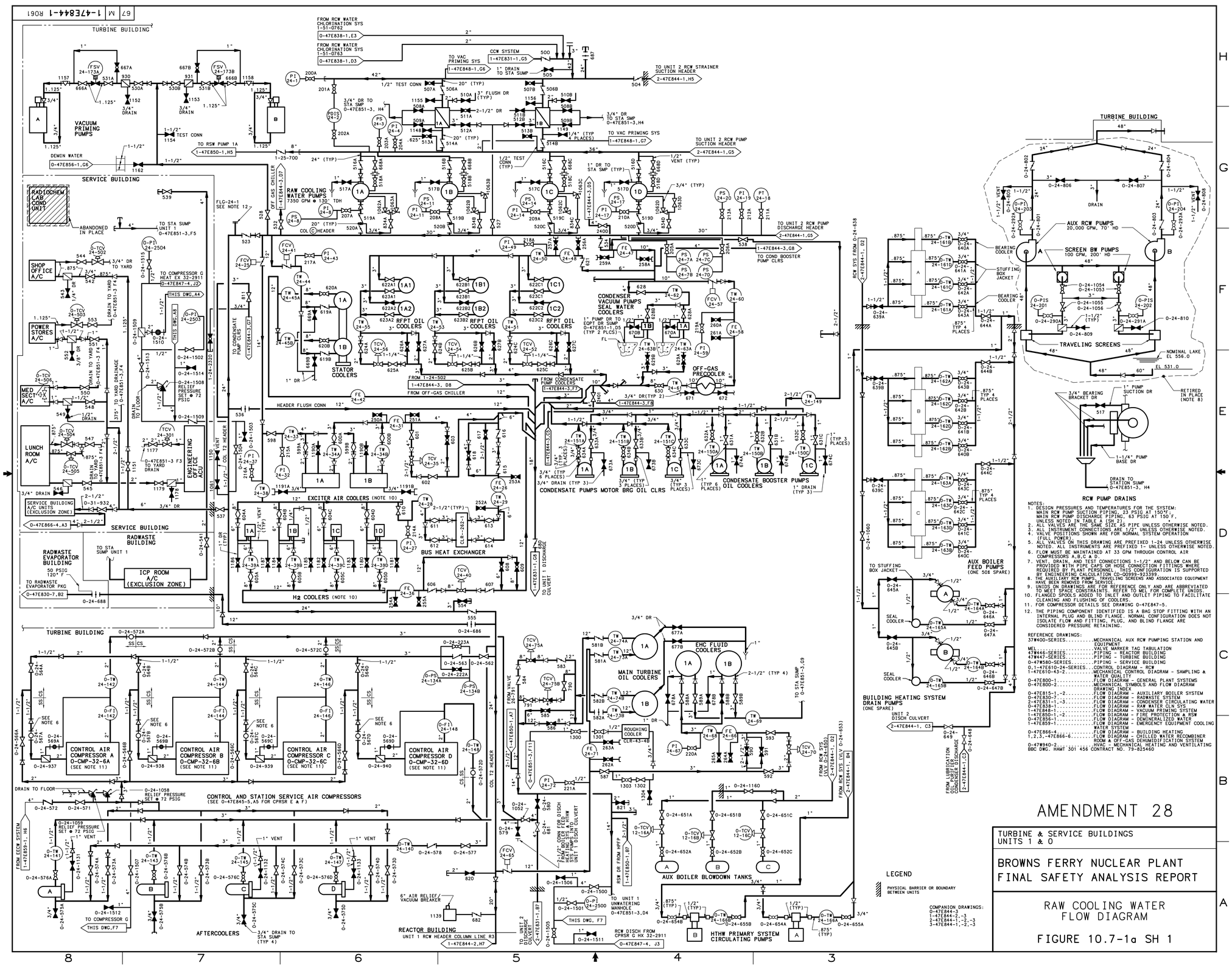
67 M 1-47E844-1 R061



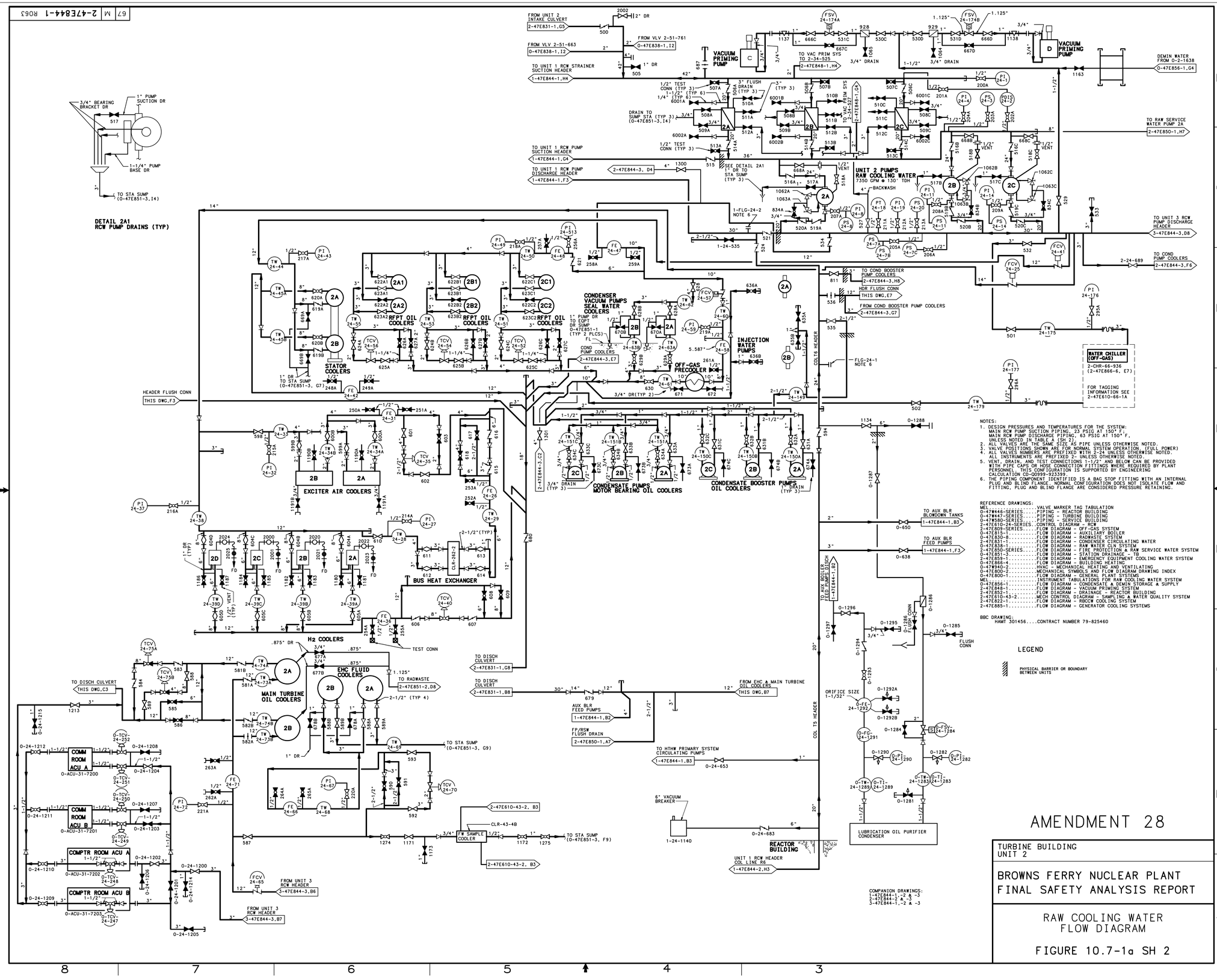
NOTES:
1. DESIGN PRESSURES AND TEMPERATURES FOR THE SYSTEM: MAIN RCW PUMP SUCTION PIPING, 23 PSIG AT 150°F; MAIN RCW PUMP DISCHARGE PIPING, 63 PSIG AT 150°F, UNLESS NOTED IN TABLE A (SH 2).
2. ALL VALVES ARE THE SAME SIZE AS PIPE UNLESS OTHERWISE NOTED.
3. ALL INSTRUMENT CONNECTIONS ARE 1/2" UNLESS OTHERWISE NOTED.
4. VALVE POSITIONS SHOWN ARE FOR NORMAL SYSTEM OPERATION (FULL POWER).
5. ALL VALVES ON THIS DRAWING ARE PREFIXED 1-24 UNLESS OTHERWISE NOTED. ALL INSTRUMENTS ARE PREFIXED 1- UNLESS OTHERWISE NOTED.
6. FLOW MUST BE MAINTAINED AT 33 GPM THROUGH CONTROL AIR COMPRESSORS A,B,C & D.
7. 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-00893-923399.
8. THE AUXILIARY RCW PUMP TRAVELING SCREENS AND ASSOCIATED EQUIPMENT HAVE BEEN REMOVED AND ARE NOT SHOWN.
9. UNITS ON DRAWING ARE FOR REFERENCE ONLY AND ARE ABBREVIATED TO MEET SPACE CONSTRAINTS. REFER TO MEL FOR COMPLETE UNITS.
10. FLANGED SPOOLS ADDED TO INLET AND OUTLET PIPING TO FACILITATE CLEANING AND FLUSHING OF COOLERS.
11. FOR COMPRESSOR DETAILS SEE DRAWING O-47E847-5.
12. THE PIPING COMPONENT IDENTIFIED IS A BAG STOP FITTING WITH AN INTERNAL PLUG AND BLIND FLANGE. NORMAL CONFIGURATION DOES NOT ISOLATE FLOW AND FITTING, PLUG, AND BLIND FLANGE ARE CONSIDERED PRESSURE RETAINING.

