

Susquehanna Learning Center
769 Salem Boulevard
Berwick, PA 18603-0467
570-542-3353



June 18, 2008

Mr. John Caruso
USNRC Chief Examiner
USNRC Region 1
475 Allendale Road
King of Prussia, PA 19406-1415

Susquehanna Learning Center
Formal Post-Examination Comment Q2
PLA 006380

Dear Mr. Caruso:

In accordance with the guidance provided in NUREG 1021, "Operating Licensing Examination Standards for Power Reactors" (Revision 9 Supp 1)) ES-403 "Grading Initial Site-Specific Written Examinations", the following formal post exam comment is being submitted to justify changing the answer key for Question #2 of the Susquehanna Initial Licensing Examination that concluded on May 16, 2008.

If you have any questions, or require more information, please contact me at 570-542-3510 or Chris Michaels at 570-542-3734.

Sincerely,

Jeffrey M. Helsel
Manager-Nuclear Training

Response: No

Enclosures: SSES RO Written Exam Question #2 – Justification, Dated 05/29/2008

cc: R. M. Fry
M. Crowthers
Ops Letter File
Nuc Records - NUCPT

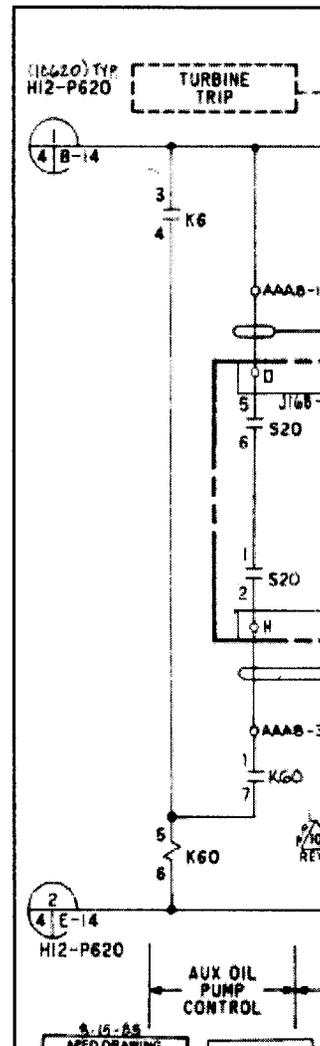
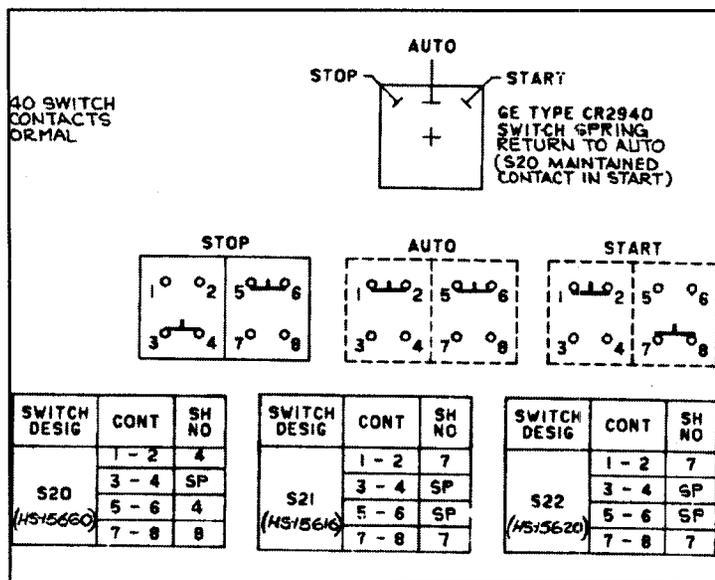
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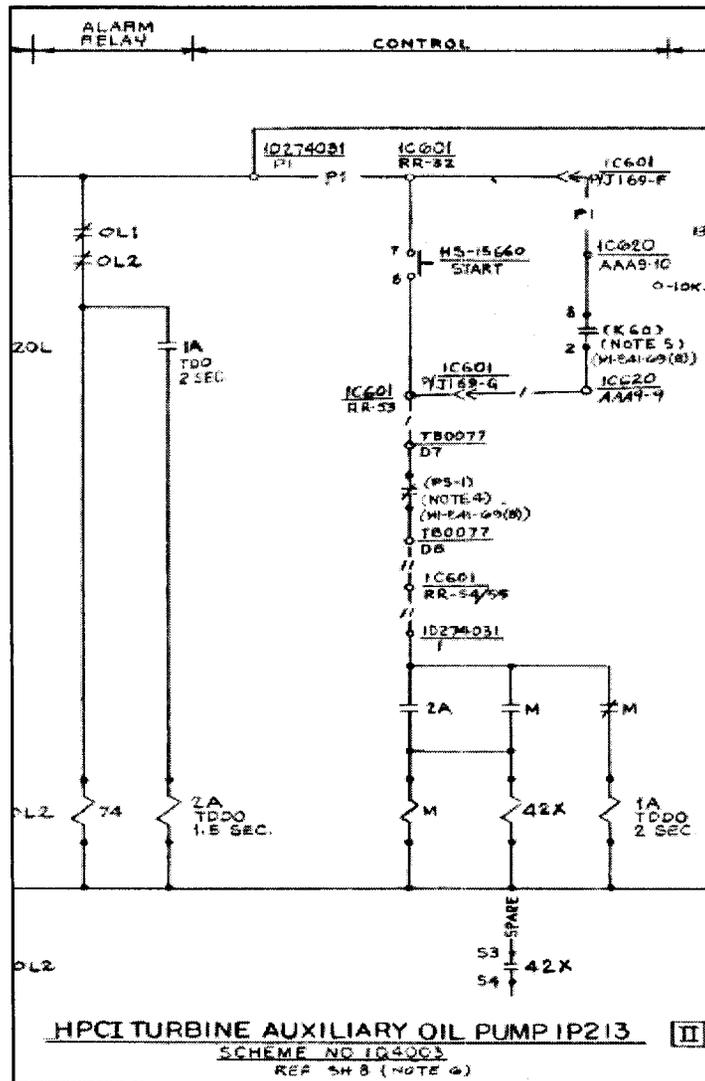
Refer to the following logic prints (ref. 1 and 2): When relay K6 is energized, contacts 3 and 4 close which energize relay K60 in the HPCI Aux Oil Pump control logic. Relay K60 is sealed-in through the HPCI Aux Oil Pump control switch (HS-15660) identified as (S20).

