

- NOTES:
- DESIGN PRESSURE: 150 PSIG. DESIGN TEMPERATURE: 230° F (PIPING 200° F (EQUIPMENT)). TEST PRESSURE 225 PSIG. UNLESS OTHERWISE NOTED.
  - ALL VALVES SHALL BE SAME SIZE AS PIPING UNLESS OTHERWISE NOTED.
  - ALL PRESSURE AND TEST CONNECTIONS ARE 1/2" UNLESS OTHERWISE NOTED.
  - ALL VALVE NUMBERS HAVE UNIT NO. 1 PREFIX UNLESS OTHERWISE NOTED. EXCEPT AS OTHERWISE NOTED.
  - THE SPARE PUMP AND HEAT EXCHANGER CAN BE USED WITH ANY UNIT.
  - DRYWELL COOLING COILS AS AND BS SHOWN AS SPARES-ANY COIL CAN BE DESIGNATED SPARE.
  - △ DESIGNATES VALVE MAY BE OPEN IF SYSTEM IS IN OPERATION (OPERATING INSTRUCTION 01-70, ATTACHMENT 1).
  - DELETED.
  - VENT, DRAIN, AND TEST CONNECTIONS 1-1/2" AND BELOW CAN BE PROVIDED WITH PIPE CAPS OR HOSE CONNECTION FITTINGS WHERE REQUIRED BY PLANT PERSONNEL. THIS CONFIGURATION IS SUPPORTED BY ENGINEERING CALCULATION CD-0989-923399.
  - FOR DESIGN CONDITIONS FOR DRYWELL OUTAGE CHILLER PIPING, SEE FLOW DIAGRAM 0-47E822-2, NOTE 1.
  - FLANGES DENOTE USE OF 10" SPECTACLE BLINDS (NORMALLY OPEN FOR RBCW OPERATIONS AND MAY BE CLOSED FOR OUTAGE DRYWELL COOLING OPERATIONS).
  - FLANGES DENOTE USE OF 6" SPECTACLE BLINDS (NORMALLY OPEN FOR OUTAGE DRYWELL COOLING OPERATIONS AND MAY BE CLOSED FOR RBCW OPERATIONS).
  - LOCATION FOR RECOMMENDED, FUTURE TIE-IN TO UNIT 2 RBCW.
  - UNIDS ON DRAWING ARE FOR REFERENCE ONLY AND ARE ABBREVIATED TO MEET SPACE CONSTRAINTS. REFER TO MEL FOR COMPLETE UNIDS. (CONTRACT NO. 9748).
  - THESE LETTER DESIGNATIONS CORRESPOND TO THE INTERFACE POINTS SHOWN ON UNDERGROUND DRAWINGS 636K2227, 636K2325 AND 636K2424 (CONTRACT NO. 9748).
  - THE TEMPORARY INSTALLATION OF THE BACK-UP CHILLER, AND REQUIRED AUXILIARY EQUIPMENT TO OPERATE IT, SHALL BE DONE UNDER A PROCESS TO BE IN PLACE FOR LESS THAN 90 DAYS. THIS TEMPORARY CHILLED WATER LOOP REWORK PIPING SHALL BE 3" INCH REWORK PIPE. THE 3" INCH PIPE TAPS, THE TEMPORARY CHILLER AND PUMP WILL BE CONNECTED TO THE EXISTING REWORK PIPING SYSTEM USING HOSES WITH A MINIMUM PRESSURE RATING OF 100 PSI. HOSES MUST BE SECURED TO PREVENT EXCESSIVE MOVEMENT DURING OPERATION. FILLING, VENTING, AND DRAINING OPERATIONS WILL BE PERFORMED UNDER THE SUPERVISION OF RADON AND CHEMISTRY PERSONNEL. POTENTIALLY CONTAMINATED WATER IS NOT RELEASED TO THE ENVIRONMENT, OR USED WITH THE TEMPORARY CHILLER. FILLING, VENTING, AND DRAINING OPERATIONS MAY ALSO REQUIRE A SECONDARY BREACH PERMIT.
  - THESE LETTER DESIGNATIONS CORRESPOND TO THE INTERFACE POINTS SHOWN ON HAYWARD TILVER, INC. DRAWING 01-500-868 (CONTRACT NO. 2855991).