REFERENCE DRAWINGS:
37W400-SERIES.....MECHANICAL AUX RCW PUMPING STATION AND EQUIPMENT
MEL.....VALVE MARKER TAG TABULATION
47W446-SERIES.....PIPING - REACTOR BUILDING
47W447-SERIES.....PIPING - TURBINE BUILDING
47W450-SERIES.....PIPING - SERVICE BUILDING
0.1-47E610-24-SERIES...CONTROL DIAGRAM - RCW
1-47E610-43-2.....MECHANICAL CONTROL DIAGRAM - SAMPLING & WATER QUALITY
0-47E800-1.....P&ID DIAGRAM - GENERAL PLANT SYSTEMS
0-47E800-2.....MECHANICAL SYMBOLS AND P&ID DIAGRAM DRAWING INDEX
0-47E815-1,-2.....FLOW DIAGRAM - AUXILIARY BOILER SYSTEM
0-47E830-1.....FLOW DIAGRAM - RADWASTE SYSTEM
2-47E831-1,-3.....FLOW DIAGRAM - CONDENSER CIRCULATING WATER
1-47E838-1.....FLOW DIAGRAM - RAW WATER CLR SYS
1-47E848-1.....FLOW DIAGRAM - VACUUM PRIMING SYSTEM
1-47E850-1,-2.....FLOW DIAGRAM - FIRE PROTECTION & RSW
1-47E856-1.....FLOW DIAGRAM - DEMINERALIZED WATER
1-47E859-1.....FLOW DIAGRAM - EMERGENCY EQUIPMENT COOLING WATER SYSTEM
0-47E866-4.....FLOW DIAGRAM - BUILDING HEATING
1,2,3,-47E866-6.....FLOW DIAGRAM - CHILLED WATER RECOMBINER ROOM & DFF-GAS DEHUMIDIFICATION SYSTEM
0-47W940-2.....HVAC - MECHANICAL HEATING AND VENTILATING
BBC DWG. HAMT 301 456 CONTRACT NO. 79-825460

