the last SALP issued prior to the event, and no escalated enforcement in the past two years. Full 100% mitigation, as allowed by the Policy, is not considered appropriate because your current performance in the area of concern (operations) has declined, and your performance in fuel handling activities has shown some weaknesses, as evidenced by numerous previous events with corrective actions ineffective in preventing recurrence. The other adjustment factors in the Policy were considered and no further adjustment to the base civil penalty was considered appropriate.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

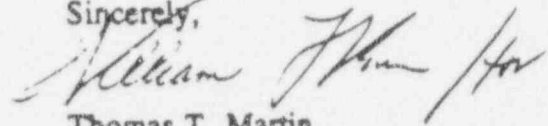
In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Pennsylvania Power and
Light Company

- 4 -

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



Thomas T. Martin
Regional Administrator

Enclosure:
Notice of Violation

cc w/encl:
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J. Kenny, Nuclear Licensing
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