- REFERENCE DRAWINGS:
- MEL 1-47E810-1: VALVE MARKER TAG FABULATION
  - MEL 1-47E810-2: CONTROL DIAGRAM-REACTOR BUILDING CCW SYSTEM
  - MEL 1-47E810-3: INSTRUMENT FABULATION FOR CCW SYSTEM
  - MEL 1-47E810-4: FLOW DIAGRAM-GENERAL PLANT SYSTEMS
  - 474464 SERIES: PHYSICAL PIPING DRAWINGS
  - 1-47E810-1: CONTROL DIAGRAM-SAMPLING AND WATER QUALITY SYSTEM
  - 1-47E810-2: FLOW DIAGRAM-RAW COOLING WATER
  - 1-47E810-3: FLOW DIAGRAM-DRAINAGE
  - 1-47E810-4: FLOW DIAGRAM-USE FOR COOLING
  - 1-47E810-5: FLOW DIAGRAM-DEMINERALIZED WATER
  - 1-47E810-6: CONTROL DIAGRAM-CONTROL AIR SYSTEM
  - 0-47E800-2: MECHANICAL SYMBOLS AND FLOW DIAGRAM INDEX
  - 2-47E800-3: FLOW DIAGRAM-SAMPLING AND WATER QUALITY SYSTEM
  - 3-47E800-3: FLOW DIAGRAM-SAMPLING AND WATER QUALITY SYSTEM

LEGEND

A REFERRING LINE REPRESENTS UNIT 1/UNIT 2 AND UNIT 2/UNIT 1 BOUNDARY ISOLATION POINT. VALVES CLOSED FOR ISOLATION PURPOSES.