LEGEND
PHYSICAL BARRIER OR BOUNDARY BETWEEN UNITS

COMPANION DRAWINGS:
1-47E844-2,-3
2-47E844-1,-2,-3
3-47E844-1,-2,-3

8 7 6 5 4 3
H G F E D C B A



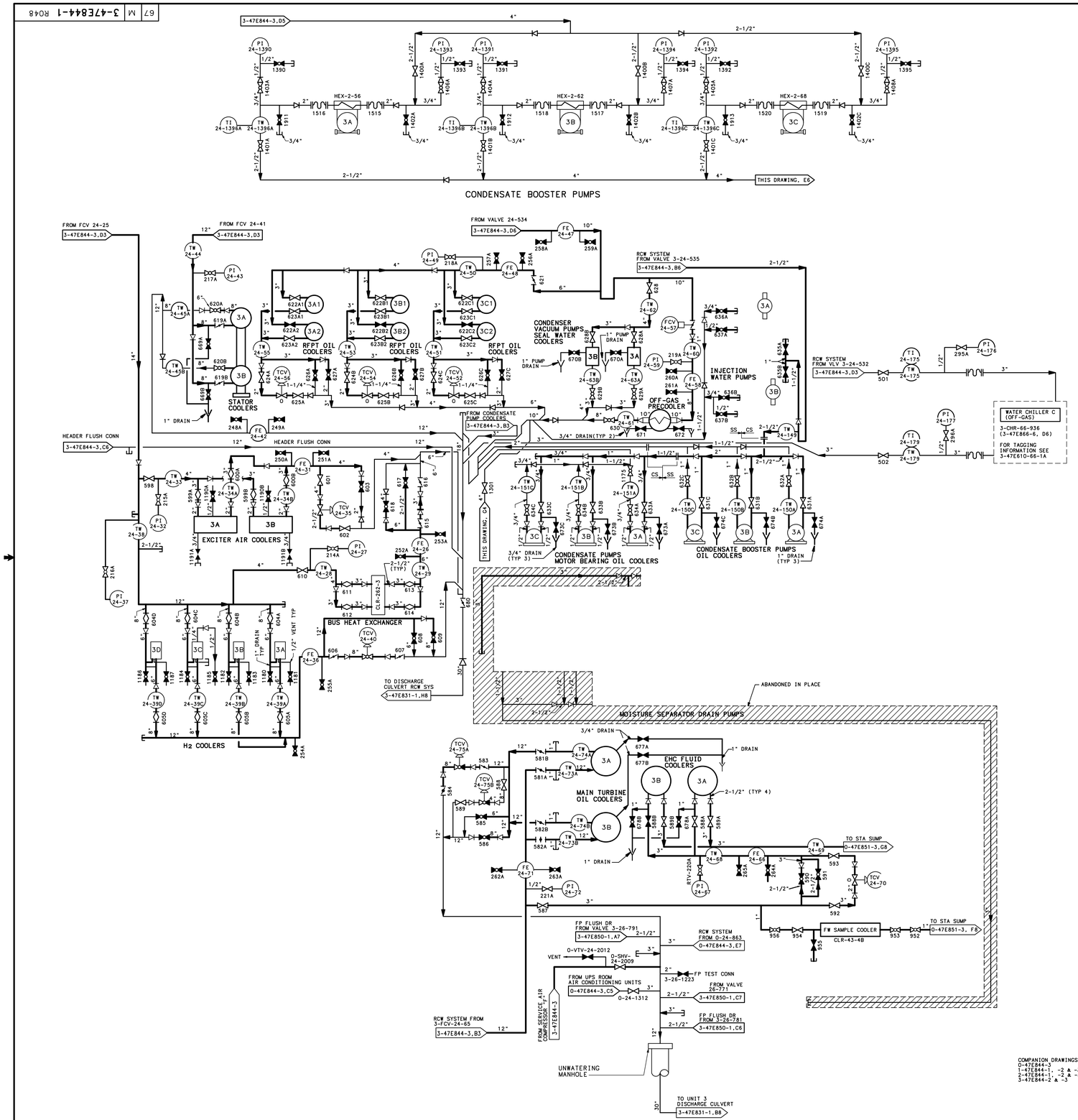
AMENDMENT 28

TURBINE BUILDING
UNIT 2

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER
FLOW DIAGRAM

FIGURE 10.7-1a SH 2



NOTES:

