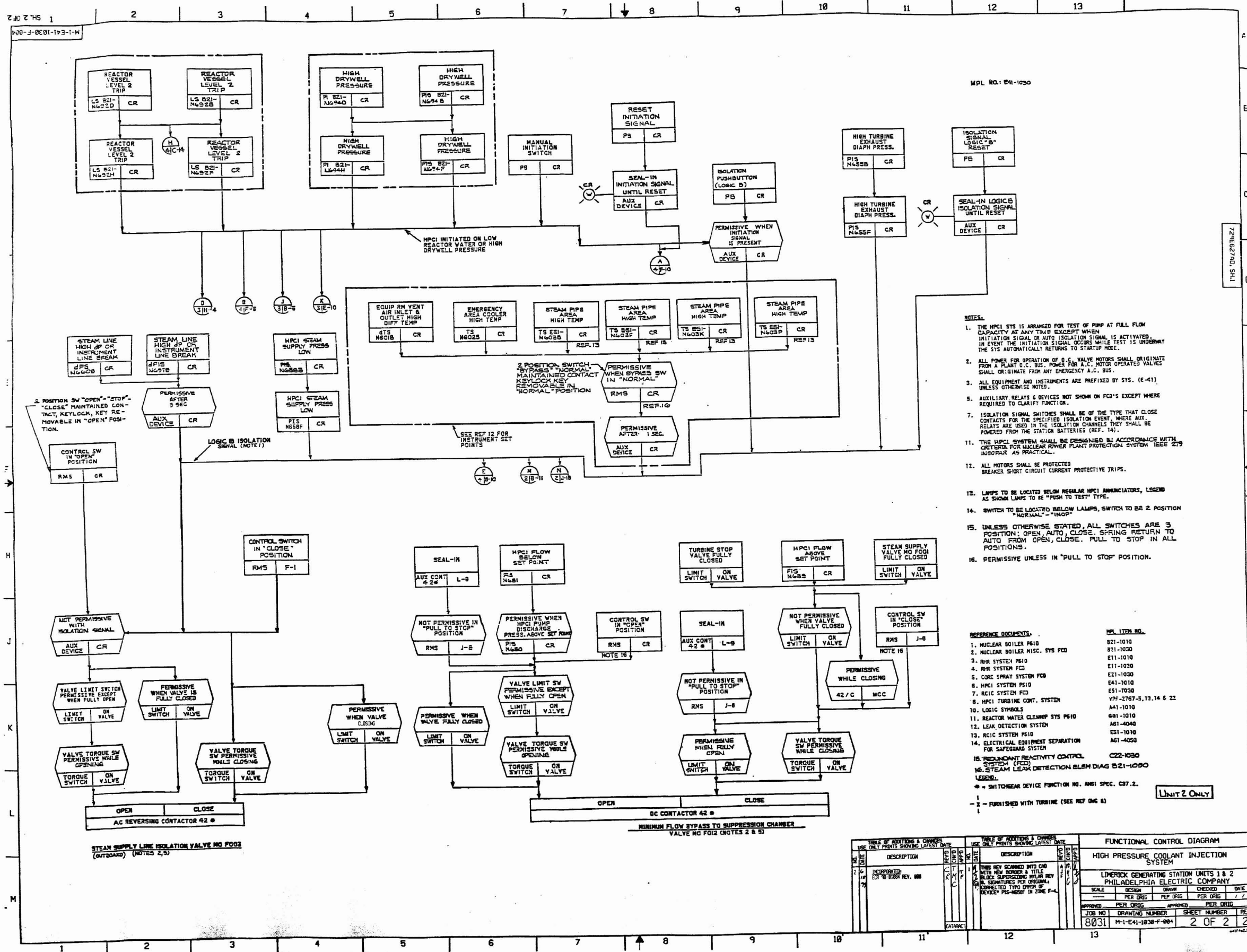




- NOTES:
1. THE HPCI SYSTEM IS DESIGNED FOR TEST OF PMP AT FULL FLOW CAPACITY AT ANY TIME EXCEPT WHEN INITIATION SIGNAL OR AUTO ISOLATION SIGNAL IS ACTIVATED. IN EVENT THE INITIATION SIGNAL OCCURS WHILE TEST IS UNDERWAY THE SYSTEM AUTOMATICALLY RETURNS TO STARTUP MODE.
 2. ALL POWER FOR OPERATION OF B.C. VALVE MOTORS SHALL ORIGINATE FROM A PLANT D.C. BUS. POWER FOR A.C. MOTOR OPERATED VALVES SHALL ORIGINATE FROM ANY EMERGENCY A.C. BUS.
 3. ALL EQUIPMENT AND INSTRUMENTS ARE PREFIXED BY SYS. (E-41) UNLESS OTHERWISE NOTED.
 4. AUXILIARY RELAYS & DEVICES NOT SHOWN ON FCI'S EXCEPT WHERE REQUIRED TO CLARIFY FUNCTION.
 5. ISOLATION SIGNAL SWITCHES SHALL BE OF THE TYPE THAT CLOSE CONTACTS FOR THE SPECIFIED ISOLATION EVENT, WHERE AUX. RELAYS ARE USED IN THE ISOLATION CHANNELS THEY SHALL BE POWERED FROM THE STATION BATTERIES (REF. 14).
 6. THE HPCI SYSTEM SHALL BE DESIGNED IN ACCORDANCE WITH CRITERIA FOR NUCLEAR POWER PLANT PROTECTION SYSTEM IEEE 279 INsofar AS PRACTICAL.
 7. ALL MOTORS SHALL BE PROTECTED BREAKER SHORT CIRCUIT CURRENT PROTECTIVE TRIPS.
 8. LAMPS TO BE LOCATED BELOW REGULAR HPCI ANNUNCIATORS, LEGEND AS SHOWN LAMPS TO BE "PUSH TO TEST" TYPE.
 9. SWITCH TO BE LOCATED BELOW LAMPS, SWITCH TO BE 2 POSITION "NORMAL" - "INOP".