PHYSICAL BARRIER OR BOUNDARY BETWEEN UNITS

SYSTEM PRESS - TEMP DATA

LINE NO.	DESIGN PRESSURE (PSIG)	DESIGN TEMP (°F)
1	150	230
2	150	125
3	100	150

AMENDMENT 29

POWERHOUSE UNIT 1 & 0

BROWNS FERRY NUCLEAR PLANT

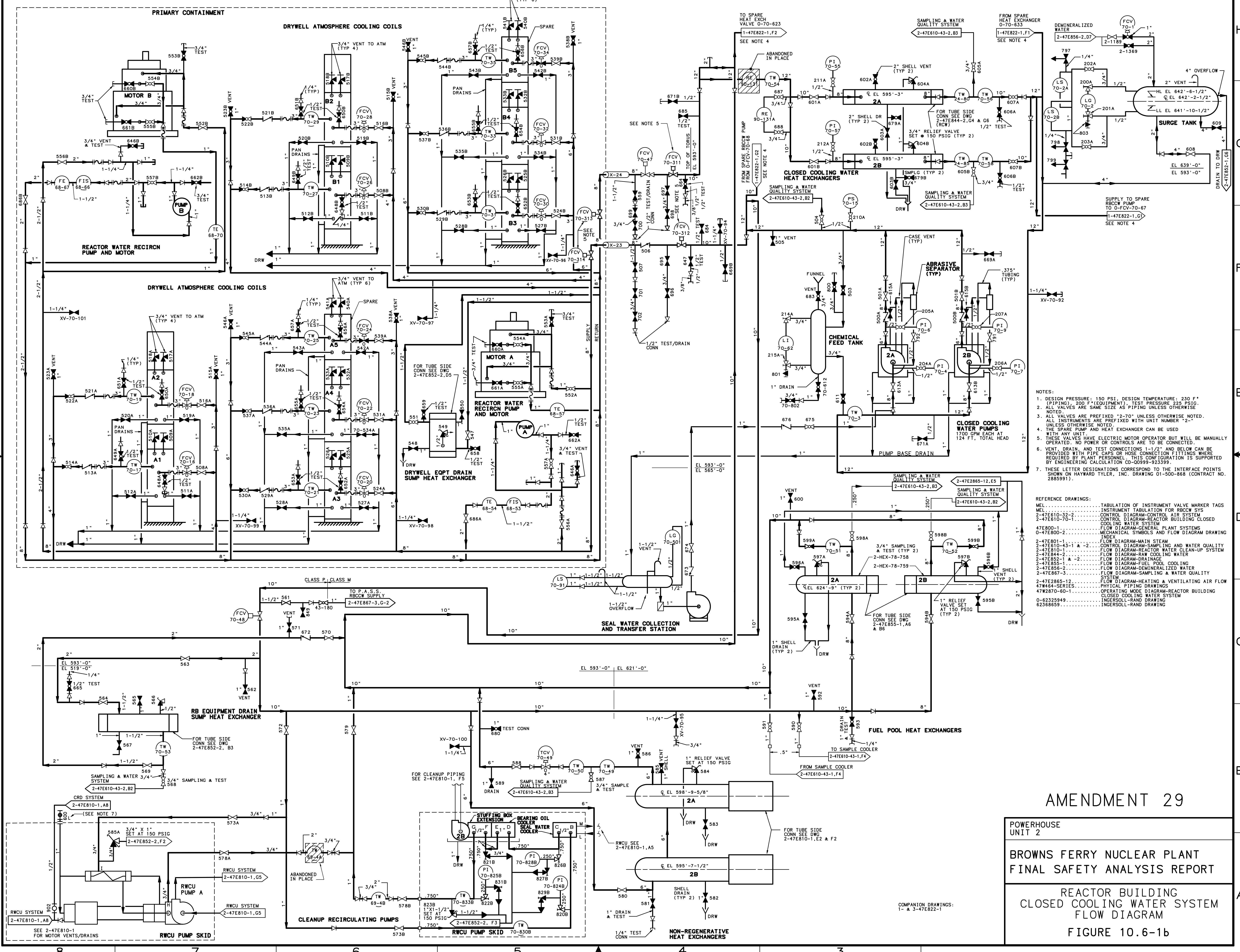
FINAL SAFETY ANALYSIS REPORT

REACTOR BUILDING

CLOSED COOLING WATER SYSTEM

FLOW DIAGRAM

FIGURE 10.6-1a



- NOTES:
- DESIGN PRESSURE, 150 PSIG. DESIGN TEMPERATURE, 230 F (PIPING); 200 F (EQUIPMENT). TEST PRESSURE 225 PSIG.
  - ALL VALVES ARE SAME SIZE AS PIPING UNLESS OTHERWISE NOTED.
  - ALL VALVES ARE PREFIXED "2-70" UNLESS OTHERWISE NOTED.
  - ALL INSTRUMENTS ARE PREFIXED WITH UNIT NUMBER "2-". UNLESS OTHERWISE NOTED.
  - THE SPARE PUMP AND HEAT EXCHANGER CAN BE USED OPERATED. NO POWER OR CONTROLS ARE TO BE CONNECTED.
  - THESE VALVES HAVE ELECTRIC MOTOR OPERATOR BUT WILL BE MANUALLY OPERATED. NO POWER OR CONTROLS ARE TO BE CONNECTED.
  - VENT, DRAIN, AND TEST CONNECTIONS 1-1/2" AND BELOW CAN BE PROVIDED WITH PIPE CAPS OR HOSE CONNECTION FITTINGS. THESE REQUIRE BY PLANT PERSONNEL. THIS CONFIGURATION IS SUPPORTED BY ENGINEERING CALCULATION 01-500-868 (CONTRACT NO. 286899).
  - THESE LETTER DESIGNATIONS CORRESPOND TO THE INTERFACE POINTS SHOWN ON HAYWARD TYLER, INC. DRAWING 01-500-868 (CONTRACT NO. 286899).

- REFERENCE DRAWINGS:
- MEL.....TUBULATION OF INSTRUMENT VALVE MARKER TAGS
  - MEL.....INSTRUMENT TABULATION FOR RBCCW SYS
  - 2-47E810-32.....CONTROL DIAGRAM-CONTROL AIR SYSTEM
  - 2-47E810-70.....FLOW DIAGRAM-REACTOR BUILDING CLOSED COOLING WATER SYSTEM
  - 47E800-1.....FLOW DIAGRAM-GENERAL PLANT SYSTEM
  - 0-47E800-2.....MECHANICAL SYMBOLS AND FLOW DIAGRAM DRAWING INDEX
  - 2-47E801-1.....FLOW DIAGRAM-MAIN STEAM
  - 2-47E810-43-1 & 2.....CONTROL DIAGRAM-SAMPLING AND WATER QUALITY SYSTEM
  - 2-47E810-1.....FLOW DIAGRAM-REACTOR WATER CLEAN-UP SYSTEM
  - 2-47E842-1.....FLOW DIAGRAM-RAW COOLING WATER
  - 2-47E852-1 & 2.....FLOW DIAGRAM-DRAINAGE
  - 2-47E854-1.....FLOW DIAGRAM-FUEL POOL COOLING
  - 2-47E856-1.....FLOW DIAGRAM-DEMINERALIZED WATER
  - 2-47E857-1.....FLOW DIAGRAM-SAMPLING & WATER QUALITY SYSTEM
  - 2-47E2865-12.....SYSTEM
  - 47E844-SERIES.....PHYSICAL PIPING DRAWINGS
  - 47E870-50-1.....OPERATING MODE DIAGRAM-REACTOR BUILDING
  - 0-5325949.....CLOSED COOLING WATER SYSTEM
  - 6238659.....INGERSOLL-RAND DRAWING

