



Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101-1179 • 215/774-5151

Harold W. Keiser
Senior Vice President-Nuclear
215/774-4194

FEB 19 1991

U.S. Nuclear Regulatory Commission
Attn.: Document Control Desk
Mail Station P1-137
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
REPLY TO A NOTICE OF VIOLATION
DATED JANUARY 14, 1991
PLA-3520 FILE R41-2

Docket Nos. 50-387
and 50-388

Attached is Pennsylvania Power & Light Company's response to the Notice of Violation dated 1/14/91 resulting from Inspection Nos. 50-387/90-200 and 50-388/90-200. Pennsylvania Power & Light Company is accepting both violations.

The notice required submittal of a written reply within thirty (30) days of the date of the letter. However, as discussed with Mr. J. R. White of Region I on February 15, 1991, PP&L has been authorized to delay the response until February 19, 1991. We trust that the Commission will find the attached response acceptable.

If you have any questions, please contact Mr. C.T. Coddington (215) 774-7915.

Very truly yours,

H. W. Keiser

Attachment

cc: NRC Region I - Regional Administrator
Mr. M.C. Thadani, NRC Project Manager (OWFN)
Mr. G.S. Barber, NRC Sr. Resident Inspector (SSES)

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bcc: P. W. Brady N-4
R. G. Byram A6-1
C. T. Coddington A2-4
B. A. Bozarth SSES
S. R. Brylinsky SSES
E. W. Figard SSES
J. T. Kauffman TW-16
J. M. Kenny A2-4
W. E. Licht A6-1
A. M. Male A6-2
H. J. Marsh TW-4
J. R. Miltenberger A6-1
D. F. Roth SSES
A. R. Sabol A2-2
H. G. Stanley SSES
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SRMS Corresp. File A6-2

REPLY TO NOTICE OF VIOLATION

1. VIOLATION (OPEN ITEM NOS. 90-200-02, 90-200-11 AND 90-200-12)

10CFR50, Appendix B, Criterion XII, states in part, "Measures shall be established to assure that ... instruments ... are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits."

Contrary to the above, several instruments were not properly calibrated and adjusted at specified periods to maintain accuracy within necessary tolerance acceptance limits. In addition, one instrument was not properly controlled to ensure that it would operate within the manufacturer's specified limits. Specifically:

- Bus 1A/1B 27A UV relays' as-found settings were found to be +2.9% and +3.3%, respectively, which are above the instrument set point tolerance acceptance criteria of $\pm 2\%$.
- CS pump 1A/1B and RHR Pump 1A 50/51 relays' as-found settings were found to be +4.6%, 2.8% and 6.3% respectively, which are above the set point tolerance acceptance criteria of $\pm 2\%$.
- Timers 62-27-AIX1-20201, 62B1-20102, and 62B1-20202 as-found settings were found to be -7.5%, -21% and -21%, respectively, which are above the set point tolerance acceptance criteria of $\pm 5\%$.
- Emergency Diesel Generators' overcurrent relay (51) pick-up values were found to have drifted from 25% to 250% of their last calibrated set points. The set point tolerance acceptance criteria is $\pm 2\%$.
- Undervoltage relay's (27A installed in Unit 2, 4160 Vac 20204) dropout setting was outside the manufacturer's specified range.

RESPONSE

1. REASON FOR VIOLATION

Pennsylvania Power & Light Company agrees with the violation in that the company does not have a formal program to trend or assess out-of-tolerance electrical distribution protective relays and timing relays with one exception. That exception is if a relay is included in the Technical Specifications and is out of its Technical Specification Tolerance then a Significant Operating Occurrence Report is written to allow trending of this item.

2. CORRECTIVE ACTIONS TAKEN

- a. Relays which are found out-of-tolerance are reset at the time of the surveillance.
- b. The undervoltage relay (27A) was replaced during the EDSFI as noted in the NRC Inspection Report Nos. 50-387/90-200 and 50-388/90-200.
- c. An evaluation of the out-of-tolerance settings of the relays identified in the violation was performed. It was concluded that the out-of-tolerance setting would not affect any safety-related function. Therefore, there were no operability concerns. Evaluation conclusions are as follows:
 - The Bus 1A/1B 27A UV relays are included in the Technical Specification. Their as-found settings were greater than the conservative PP&L tolerance band but they were within the manufacturer's recommendation and the Technical Specification allowable value tolerance band (5% and 7% respectively). Therefore, there is no operability concern with respect to the as-found settings of these relays.
 - The CS pump 1A/1B and RHR pump 1A 50/51 relays are used in pump protection and alarm circuits. The as-found settings are conservative with respect to the protection function. Therefore, there is no operability concern with respect to the as-found settings of these relays.