1. DESIGN PRESSURES AND TEMPERATURES FOR THE SYSTEM:
   MAIN RCW PUMP SUCTION PIPING - 93 PSIG AT 150°F.
   MAIN RCW PUMP DISCHARGE PIPING - 93 PSIG AT 150°F UNLESS NOTED IN TABLE A (3-47E844-2).
2. ALL VALVES ARE PREFIXED "3-24," UNLESS OTHERWISE NOTED.
   ALL INSTRUMENTS ARE PREFIXED "3-" UNLESS OTHERWISE NOTED.
3. ALL VALVES ARE THE SAME SIZE AS PIPE UNLESS OTHERWISE NOTED.
4. ALL INSTRUMENT CONNECTIONS ARE 1/2" UNLESS OTHERWISE NOTED.
5. VALVE POSITIONS SHOWN ARE FOR NORMAL SYSTEM OPERATION (FULL POWER).
6. PNEUMATIC CONTROL VALVES FAIL CLOSED UNLESS OTHERWISE NOTED.
7. UNIDS ON DRAWINGS ARE FOR REFERENCE ONLY AND ARE ABBREVIATED TO MEET SPACE CONSTRAINTS, REFER TO MEL FOR COMPLETE UNIDS.
8. 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-QQ999-923399.

REFERENCE DRAWINGS:

MEL	MECHANICAL VALVE MARKER TAG TABULATION
47W446-SERIES	PIPING - REACTOR BUILDING
47W447-SERIES	PIPING - TURBINE BUILDING
47W580-SERIES	PIPING - SERVICE BUILDING
3-47E610-24-1,-2	MECHANICAL CONTROL DIAGRAM - RCW SYSTEM
0-47E610-24-3,-4	MECHANICAL CONTROL DIAGRAM - RCW SYSTEM
0-47E809-2,-3,-4	FLOW DIAGRAM - OFF-GAS SYSTEM
0-47E830-1 THRU -9	FLOW DIAGRAM - RADWASTE SYSTEM
1-47E831-1,-3	FLOW DIAGRAM - CONDENSER CIRCULATING WATER
0-47E838-1	FLOW DIAGRAM - RAW WATER CLN SYSTEM
1-47E850-1,-2	FLOW DIAGRAM - FIRE PROTECTION & RSW
0-47E851-3	FLOW DIAGRAM - STATION DRAINAGE - TB
1-47E859-1	FLOW DIAGRAM - EECW SYSTEM
3-47E859-1,-2	FLOW DIAGRAM - EECW SYSTEM
0-47E866-6	FLOW DIAGRAM - HEAT & AIR COND H/C WATER
3-47E610-43-2	MECHANICAL CONTROL DIAGRAM-SAMPLING & WATER QUALITY SYSTEM
0-47W940-2	HVAC - MECHANICAL HEATING AND VENTILATING
0-47E800-1	FLOW DIAGRAM - GENERAL PLANT SYSTEMS
0-47E800-2	MECHANICAL SYMBOLS AND FLOW DIAGRAM DRAWING INDEX
0-47E856-1	FLOW DIAGRAM - DEMINERALIZED WATER
MEL	INSTRUMENT TABULATION
3-47E866-6,-7	FLOW DIAGRAM CHILLED WATER RECOMBINER ROOM & OFF-GAS DEHUMIDIFICATION SYSTEM
3-47E610-90-3	CONTROL DIAGRAM - RAD. MONITORING
0-47E870-1	WARM WATER WASTE HEAT DEMONSTRATION
3-47E848-1	FLOW DIAGRAM - VACUUM PRIMING SYSTEM
3-47E852-1	FLOW DIAGRAM - FLOOR & DIRTY RADWASTE DRAINAGE (DRW)
0-47E845-4	FLOW DIAGRAM - COMPRESSED AIR STATION SERVICE
3-47E885-1	FLOW DIAGRAM - GENERATOR COOLING SYSTEMS