AMENDMENT 29

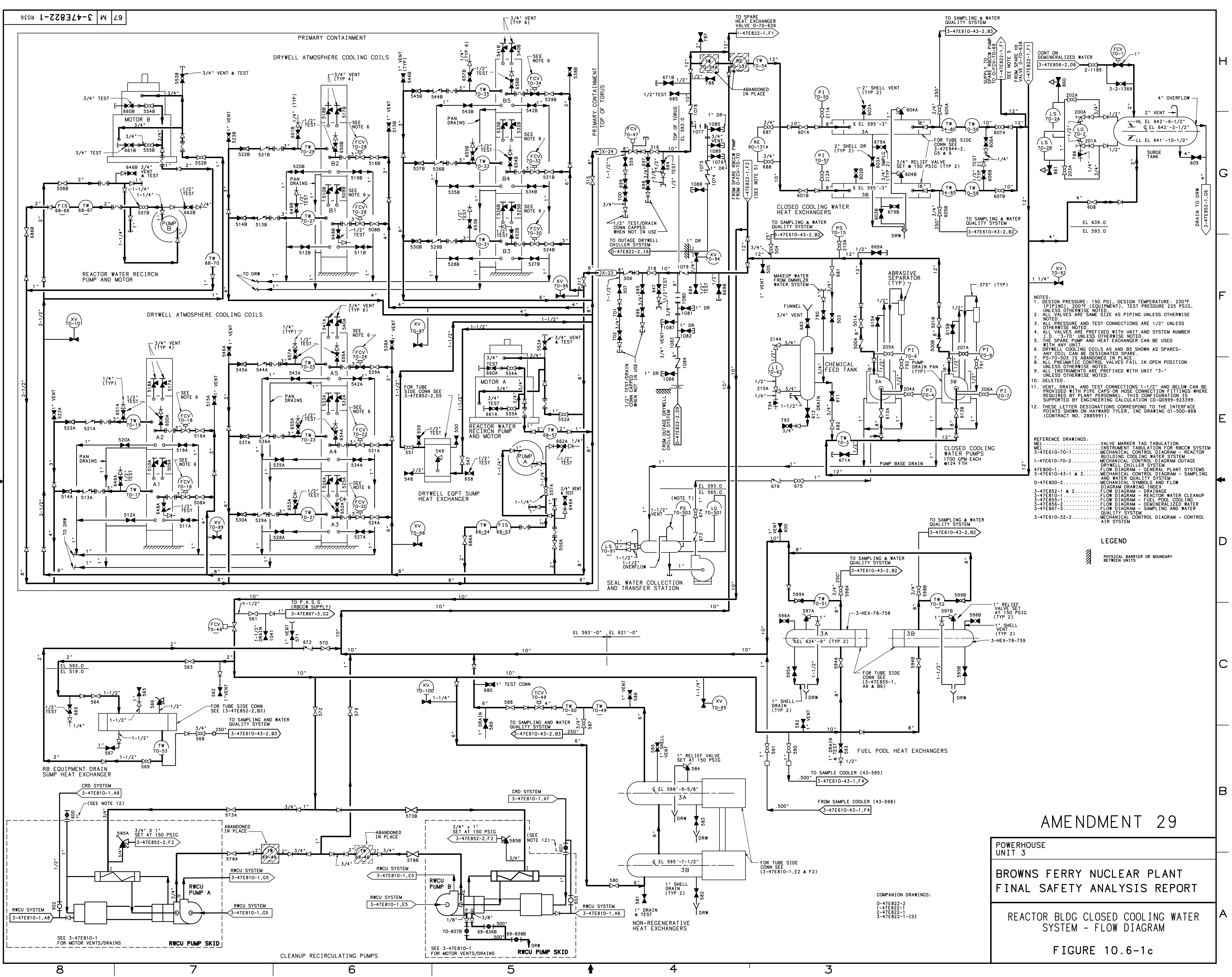
POWERHOUSE  
UNIT 2

BROWNS FERRY NUCLEAR PLANT  
FINAL SAFETY ANALYSIS REPORT

REACTOR BUILDING  
CLOSED COOLING WATER SYSTEM  
FLOW DIAGRAM

FIGURE 10.6-1b





- NOTES:
- DESIGN PRESSURE: 150 PSIG. DESIGN TEMPERATURE: 230°F (EQUIPMENT); TEST PRESSURE 225 PSIG. UNLESS OTHERWISE NOTED.
  - ALL VALVES ARE SAME SIZE AS PIPING UNLESS OTHERWISE NOTED.
  - ALL PRESSURE AND TEST CONNECTIONS ARE 1/2" UNLESS OTHERWISE NOTED.
  - ALL VALVES ARE PREFIXED WITH UNIT AND SYSTEM NUMBER 1-B-3-70 UNLESS OTHERWISE NOTED.
  - THE SPARE PUMP AND HEAT EXCHANGER CAN BE USED WITH ANY UNIT.
  - DRYWELL COOLING COILS A5 AND B5 SHOWN AS SPARES - ANY COIL CAN BE DESIGNATED SPACE.
  - PS-70-503 IS ABANDONED IN PLACE.
  - ENGINEERING CALCULATION CD-00989-92399 SUPPORTS BY ENGINEERING CALCULATION CD-00989-92399 UNLESS OTHERWISE NOTED.
  - ALL INSTRUMENTS ARE PREFIXED WITH UNIT "3-" UNLESS OTHERWISE NOTED.
  - DELETED.
  - VENT, DRAIN, AND TEST CONNECTIONS 1-1/2" AND BELOW CAN BE PROVIDED WITH PIPE CAPS OR HOSE CONNECTION FITTINGS WHERE REQUIRED BY PLANT PERSONNEL. THIS CONFIGURATION IS SUPPORTED BY ENGINEERING CALCULATION CD-00989-92399.