 10. UNLESS OTHERWISE STATED, ALL SWITCHES ARE 3 POSITION: OPEN, AUTO, CLOSE. SPRING RETURN TO AUTO FROM OPEN, CLOSE. PULL TO STOP IN ALL POSITIONS.
 11. PERMISSIVE UNLESS IN "PULL TO STOP" POSITION.

REFERENCE DOCUMENTS	FILE NO.
1. NUCLEAR BOILER P&ID	821-1010
2. NUCLEAR BOILER MISC. SYS. FCI	821-1030
3. RHR SYSTEM P&ID	E11-1010
4. RHR SYSTEM FCI	E11-1030
5. CORE SPRAY SYSTEM FCI	E21-1030
6. HPCI SYSTEM P&ID	E41-1010
7. RCIC SYSTEM FCI	E51-1030
8. HPCI TURBINE CONT. SYSTEM	VF-2767-5, 13, 14 & 22
9. LOGIC SYMBOLS	A41-1010
10. REACTOR WATER CLEANUP SYS. P&ID	G41-1010
11. LEAK DETECTION SYSTEM	A61-4040
12. RCIC SYSTEM P&ID	E51-1010
13. ELECTRICAL EQUIPMENT SEPARATION FOR SAFEGUARD SYSTEM	A61-4050
14. REDUNDANT REACTIVITY CONTROL SYSTEM (FCI)	C22-1030
15. STEAM LEAK DETECTION ELEM. DIAG. B21-1030	

LEGEND:
- = SWITCHGEAR DEVICE FUNCTION NO. ANSI SPEC. C37.2.
- = FURNISHED WITH TURBINE (SEE REF. 14) **UNIT 2 ONLY**

FUNCTIONAL CONTROL DIAGRAM			
HIGH PRESSURE COOLANT INJECTION SYSTEM			
LIVERICK GENERATING STATION UNITS 1 & 2 PHILADELPHIA ELECTRIC COMPANY			
SCALE	DESIGN	DATE	REV.
PER. ORG.	PER. ORG.	PER. ORG.	PER. ORG.
APPROVED	PER. ORG.	APPROVED	PER. ORG.
JOB NO.	DRAWING NUMBER	SHEET NUMBER	REV.
8031	M-1-E41-1030-F-004	2 OF 2	2