



**NOTES**

- TWO MOMENTARY SWITCHES; ACTUATION OF EITHER SWITCH WILL ACTUATE.
- TWO MOMENTARY PUSH BUTTONS, ACTUATION IS EFFECTED ONLY IF BOTH PUSH BUTTONS ARE PRESSED SIMULTANEOUSLY.
- ONE CONTROL SWITCH FOR EACH MAIN STEAMLINE STOP (TRAIN B SV ONLY) AND EACH BYPASS VALVE.
- CONTAINMENT PRESSURE BISTABLES FOR SPRAY ACTUATION ARE ENERGIZE-TO-ACTUATE (OTHER BISTABLES ARE DE-ENERGIZE-TO-ACTUATE).
- ENCLOSED CIRCUITRY IS PART OF THE CONTROL ROOM VENT AND PRESSURIZATION (CRVP) SYSTEM.
- COMPONENTS ARE ALL INDIVIDUALLY SEALED IN (LATCHED) SO THAT LOSS OF THE ACTUATION SIGNAL WILL NOT CAUSE THESE COMPONENTS TO RETURN TO THE POSITION HELD PRIOR TO THE ADVENT OF THE ACTUATION SIGNAL.
- FEEDWATER ISOLATION INCLUDES THE TRIPPING OF ALL MAIN FEEDWATER PUMPS.
- COMPONENT COOLING WATER SYSTEM ISOLATION IS USED ONLY IF REQUIRED.
- THE REDUNDANT MANUAL RESET CONSISTS OF TWO MOMENTARY CONTROLS ON THE CONTROL BOARD, ONE FOR EACH TRAIN.
- AUTOMATIC ACTUATION ALSO CLOSES THE BYPASS VALVE IN PARALLEL WITH THE ASSOCIATED MAIN STEAMLINE STOP VALVE. MANUAL CLOSURE OF EITHER VALVE REQUIRES SEPARATE MANUAL ACTION FOR THE OTHER ASSOCIATED VALVE.
- NUCLEAR STEAM SUPPLY SYSTEM REQUIREMENTS SPECIFIED BY WESTINGHOUSE.
- SHEET NUMBERS REFER TO THE REFERENCE NUMBERS BELOW.
- WHENEVER A PROCESS SIGNAL IS USED FOR CONTROL AND DERIVED FROM A PROTECTION CHANNEL, ISOLATION MUST BE PROVIDED.
- THIS ILLUSTRATES THE FUNCTIONAL REQUIREMENTS OF THE REACTOR CONTROL AND PROTECTION SYSTEM. THIS DRAWING DOES NOT REPRESENT ACTUAL HARDWARE IMPLEMENTATION. FOR HARDWARE IMPLEMENTATION, REFER TO APPLICABLE SCHEMATIC.

**REFERENCES**

WE DWG	PG&E DWG
1. FUNCTIONAL LOGIC DIAGRAM INDEX AND SYMBOLS	5653D74-1 495841
2. FUNCTIONAL LOGIC DIAGRAM REACTOR TRIP SIGNALS	5653D74-2 495842
3. FUNCTIONAL LOGIC DIAGRAM NUCLEAR INSTR AND MANUAL TRIP SIGNALS	5653D74-3 495843
4. FUNCTIONAL LOGIC DIAGRAM NUCLEAR INSTR PERMISSIVES AND BLOCKS	5653D74-4 495844
5. FUNCTIONAL LOGIC DIAGRAM PRIMARY COOLANT SYSTEM TRIP SIGNALS	5653D74-5 495845
6. FUNCTIONAL LOGIC DIAGRAM PRESSURIZER TRIP SIGNALS	5653D74-6 495846
7. FUNCTIONAL LOGIC DIAGRAM STEAM GENERATOR TRIP SIGNALS	5653D74-7 495847
8. FUNCTIONAL LOGIC DIAGRAM SAFEGUARDS ACTUATION SIGNALS	5653D74-8 495848
9. FUNCTIONAL LOGIC DIAGRAM ROD CONTROLS AND ROD BLOCKS	5653D74-9 495849
10. FUNCTIONAL LOGIC DIAGRAM STEAM DUMP CONTROL	5653D74-10 495850
11. FUNCTIONAL LOGIC DIAGRAM PRESSURIZER PRESSURE AND LEVEL CONTROL	5653D74-11 495851
12. FUNCTIONAL LOGIC DIAGRAM PRESSURIZER HEATER CONTROL	5653D74-12 495852
13. FUNCTIONAL LOGIC DIAGRAM FEEDWATER CONTROL AND ISOLATION	5653D74-13 495853
14. FUNCTIONAL LOGIC DIAGRAM FEEDWATER CONTROL AND ISOLATION	5653D74-14 495854
15. FUNCTIONAL LOGIC DIAGRAM AUXILIARY FEEDWATER PUMPS STARTUP	5653D74-15 495855
16. FUNCTIONAL LOGIC DIAGRAM TURBINE TRIPS, RUNBACKS & SIGNALS	5653D74-16 495856
17. FUNCTIONAL LOGIC DIAGRAM AMSAC SIGNALS	5653D74-17 495857
18. FUNCTIONAL LOGIC DIAGRAM SEISMIC TRIP	8759D77 495858
19. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS INPUT SIGNAL VALIDATION	5653D74-18 495859
20. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS FW FLOW CONTROLLER & Cv DEMAND	5653D74-19 495860
21. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS CONT VCV SEQ & TRACKING LOGIC	5653D74-20 495861
22. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS SIGNAL SELECTOR LOGIC	5653D74-21 495862
23. DRAWING INDEX SOLID STATE PROTECTION SYS INTERCONNECTION & SCHEM. DIAGRAM	108D442-1 458862

NUCLEAR SAFETY RELATED

KEY DWG. SECTION 3		UNIT 1	
DATE 08-20-2019	D.D. ZNS4	REVISION DESCRIPTION Revised Per DFT-74940	DWG SCALE: BILL OF MATL: SUPDS: 663195-8
R. E. FXC2	I. V. N/A	P. E. N/A	DRAWING SHEET PAGE REV 495848 1 0 10
PACIFIC GAS AND ELECTRIC COMPANY SAN FRANCISCO, CALIFORNIA			REV 10

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