  - THESE LETTER DESIGNATIONS CORRESPOND TO THE INTERFACE POINTS SHOWN ON HAYWARD TYLER, INC. DRAWING 01-500-868 (CONTRACT NO. 2885991).

- REFERENCE DRAWINGS:
- VALVE MARKER TAG TABULATION
  - INSTRUMENT TABULATION FOR RBCWC SYSTEM
  - MECHANICAL CONTROL DIAGRAM - REACTOR BUILDING COOLING WATER SYSTEM
  - MECHANICAL CONTROL DIAGRAM - OUTAGE DRYWELL CHILLER SYSTEM
  - MECHANICAL CONTROL DIAGRAM - SAMPLING AND WATER QUALITY SYSTEM
  - MECHANICAL SYMBOLS AND FLOW DIAGRAM DRAWING INDEX
  - 3-47E822-1 & 2..... FLOW DIAGRAM - DRAINAGE
  - 3-47E855-1..... FLOW DIAGRAM - REACTOR WATER CLEANUP
  - 3-47E855-2..... FLOW DIAGRAM - FUEL POOL COOLING
  - 3-47E867-3..... FLOW DIAGRAM - DESALINATED WATER QUALITY SYSTEM
  - 3-47E867-3..... FLOW DIAGRAM - SAMPLING AND WATER QUALITY SYSTEM
  - 3-47E810-32-2..... MECHANICAL CONTROL DIAGRAM - CONTROL AIR SYSTEM

LEGEND



AMENDMENT 29

POWERHOUSE  
UNIT 3  
BROWNS FERRY NUCLEAR PLANT  
FINAL SAFETY ANALYSIS REPORT

REACTOR BLDG CLOSED COOLING WATER  
SYSTEM - FLOW DIAGRAM

FIGURE 10.6-1c

COMPANION DRAWINGS:  
0-47E822-2  
1-47E822-1  
3-47E822-1-1S1

67 M 3-47E822-1 R036

BFN-22

Figures 10.6-2a through 10.6-2d  
(Deleted by Amendment 22)

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