



- NOTES:
1. PIPING HIGH POINT VENTS AND LOW POINT DRAINS ARE TO BE ADDED AS NECESSARY.
  2. INSTRUMENT LINE DESIGN AND VALVING SHALL BE IN ACCORDANCE WITH INSTRUMENT PIPING SPECIFICATION A70-300.
  3. VALVE F028 IS REQUIRED IF THERE IS POTENTIAL FOR OVERPRESSURE.
  4. FOR ADDITIONAL CONTROL, ROOM LIGHTS, SYSTEM ALARMS AND REMOTE MANUAL SWITCHES, SEE THE RWR ISO E11-1030.
  5. PROVISIONS FOR CONTAMINANT ISOLATION SHALL BE IN ACCORDANCE WITH CURRENT LICENSING REQUIREMENTS.
  6. VALVE F002 SHALL BE LOCATED AT AN ELEVATION LOWER THAN THE SUPPRESSION POOL MAXIMUM WATER LEVEL.
  7. PUMP C001 COOLING WATER, IF REQUIRED, IS SPECIFIED IN P2-1210.
  8. VALVES F001, F003 & F011 SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE CONTAMINANT PENETRATION.
  9. ALL MOTOR OPERATED VALVES ARE TO BE OPERATED UNLESS OTHERWISE NOTED.
  10. EQUIPMENT IN SUBSYSTEMS A, B AND C SHALL HAVE THE SUFFIX LETTER A, B AND C RESPECTIVELY AFTER THE EQUIPMENT NUMBER.
  11. FLUSHING CONNECTIONS AND TEMPORARY STRAINER SCREENS ON THE SUCTION SIDE OF ALL PUMPS SHALL BE PROVIDED IN ACCORDANCE WITH A70-400.
  12. ALL MOTOR OPERATED VALVES, AIR OPERATED VALVES AND ALL PUMPS SHALL HAVE A LOCAL PANEL, REMOTE MANUAL SWITCH AND STATUS LIGHT THAT WILL BE HARD WIRING. IN ADDITION, THERE WILL BE A REDUNDANT REMOTE MANUAL SWITCH AND STATUS LIGHT CONNECTED BY MEANS OF MULTIPLEXING AND LOCATED IN THE MAIN CONTROL ROOM.
  13. DRYWELL PIPING RUNS SHALL BE HORIZONTAL OR VERTICAL UPWARDS FROM THE DRYWELL WALL TO THE POINT OF ATTACHMENT WITH THE REACTOR VESSEL.
  14. THIS HIGH POINT VENT SHALL BE LOCATED AT THE HIGHEST POINT IN THE PIPING OUTSIDE THE DRYWELL BETWEEN VALVES F077 AND F015.
  15. SUBSYSTEM A RETURNS TO RPV THROUGH FEEDWATER LINE A.
  16. DISCHARGE LINES FOR COOLING WATER TO BE ROUTED UPSTREAM OF SERVICE WATER RADIATION MONITORS.
  17. VALVE F014 SHALL BE AS CLOSE AS POSSIBLE TO THE CONNECTIONS TO THE MAIN LINE.
  18. DESIGN LINE SIZE WILL BE FINALIZED AT THE DETAILED DESIGN PHASE. ACTUAL LINE SIZES DETERMINED BY THE PIPING DESIGNER SHALL MEET THE PROCESS DATA HYDRAULIC REQUIREMENTS.
  19. CHECK VALVE F006 SHALL BE LOCATED AS CLOSE AS PRACTICAL TO THE REACTOR VESSEL NOZZLE.
  20. VALVES F01A, F01B AND F01C ARE IN ELECTRICAL DIVISIONS B, C AND A RESPECTIVELY. THE MANUAL CONTROL SWITCHES FOR VALVES F01A, F01B AND F01C ARE IN ELECTRICAL DIVISIONS A, B AND C RESPECTIVELY.
  21. PIPING DESIGN SPECIFICATIONS ARE AS FOLLOWS:
    - A. MAXIMUM OPERATING PRESSURE - SEE SPECIFIC BOUNDARY SYMBOL
    - B. MAXIMUM OPERATING TEMPERATURE - SEE SPECIFIC BOUNDARY SYMBOL
    - C. MATERIAL - CARBON STEEL
    - D. PIPING SCHEDULE - INTERFACE
    - E. DESIGN CLASS - SEE SPECIFIC BOUNDARY SYMBOL
    - F. OC CLASS - SEE SPECIFIC BOUNDARY SYMBOL
    - G. SERVICE CLASS - RHW - A0
    - H. FLUID - WATER
    - I. INTERFACE
  22. AIR SUPPLY AND NITROGEN SUPPLY SHOWN IN SUPPLEMENTAL DOCUMENT 10.
  23. STRAINER TYPE AS SUPPLIED WITH PUMP C002.
  24. FLANGE CONNECTION USED FOR OCCASIONAL SUPPRESSION POOL DRAINING.

