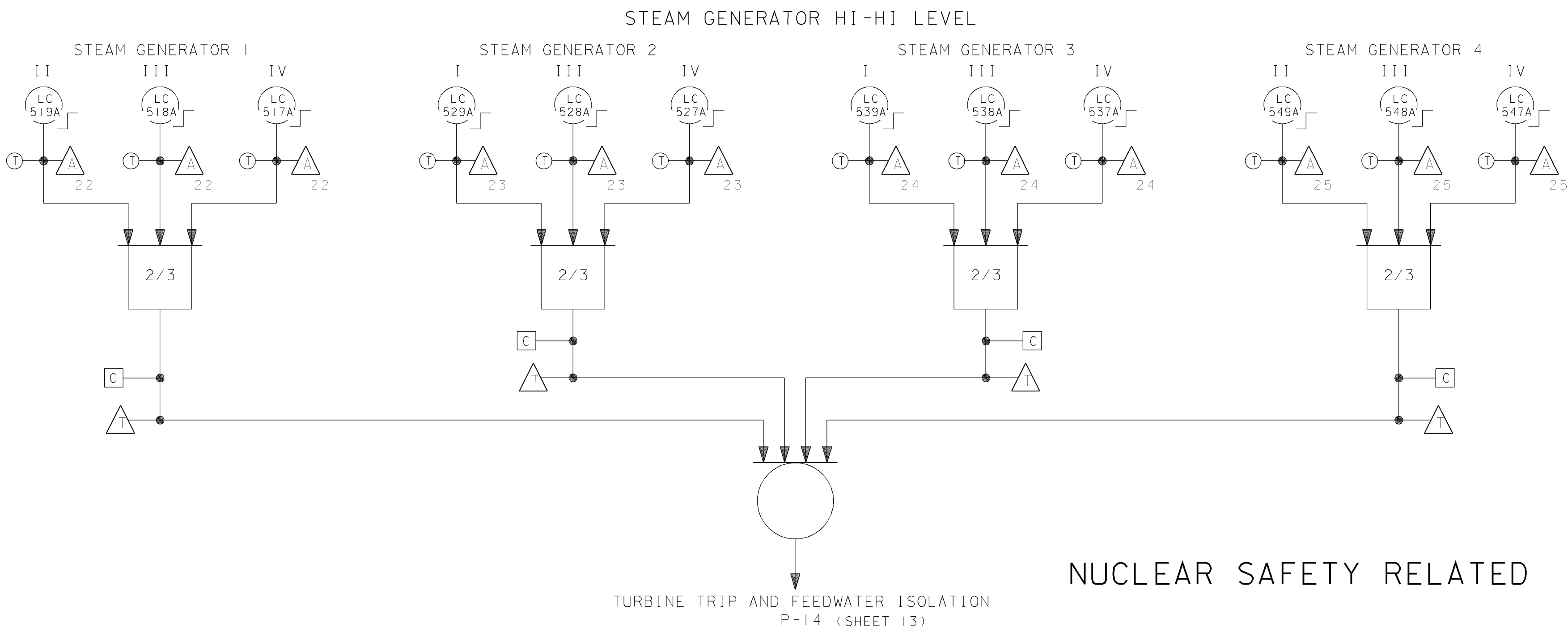
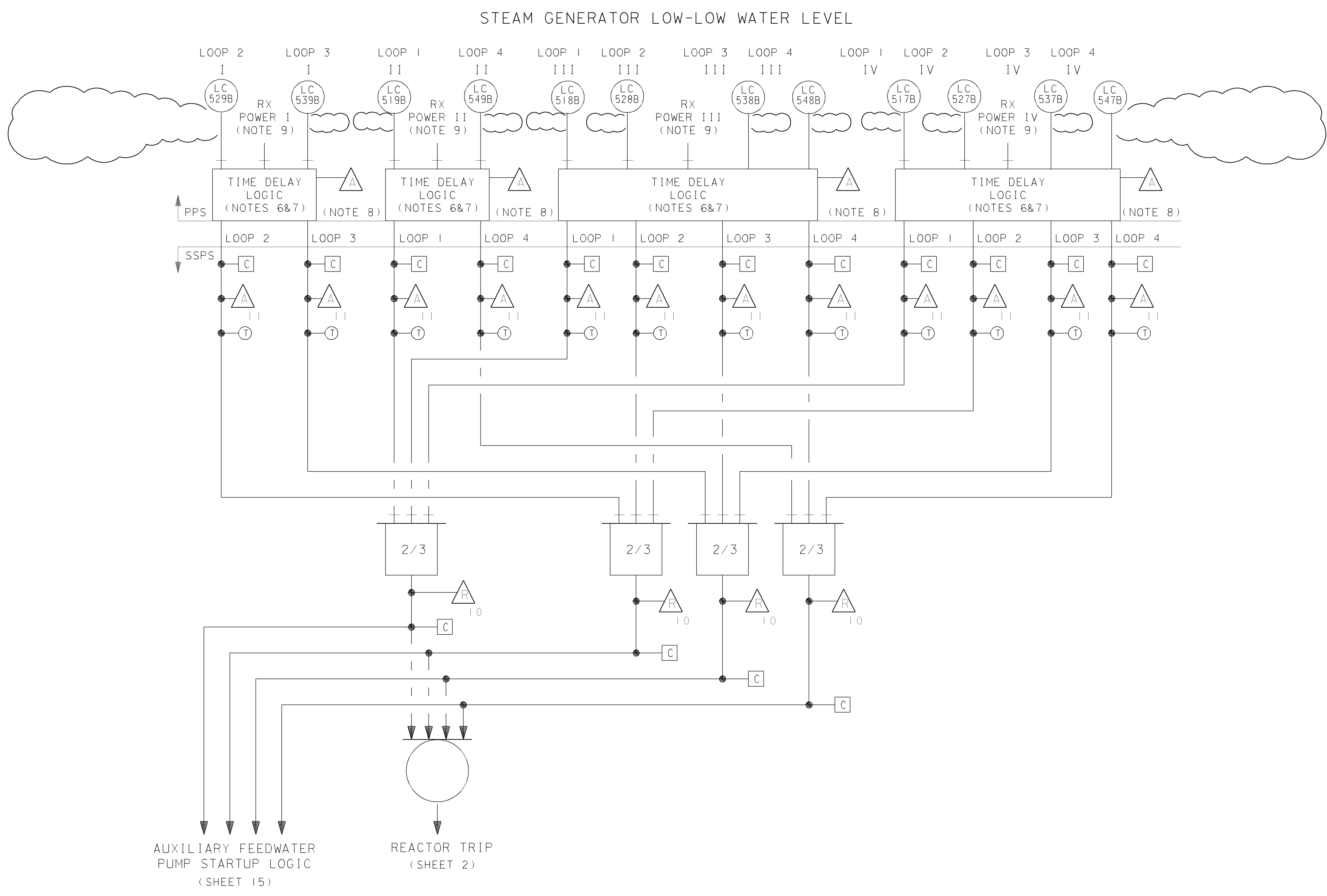
