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 BUTLER, W.R. Project Directorate I-2

SUBJECT: Forwards Rev 0 to SEA-EE-181, "Evaluation of Open CT
 Secondary Voltages on Unit 1 & Unit 2 Computer Input...."

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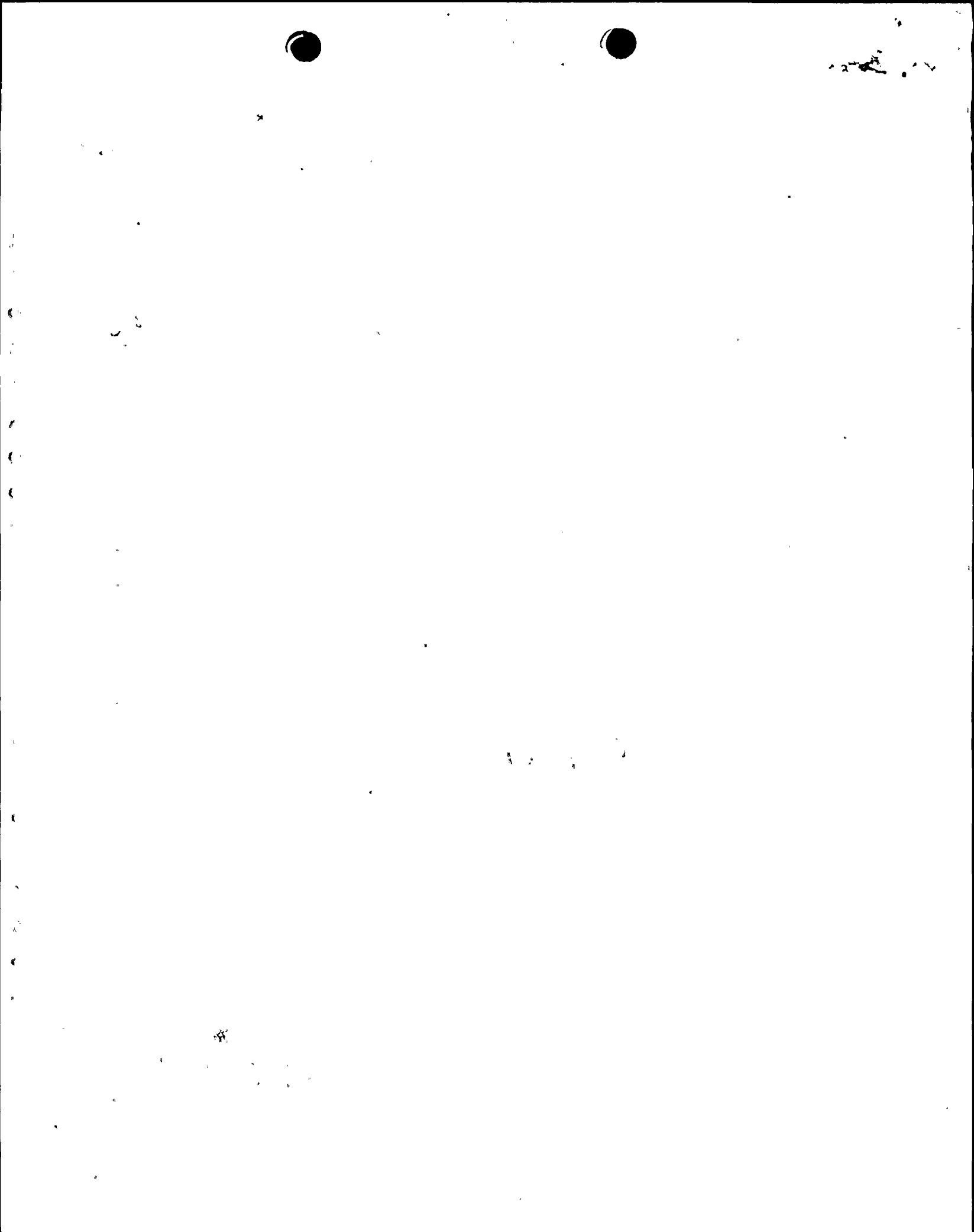
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NOV 28 1989

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Project Directorate I-2
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SUSQUEHANNA STEAM ELECTRIC STATION
CLASS 1E/NON 1E ISOLATION - OPEN CT
VOLTAGES ON COMPUTER INPUT CIRCUITS
PLA-3295 FILES R41-2, A28-3B

Docket Nos. 50-387
and 50-388

Dear Dr. Butler:

Attached is a copy of Pennsylvania Power & Light Company's report, "Evaluation of Open CT Secondary Voltages on the Unit 1 and Unit 2 Computer Input Circuits."

This evaluation shows that the maximum creditable voltage, produced by the Westinghouse CTs and GE 18000/5A CTs, listed in this evaluation will not break down the insulation of Type 4701 or 4722 transducers. Therefore, these CTs will not impact other safety systems. The maximum voltage produced by the McGraw CTs listed in this evaluation may exceed the insulation capabilities of Type 4701 or 4722 transducers; however, this voltage does not prevent the Class 1E circuits, connected to the same computer chassis as these CTs, from meeting their minimum performance requirements. The evaluation in Appendix B shows that the open CT secondary voltage, produced by installed 600/5A and lower ratio CTs cannot prevent the Class 1E circuits, connected to the computer, from meeting their minimum performance requirements.

This leaves the GE 40000/5A CTs. The CT open secondary circuit voltage for these CTs as listed in the evaluation is not known but is expected to exceed the 8 hour dielectric withstand capability

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of the transducers in the secondary circuit. This voltage could perhaps damage some Regulatory Guide 1.97 instrumentation. Accordingly, CT circuit protectors are to be installed across the secondary winding of these CTs to limit the voltage to 1500 VRMS thereby ensuring that the transducers will not pass high voltage to the computer circuits. This action is being tracked by NCR 87-0021.

Very truly yours,



H. W. Keiser

Attachment(s)

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

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