The switch development for the HPCI Aux Oil Pump Control Switch (S20) is provided below (ref. 1). Control switch (S20) contacts 5 and 6 are closed in STOP or AUTO, and contacts 1 and 2 are closed in AUTO or START.

Since the HPCI Aux Oil Pump control switch is maintained in the AUTO position, relay K60 remains energized and sealed-in until the HPCI Aux Oil Pump control switch is taken out of the AUTO position.



Refer to the following logic print (ref. 3): With relay K60 energized, contacts 2 and 8 (in the HPCI Aux Oil Pump control logic for the breaker) will remain closed and the pump will automatically start when oil pressure lowers to 35 psig as sensed by (PS-1).



In conclusion, the stem of Question #2 stated that the HPCI initiation signal was generated and subsequently reset by the operator using the HPCI Initiation logic RESET pushbutton (S17) (Relay K6 was energized and subsequently deenergized). Since the HPCI Aux Oil Pump control switch (S20) remained in the AUTO position, relay K60 remains sealed-in and energized which causes the Aux Oil Pump to automatically start when oil pressure lowers to 35 psig.

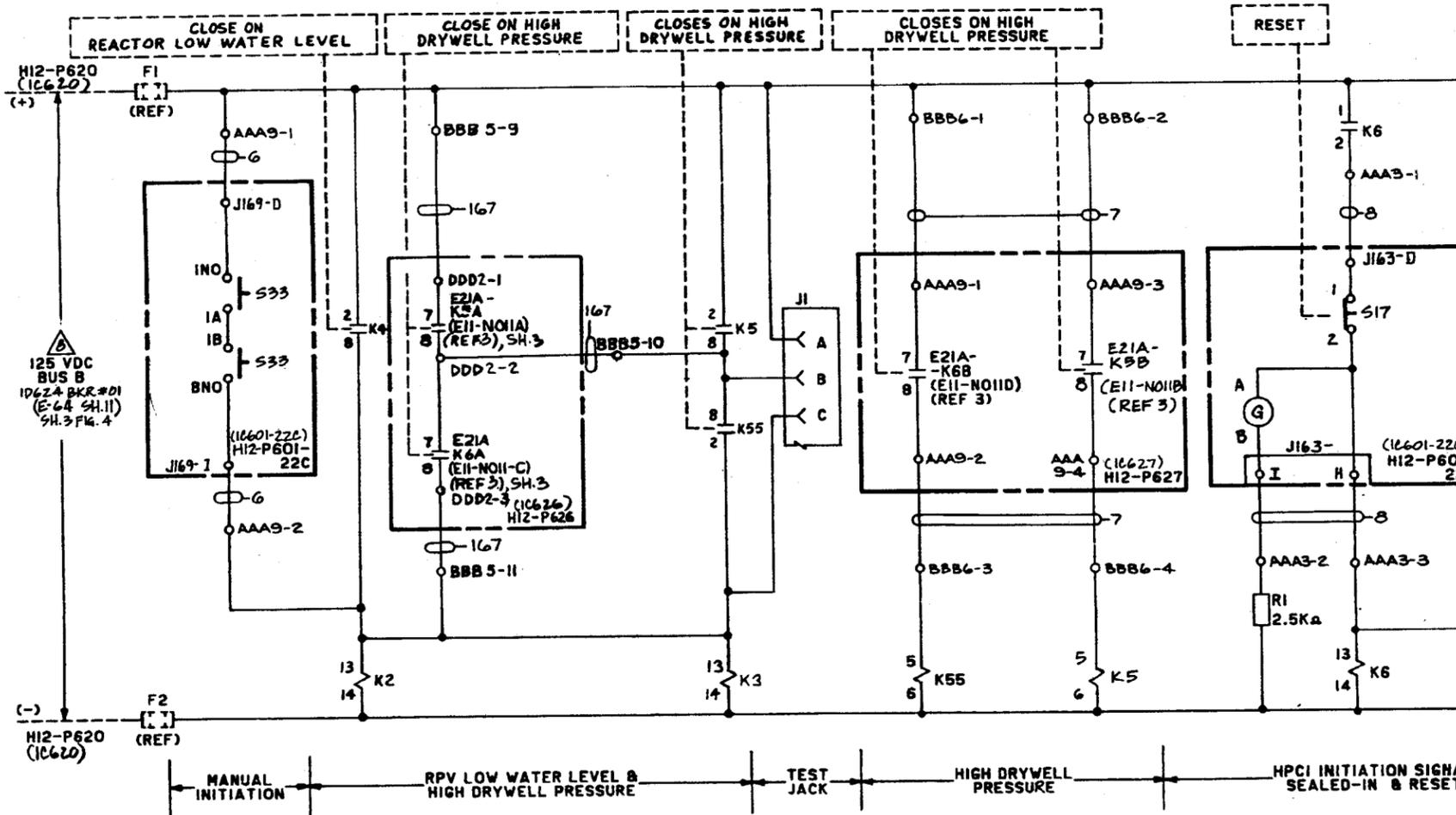
As part of the question review, the staff determined that the Simulator correctly models the HPCI Aux Oil Pump control logic, as discussed above. Further, a review of the plant surveillance test, SO-152-002, QUARTERLY HPCI FLOW VERIFICATION (ref. 4), determined that the HPCI Aux Oil Pump control logic (Relay K60) is exercised in an identical sequence as stated in Question #2. Thus, the operation of the HPCI Aux Oil pump seal-in logic as provided in the elementary logic diagrams agrees with the simulator modeling and actual plant surveillance testing.

Question #2 choice "D" was the originally intended answer. The basis for this answer was the training material, TM-OP-052-ST rev 01, which incorrectly stated that the HPCI Aux Oil Pump logic seal-in would dropout when the Initiation Logic was reset. Without the seal-in, the pump would not automatically start. The training staff determined that the training material is incorrect and this deficiency was entered in the Susquehanna Corrective Action Program (AR# 1032082). The TM-OP-052-ST was revised (rev 02 dated 05/27/2007) to correctly reflect the HPCI pump AOP seal-in logic.