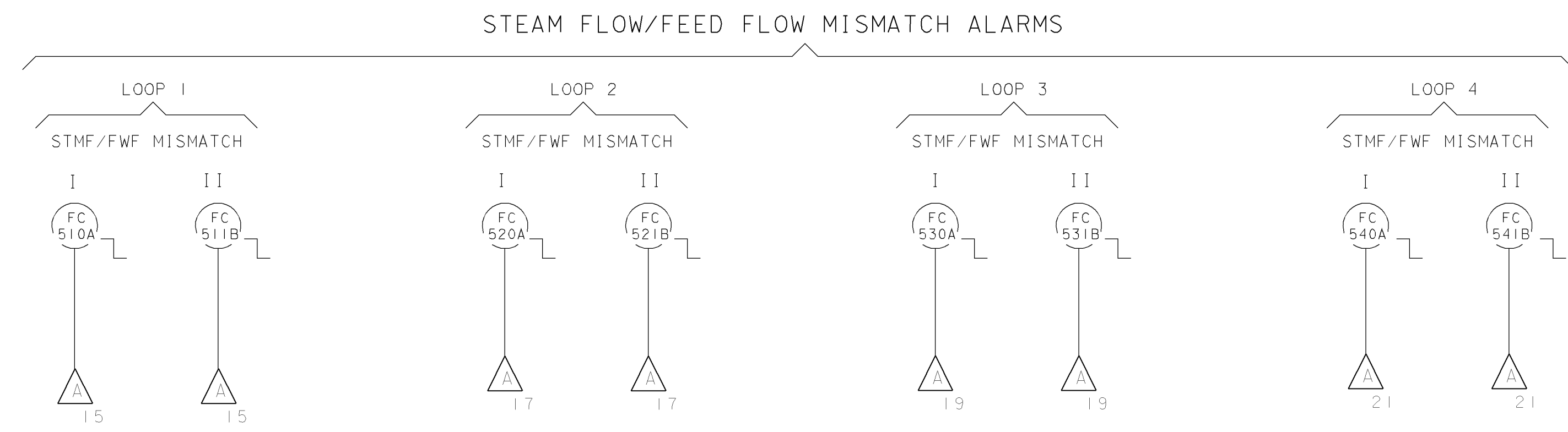