23. DRAIN AND VENT PIPING DESIGN CONDITIONS ARE:

MAXIMUM OPERATING PRESSURE - SAME AS MAIN LINE UPSTREAM OF VALVE (ATMOSPHERIC PRESSURE FROM LAST VALVE TO FUNNELL)

MAXIMUM OPERATING TEMPERATURE - SAME AS MAIN LINE UPSTREAM OF VALVE (65% FROM LAST VALVE TO FUNNELL)

26. UNIFORM PIPE NUMBERS ARE ASSIGNED SEQUENTIALLY FOR EACH RWR LOOP. RANGES OF NUMBERS ARE ALLOCATED FOR EACH LOOP AND TYPE OF PIPE AS FOLLOWS:

	LOOP A	LOOP B	LOOP C
PROCESS PIPING	001-100	101-200	201-300
DRAIN AND VENT PIPING	500-529	530-559	560-589
INSTRUMENT PIPING	700-729	730-759	760-789

27. THE VALVE TYPE FOR F044 AND F045 WILL BE DECIDED IN THE FINAL DESIGN.
28. THE RECORDING FUNCTION CAN BE ACHIEVED BY A COMMON RECORDING DEVICE.
29. TWO ROOT VALVES CAN BE PROVIDED AT THE SUPPLIER'S OPTION ON HIGH RADIATION/LOW PRESSURE DRAIN AND VENT LINES.

SUPPLEMENTAL DOCUMENTS UNDER THE FOLLOWING IDENTITIES ARE TO BE USED IN CONJUNCTION WITH THIS DRAWING.

	MPL NO.
1. RESIDUAL HEAT REMOVAL SYSTEM P&ID	E11-1020
2. RESIDUAL HEAT REMOVAL SYSTEM ISO	E11-1030
3. SAMPLING SYSTEM P&ID	P81-1010
4. REACTOR PRESSURE VESSEL SYSTEM DESIGN SPEC	B11-1010
5. REACTOR WATER CLEANUP SYSTEM P&ID	G31-1010
6. FUEL POOL COOLING AND CLEANUP SYSTEM P&ID	G41-1010
7. VALVE LEAKAGE TREATMENT SYSTEM P&ID	P71-1010
8. MAKE-UP WATER SYSTEM (CONDENSATE) P&ID	P10-1010
9. REMOTE SHUTDOWN SYSTEM ED	C81-1040
10. HIGH PRESSURE CORE FLOODER P&ID	E22-1010
11. REACTOR CORE ISOLATION COOLING SYSTEM P&ID	E51-1010
12. NUCLEAR BOILER SYSTEM P&ID	B21-1010
13. HIGH CONDUCTIVITY WASTE SYSTEM P&ID	K17-1010
14. REACTOR BUILDUP COOLING WATER SYSTEM P&ID	P21-1010
15. INSTRUMENT AIR SYSTEM P&ID	P52-1010
16. FLAMMABILITY CONTROL SYSTEM P&ID	T49-1010
17. NUCLEAR COOLER SYSTEM ISO	G21-1030
18. POST ACCIDENT SAMPLING SYSTEM P&ID	P91-1010
19. SUPPRESSION POOL WATER SYS P&ID	NOT USED
20. LOW CONDUCTIVITY WASTE SYSTEM P&ID	K17-1010

SUPPORTING DOCUMENTS

1. PIPING AND INSTRUMENT SYMBOLS	A10-3030
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FIG. 5.4-10

SI  
APERTURE  
CARD

SIGNATURES		DATE	TIME	REVISION
W.D. TORRES		8/10/80		
F. WEHLE		9/1/80		
CA. BAYLES		11/1/80		
WE TAFT		4/11/80		

  

EQUIPMENT CLASS CODE		SAFETY RELATED		FREE CLASS '18	
THIS ITEM IS OR CONTAINS A SAFETY RELATED ITEM	YES	NO	CLASS	CLASS	CLASS

  

GENERAL ELECTRIC		RESIDUAL HEAT REMOVAL SYS	
NEBO DEPT	LOC SAN JOSE	DOC TYPE: P&ID	
UNLESS OTHERWISE SPECIFIED			
TOLERANCES OF	FRACTIONS ±	DECIMALS ±	ANGLES ±
3 PLACE	1/16	0.001	1/16
3 PLACE	1/32	0.0005	1/32

  

THE DRAWING		DATE	
NO. 103E1797	REV. 1	DATE	BY

MPL NO. E11-1010



PDR RIDS

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