UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 8, 1995

NOED No. 95-6-001

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

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR PENNSYLVANIA POWER & LIGHT COMPANY (PP&L), SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2 (TAC NO. M91482)

Dear Mr. Byram:

This letter confirms that on February 6, 1995, at approximately 3:00 p.m., the NRC orally granted your request to exercise discretionary enforcement from compliance with the Susquehanna Steam Electric Station (SSES) Unit 2 Technical Specifications (TS) regarding Post Accident Monitoring Instrumentation. Specifically, at 9:30 p.m. on February 6, 1995, the Limiting Condition for Operation (LCO) 3.3.7.5 would have required that the unit begin an orderly shutdown due to the inoperability of the "B" ex-core neutron flux monitor channel in excess of the specified limit of 7 days.

By letter dated February 6, 1995, with SSES Unit 2 at 100% power, you requested that the U.S. Nuclear Regulatory Commission (NRC) exercise its discretion not to enforce compliance with the required action in TS Section 3.3.7.5 relative to one of the two ex-core neutron flux monitor channels being inoperable. This regulatory action was requested to avoid an undesirable plant shutdown as a result of having to comply with the license condition and to avoid any potential safety consequences and operational risks which might be inappropriate for the current plant condition. Further, in the letter, you requested that the plant be permitted to operate until the next shutdown of sufficient duration which would permit containment entry, the evaluation, and correction of the condition; not to exceed the seventh refueling outage for the unit which is scheduled to begin in September 1995. The enforcement discretion would be in effect until an emergency TS change is processed changing the number of required operable ex-core monitor channels from 2 to 1 and changing the LCO from 48 hours to 7 days, to allow restoration of the inoperable channel when both channels are inoperable.

As discussed with the NRC resident inspectors and the project manager on February 3, 1995, and in your February 6, 1995 letter, the following occurrence led to the need for this request for enforcement discretion. On January 30, 1995, PP&L staff found that the "B" channel log power range indicator of the ex-core neutron flux monitor was reading upscale. In accordance with TS 3.3.7.5, and Table 3.3.7.5-1, the "B" channel was declared inoperable and the limiting condition for operation was entered. (The "A" channel remains operable.) This LCO requires bringing the plant to HOT SHUTDOWN within 12 hours if the inoperable channel can not be restored to an operable condition within 7 days. Since the LCO was entered, you indicated

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that your staff has expended significant effort to identify the cause and correct the impaired condition by working on channel components and cables outside containment so that the channel might be restored to an operable condition. As stated in your letter, the evidence indicates that the root cause may be a faulty detector, a cable, or connection problem inside primary containment, and therefore a shutdown would be required to reestablish operability.

The ex-core monitoring system provides the neutron flux monitoring requirements of Regulatory Guide (RG) 1.97. It is comprised of two redundant and separate channels, and each channel has four detectors which are located inside containment outside the biological shield. This system provides only indication and alarm functions. For the Safety Parameter Display System (SPDS) it provides log power input, and for the plant computer, it provides log and low power countrate inputs. The control room ex-core monitoring readouts indicate log and low power countrate and period. In addition, the countrate information is also displayed at the shutdown range monitor. The system is powered from instrument AC with backup from the emergency diesel generators.

In your letter you provided the following justification for being able to continue to operate the unit for as long as approximately 7 months with one channel of the ex-core monitor operable. The post-accident neutron flux monitoring function at SSES can be accomplished by the source range monitors (SRMs), the intermediate range monitors (IRMs), the local power range monitors (LPRMs), and the average power range monitors (APRMs). Your staff indicated in the teleconference that the APRMs and the LPRMs receive their power from the reactor protection system bus and the IRMs and SRMs receive power from 24 volt DC power supplies. Also, the SRMs and APRMs have input to the SPDS.

In addition, you noted that the Boiling Water Reactor Owner's Group (BWROG) issued a report, NEDO-31558, "Position on NRC Regulatory Guide 1.97, Revision 3, Requirements for Post-Accident Neutron Monitoring System," dated April 1, 1988, which provided alternate requirements for post-accident instrumentation to those stated in RG 1.97. Further, you discussed the staff's findings in the safety evaluation issued on November 28, 1994 which addressed NEDO-31558. The staff's evaluation indicated that the staff had evaluated the BWROG's scenarios to determine the consequences of neutron flux monitoring unavailability and concluded that the failure of this instrument will not prevent the operator from determining appropriate reactor power levels. This is because multiple alternate parameter status will be available from which reactor power may be inferred and from which the operator will be able to make operational decisions.

As indicated in our discussion on February 6, the SSES Unit 2 emergency operating procedures (EOPs) do not address the ex-core monitor function or outputs. Therefore, the EOPs will be unaffected by the TS change.
You also described a set of compensatory measures that will be taken:
1) On-site part availability for parts that could be used for corrective maintenance on the "A" ex-core channel will be inventoried and ensured, 2) the

alarm response and surveillance procedures for the ex-core monitoring system will be revised, as needed, in accordance with the TS change, and 3) operator training (hot box) will be conducted to reflect the inoperable "B" channel of the ex-core monitoring system and to re-emphasize the availability of alternate means of reactivity indication. The staff has verified that these measures have been or are in the process of being implemented.

On the basis of the staff evaluation of all of the information provided, including the compensatory measures identified above, we have concluded that the exercise of enforcement discretion is warrented because we are clearly satisfied that this action involves minimal or no safety impact and has no adverse impact on public health and safety. Therefore, it is our intention to exercise discretion not to enforce compliance with the requirements of TS 3.3.7.5 until such time as an amendment to the TS, which you have indicated will be submitted within 2 days of the date of granting this discretion, can be processed.

However, as stated in Appendix C to 10 CFR Part 2, enforcement action will normally be taken, to the extent that violations were involved, for the root cause that led to the noncompliance for which this discretion was used.

Sincerely,

Signed by F. Rinaldi
for J. Stolz

John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-388

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John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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