BBC DWG HAMT 301 456 CONTRACT NO 79-825460

COMPANION DRAWINGS:
0-47E844-3
1-47E844-1, -2 & -3
2-47E844-1, -2 & -3
3-47E844-2 & -3

AMENDMENT 29

TURBINE & SERVICE BLDG
UNIT 3

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER
FLOW DIAGRAM

FIGURE 10.7-1a SH 3

8 | 7 | 6 | 5 | 4 | 3

H | G | F | E | D | C | B | A

67 | M | 1-47E844-2 R053

COL R3 IN REACTOR BLDG
COL T2 IN TURBINE BLDG
COL R6 IN REACTOR BLDG
COL T5 IN TURBINE BLDG
REACTOR BLDG WALL
RCW SUPPLY 1-47E844-1, A5
LOOP SEAL
VENT 1189
AFTER-COOLER
DRYWELL-TORUS ΔP COMPRESSOR
RBCCW HEAT EXCHANGER 1A
RBCCW HEAT EXCHANGER 1C (SPARE)
RBCCW HEAT EXCHANGER 1B
SAMPLE 1-47E610-43-2,G1
EECW SYSTEM FROM 67-581 1-47E859-1,D5
EECW SYSTEM FROM 67-579 1-47E859-1,D5
EECW SYSTEM FROM 67-580 1-47E859-1,D5
1" DRAIN TO FLOOR DRAIN (TYP 6 PLACES)
COL R5 HEADER
COL R6 HEADER
COL P HEADER
RCW CROSS-TIE HEADER TO UNIT 2 2-47E844-2,F4
ABANDONED IN PLACE
WATER CHILLER 1A
WATER CHILLER 1B (STANDBY)
CONTROL BAY AIR CONDITIONING EQUIPMENT
RAW COOLING WATER BOOSTER PUMPS 3400 GPM @ 70.57 TDH
PUMP BASE DRAIN
RX BLDG FLOOR DRAIN SUMP 1-47E852-1, E4
ABANDONED IN PLACE
RCW BOOSTER PUMP DISCHARGE HEADER TO UNIT 2 2-47E844-4,D4
TEST CONN
HEX-68-1AA
HEX-68-1AB
HEX-68-1BA
HEX-68-1BB
VFD 1A HEAT EXCHANGERS
VFD 1B HEAT EXCHANGERS
VFD SYS 1A (1-47E817-3-1, B10)
VFD SYS 1A (1-47E817-3-1, A10)
VFD SYS 1B (1-47E817-3-3, B10)
VFD SYS 1B (1-47E817-3-3, A10)
4" AIR RELEASE & VENT VALVE
CLR-85-62B OIL COOLER
CLR-85-62A OIL COOLER
PMP-85-2
PMP-85-1
CONTROL ROD DRIVE PUMPS
COL R5 DRAINAGE HEADER
FIRE PROTECTION FLUSH LINE 1-47E850-2,C5
TO HCV-90-132D 1-47E610-90-3, F8
FROM HCV-90-132B 1-47E610-90-3, E7
RCW DISCHARGE UNIT 1 TO UNIT 1 CCW DISCHARGE CULVERT 1-47E831-3,D2
RE 90-132
ABANDONED IN PLACE
MOTOR 1A COOLERS
GEN 1A COOLER
GEN 1B COOLER
MOTOR 1B COOLERS
RECIRCN PUMP DRIVE SYSTEM COOLERS FOR REACTOR WATER

TABLE A		
1 ETC. DENOTES DESIGN PRESSURE & TEMP AS GIVEN BELOW		
LINE MARK NO.	DESIGN PRESSURE (PSIG)	DESIGN TEMP (°F)
1	185	150
2	150	150

NOTES:
1. FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE 1-47E844-1.
2. ALL VALVES ARE PREFIXED 1-24 UNLESS OTHERWISE NOTED.
3. DELETED
4. DELETED.
5. DELETED.
6. UNIDS ON DRAWING ARE FOR REFERENCE ONLY AND ARE ABBREVIATED TO MEET SPACE CONSTRAINTS, REFER TO MEL FOR COMPLETE UNIDS.