- Timer 62-27-A1X1-20201 is used in a non safety-related alarm circuit. Therefore, there is no operability concern with respect to the as-found setting of this relay.
 - Timers 62B1-20102 and 62B1-20202 are in the Technical Specifications. The as-found settings of these timers noted in this violation are the settings found when these timers were tested the first time prior to installation. The relay data sheets did not clearly state this.
 - As discussed in PLA-3478 dated 12/19/90, Item 90-200-02, the Emergency Diesel Generators' overcurrent relays (51) are non safety-related alarm relays.
 - The undervoltage relay (27A) was set outside the manufacturer's specified range. The manufacturer indicated that it was physically possible to set the relay outside the specified range stamped on the relay. Also, the test records on this relay demonstrate that the accuracy and repeatability at this setpoint was comparable to the other seven relays (all set within the manufacturer's specified range) performing the same function. This relay was capable of performing its required safety function.
- d. In addition to the evaluation performed in 2c, a walkdown was performed and a sample of 46 relays was inspected in the 13.8kv, 480V load centers and 250V DC motor control centers to determine if other relays are set outside their manufacturer's recommended setpoint range. No similar problems were identified.

3. CORRECTIVE ACTIONS TO BE TAKEN

The following corrective actions are to be taken:

- a. A program that establishes actions required when a protective relay or timer is found out-of-tolerance will be developed and implemented by March 31, 1991. This program will address considerations and action that will include increased surveillance frequency if adverse calibration trends are found.



- b. As a further enhancement, a computerized program for relays and instruments will be developed and implemented by July 1, 1991.
- c. The Emergency Diesel Generators' overcurrent relays will be scheduled for installation during the next set of diesel generator outages (anticipated completion date January 31, 1992). These relays will provide a more stable setpoint.

4. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PP&L will be in full compliance by March 31, 1991.



2. VIOLATION (OPEN ITEM No. 90-200-13)

10CFR50, Appendix B, Criterion XI states, in part, that testing shall be conducted in accordance with written test procedures which incorporate appropriate acceptance limits to assure that components will perform satisfactorily in service. In addition, the test procedures shall include provisions for assuring that adequate test instrumentation is used.

Contrary to the above, the licensee tested dc safety-related circuit breakers in accordance with Maintenance Procedure MT-GE-006, "Load Center Breaker Relay Logic and Primary Current Testing," which did not provide specific information regarding overcurrent trip testing or contain the appropriate acceptance limits for testing dc circuit breakers. In addition, the dc circuit breakers were not tested with adequate test instrumentation in that they were tested with an ac test machine which was not representative of actual service conditions.

RESPONSE

1. REASON FOR VIOLATION

Pennsylvania Power & Light Company agrees with the violation in that at the time of the EDSFI Inspection PP&L did not have written justification for using the standard practice of testing low voltage air circuit breakers used in DC applications with an AC test current source. PP&L relied on the standard "AC" response curve supplied by the manufacturer without written justification for the use of this curve. Also, PP&L's Maintenance Procedure MT-GE-006, "Load Center Breaker Relay Logic and Primary Current Testing" did not provide clear guidance on which forms were to be used with the DC breakers.

2. CORRECTIVE ACTIONS TAKEN

The following corrective actions have been taken:

- PCAF No. 1-90-0763 has been written to clarify which forms are to be used with the DC breakers in Maintenance Procedure MT-GE-006. The form requires entry of both the curve number used in the testing and the RSCN information which provide acceptance criteria. It also provides for a yes/no acceptability determination by the test reviewer.

- PP&L performed an evaluation (SEA-EE-271) on using an AC source to test DC breakers. The evaluation concluded that using an AC source to test DC breakers was an acceptable method and the DC breakers would function as required.

3. CORRECTIVE ACTIONS TO BE TAKEN

As a further enhancement, a dc test machine will be purchased to test the breakers.

4. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

PP&L is in full compliance.







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TEO 1



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