NOTES

1. THE REDUNDANT MANUAL BLOCK CONTROL CONSISTS OF TWO CONTROLS ON THE CONTROL BOARD, ONE FOR EACH TRAIN.
2. TWO COMPUTER INPUTS ARE CONNECTED TO THIS CIRCUIT, INDIVIDUAL FOR EACH TRAIN.
3. SHEET NUMBERS REFER TO THE REFERENCE NUMBERS BELOW.
4. WHENEVER A PROCESS SIGNAL IS USED FOR CONTROL AND IS DERIVED FROM A PROTECTION CHANNEL, ISOLATION MUST BE PROVIDED.
5. THIS DRAWING ILLUSTRATES THE FUNCTIONAL REQUIREMENTS OF THE REACTOR CONTROL AND PROTECTION SYSTEM. THIS DRAWING DOES NOT REPRESENT ACTUAL HARDWARE IMPLEMENTATION, REFER TO THE APPLICABLE SCHEMATIC.
6. ALL TIME DELAY TIMERS IN A PROTECTION SET SHALL START SIMULTANEOUSLY UPON RECEIPT OF THE FIRST VALID LOW-LOW LEVEL SIGNAL.
7. TIME DELAY ASSOCIATED WITH HIGHEST REACTOR POWER OBSERVED DURING TRANSIENT SHALL BE UTILIZED WITH ZERO DELAY FOR POWER GREATER THAN OR EQUAL TO 50%.
8. STEAM GENERATOR LOW-LOW LEVEL TIMER ACTUATED (INACTIVE FOR POWER GREATER THAN OR EQUAL TO 50%).
9. PROTECTION GRADE SIGNAL EQUIVALENT TO REACTOR POWER.

REFERENCES

| | WE DWG | PG&E DWG |
|---|------------|----------|
| 1. FUNCTIONAL LOGIC DIAGRAM INDEX AND SYMBOLS | 5653074-1 | 495841 |
| 2. FUNCTIONAL LOGIC DIAGRAM REACTOR TRIP SIGNALS | 5653074-2 | 495842 |
| 3. FUNCTIONAL LOGIC DIAGRAM NUCLEAR INSTR AND MANUAL TRIP SIGNALS | 5653074-3 | 495843 |
| 4. FUNCTIONAL LOGIC DIAGRAM NUCLEAR INSTR PERMISSIVES AND BLOCKS | 5653074-4 | 495844 |
| 5. FUNCTIONAL LOGIC DIAGRAM PRIMARY COOLANT SYSTEM TRIP SIGNALS | 5653074-5 | 495845 |
| 6. FUNCTIONAL LOGIC DIAGRAM PRESSURIZER TRIP SIGNALS | 5653074-6 | 495846 |
| 7. FUNCTIONAL LOGIC DIAGRAM STEAM GENERATOR TRIP SIGNALS | 5653074-7 | 495847 |
| 8. FUNCTIONAL LOGIC DIAGRAM SAFEGUARDS ACTUATION SIGNALS | 5653074-8 | 495848 |
| 9. FUNCTIONAL LOGIC DIAGRAM ROD CONTROLS AND ROD BLOCKS | 5653074-9 | 495849 |
| 10. FUNCTIONAL LOGIC DIAGRAM STEAM DUMP CONTROL | 5653074-10 | 495850 |
| 11. FUNCTIONAL LOGIC DIAGRAM PRESSURIZER PRESSURE AND LEVEL CONTROL | 5653074-11 | 495851 |
| 12. FUNCTIONAL LOGIC DIAGRAM PRESSURIZER HEATER CONTROL | 5653074-12 | 495852 |
| 13. FUNCTIONAL LOGIC DIAGRAM FEEDWATER CONTROL AND ISOLATION | 5653074-13 | 495853 |
| 14. FUNCTIONAL LOGIC DIAGRAM FEEDWATER CONTROL AND ISOLATION | 5653074-14 | 495854 |
| 15. FUNCTIONAL LOGIC DIAGRAM AUXILIARY FEEDWATER PUMPS STARTUP | 5653074-15 | 495855 |
| 16. FUNCTIONAL LOGIC DIAGRAM TURBINE TRIPS, RUNBACKS & SIGNALS | 5653074-16 | 495856 |
| 17. FUNCTIONAL LOGIC DIAGRAM AMSAC SIGNALS | 5653074-17 | 495857 |
| 18. FUNCTIONAL LOGIC DIAGRAM SEISMIC TRIP | 8759D77 | 495858 |
| 19. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS INPUT SIGNAL VALIDATION | 5653074-18 | 495859 |
| 20. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS FW FLOW CONTROLLER & CV DEMAND | 5653074-19 | 495860 |
| 21. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS CONT VCV SEQ & TRACKING LOGIC | 5653074-20 | 495861 |
| 22. FUNCTIONAL LOGIC DIAGRAM DIGITAL FW CONT SYS SIGNAL SELECTOR LOGIC | 5653074-21 | 495862 |
| 23. DRAWING INDEX SOLID STATE PROTECTION SYS INTERCONNECTION & SCHEM. DIAGRAM | 108D442-1 | 458862 |



KEY DWG. SECTION 3

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| DATE 05-30-2012 | REVISION DESCRIPTION REVISED PER DDT-4*681-0 | DWG SCALE: 1 & C |
| D.D., MNRU | | BILL OF MATL: SUPSD1: 663195-7 |
| R.E., FXC2 | | SUPSD BY: DRAWING |
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NUCLEAR SAFETY RELATED

UNIT 1

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

RASTER=495847.dgn
DGN=495847.dgn
CAD User:MMU Date: 05-30-2012

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