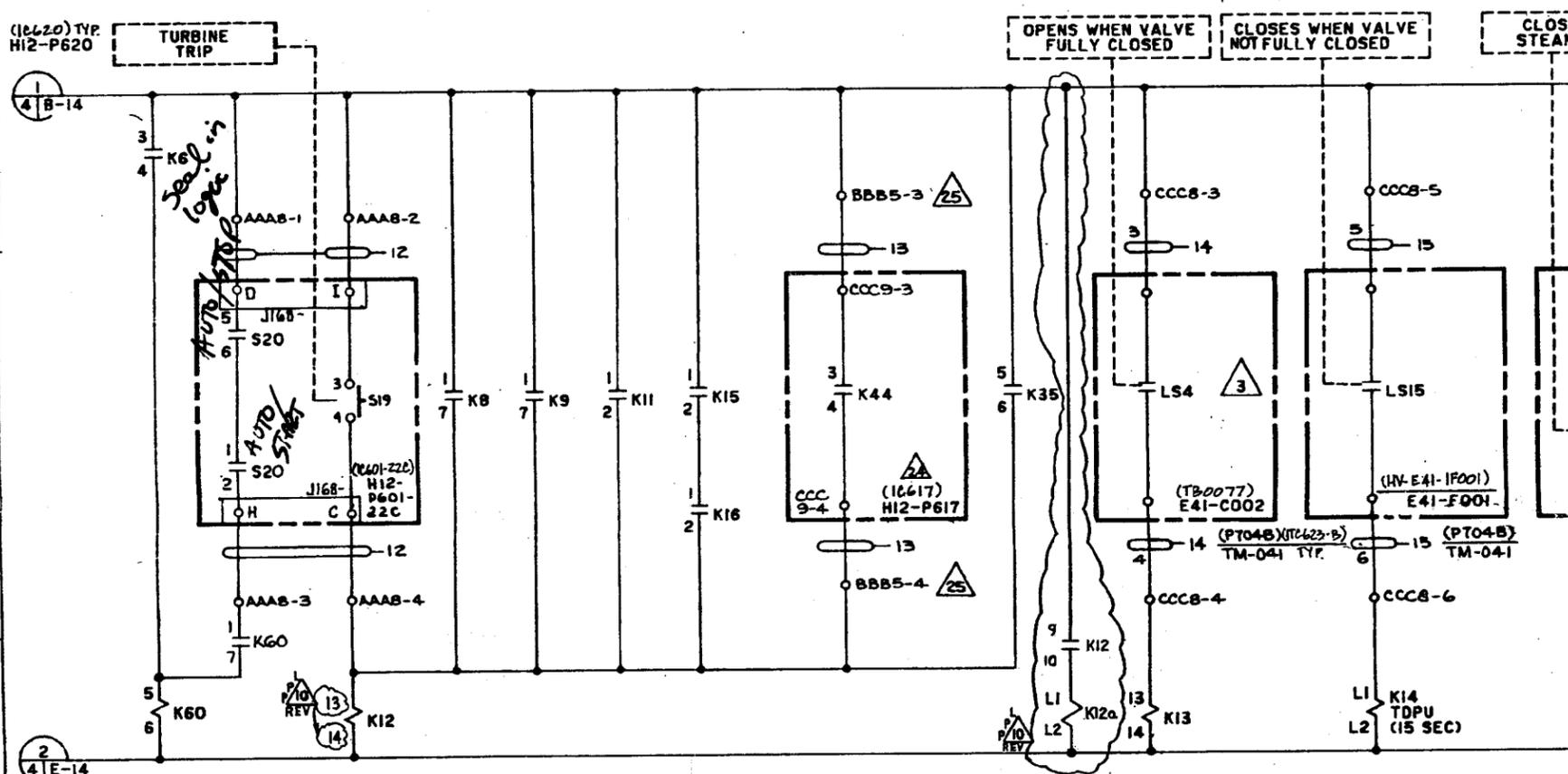
The training staff recommends that Question #2 choice "C" be the correct technical answer and choice "D" be an incorrect answer. Choices "A" and "B" are still incorrect answers and remain unaffected.

SSES Station References:

- 1) M1-E41-69, HPCI Elementary Logic print (Sheet 2 rev 15)
- 2) M1-E41-69, HPCI Elementary Logic print (Sheet 4 rev 10)
- 3) E-152, Schematic Diagram HPCI Turbine Auxiliary Oil Pump (Sheet 4 rev 12)
- 4) SO-152-002, Quarterly HPCI Flow Verification (rev 43)



11 K6
12 K6
(TO TMS PT. NO. 70
(E-303 SH. 20))



8-15-88
APED DRAWING REVIEW

COMMENTS AS CHECKED BELOW

NO COMMENTS

COMMENTS AS INDICATED, FOR APED'S INFORMATION AND USE ONLY. NO REPLY REQUIRED.

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