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SUBJECT: Discusses addl degraded plant voltage issues re voltage protection scheme,per 900917 & 26 telcons.

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OCT 26 1990

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SUSQUEHANNA STEAM ELECTRIC STATION
ADDITIONAL DEGRADED PLANT VOLTAGE ISSUES Docket Nos. 50-387
PLA-3456 FILE R41-2 and 50-388

Dear Mr. Martin:

This letter is a follow-up to two telephone calls between your Mr. Paul Swetland and our Mr. James Kenny on September 17 and September 26, 1990. These telephone calls reported that there were two issues related to our degraded voltage protection scheme. The first telephone call discussed the issue that the motor control center (MCC) which supplies power to the auxiliaries for diesel generator 'E' does not have degraded voltage protection. The second telephone call discussed the issue of not resetting the 5 minute timers to 10 seconds on each of the Unit 1 4.16kV buses for a LOCA in Unit 2. Consistent with our process for reportability evaluations, these issues have been determined to meet the criteria of 10CFR50.9.

In closing out issues generated by our EDSFI project team it was discovered that the MCC which supplies power to the auxiliary loads for diesel generator 'E' does not have degraded voltage protection. This Class 1E motor control center is energized from the offsite supplies (either T-10 or T-20) through an auto-transfer switch. The MCC is transferred to the Class 1E 4.16kV system only when voltage is lost to the bus, with the diesel generator running. The undervoltage detection scheme only detects a loss of voltage.

Examples of the diesel generator 'E' loads supplied from this MCC are lube oil heater, standby lube oil pump, battery charger, standby jacket water pump, fuel oil transfer pump and essential

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lighting. The diesel generator is determined to be operable since if a LOCA and LOOP were to occur the MCC would be fed from diesel generator 'E' itself. If a LOCA and degraded voltage condition should occur, the degraded voltage condition would not affect the diesel generator's capability to start. Once the diesel generator has started, it would run for at least 1 hour (the capacity of the day tank) which is sufficient time for the operators to restore adequate voltage to this MCC. Susquehanna SES has initiated compensatory actions in the alarm response for low voltage to swap the diesel generator E auxiliaries to its own output.

The second issue is that the 5 minute timers on each of the Unit 1 4.16kV buses do not reset to 10 seconds for a LOCA in Unit 2. The common plant loads such as standby gas treatment system and emergency service water system which are required to mitigate the consequences of a LOCA in Unit 2 receive their power from the Unit 1 4.16kV buses, Therefore, not resetting the timers on the Unit 1 buses for a LOCA in Unit 2 may affect the performance of these common loads should a degraded voltage condition occur. It is anticipated that if a degraded condition would occur, only one division of equipment would be affected due to the plant configuration (one division fed from T-10 and the other from T-20). Therefore, the other division will be functional. Also our plant procedures require that the operators restore adequate voltage when the degraded voltage alarm (96.5%) is received.

If you have any questions, please call Mr. C.T. Coddington at (215) 770-7915.

Very truly yours,

H. W. Keiser

cc: NRC Document Control Desk (original)
Mr. G. S. Barber, NRC Resident Inspector
Mr. M. C. Thadani, NRC Project Manager