COMPANION DRAWINGS:
0-47E844-3
1-47E844-1, -3
2-47E844-1, -2 & -3
3-47E844-1, -2 & -3

LEGEND

PHYSICAL BARRIER OR BOUNDARY BETWEEN UNITS

AMENDMENT 28

POWERHOUSE
UNIT 1

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER
FLOW DIAGRAM

FIGURE 10.7-1b SH 1

8 | 7 | 6 | 5 | 4 | 3

H | G | F | E | D | C | B | A

67 | M | 2-47E844-2 R040

REACTOR BLDG WALL

TO RCW DISCH
THIS DWG, D4

AFTER-COOLER

DRYWELL-TORUS ΔP COMPRESSOR

RCW SUPPLY
THIS DWG, F3

1/2" DRAIN

3/4" DRAIN

FROM EECW (VALVE 67-581)
2-47E859-1, H4

RBCCW HX 2A

RBCCW HX 2B

FOR SHELL SIDE SEE 2-47E822-1,G3

FROM EECW VALVE 67-580
2-47E859-1, H4

SAMPLE
2-47E610-43-2,G1

SAMPLE
2-47E610-43-2,G2

TO RBCCW HX 2A
THIS DWG, F6

TO RBCCW HX 2B
THIS DWG, F5

TO EECW (VALVE 67-660)
2-47E859-1, F3

TO EECW (VALVE 67-874)
2-47E859-1,F6

TO EECW (VALVE 67-875)
2-47E859-1,F6

RCW SUPPLY
2-47E844-2, H5

LOOP SEAL

COL (H1) HEADER

CLR-85-62A OIL COOLER

PMP-85-1 2A

CONTROL ROD DRIVE PUMP 2A UNIT 2

TO ΔP COMPRESSOR AFTERCOOLER
THIS DWG, C7

RCW CROSS-TIE HEADER TO UNIT 1
1-47E844-2,F3

RCW CROSS-TIE HEADER TO UNIT 3
3-47E844-2, F3

RAW COOLING WATER BOOSTER PUMP
2400 GPM @ 70 FT TDH
(UNIT 2)

TO UNIT 1 RCW BOOSTER PUMP DISCHARGE HEADER
1-47E844-2,D4

TO UNIT 3 RCW BOOSTER PUMP DISCHARGE HEADER
3-47E844-2, D3

ABANDONED IN PLACE

TO DRAIN
2-47E852-1,E4

TO EECW (VALVE 67-639)
2-47E859-1,F8

FROM DRYWELL-TORUS ΔP COMPRESSOR
THIS DWG, H8

COL (F13) HEADER-16"

VFD 2A COOLANT CABINET (2-47E817-3-1,B10)

VFD 2A COOLANT CABINET (2-47E817-3-1,A10)

VFD 2B COOLANT CABINET (2-47E817-3-3,B10)

VFD 2B COOLANT CABINET (2-47E817-3-3,A10)

COOLERS FOR REACTOR WATER RECIRC PUMP DRIVE SYSTEM
UNIT 2

FROM FIRE PROTECTION (FLUSH LINE)
2-47E850-2,D5

TO HCV-90-132D
2-47E610-90-3

FROM HCV-90-132B
2-47E610-90-3

REACTOR BUILDING WALL

RCW DISCHARGE TO UNIT 2 CCW DISCHARGE CULVERT
2-47E831-3,D4

ABANDONED IN PLACE

COMPANION DRAWINGS:
1-47E844-2
3-47E844-2,-3

TABLE A

1 ETC DENOTES DESIGN PRESSURE & TEMP AS GIVEN BELOW		
LINE MARK NO.	DESIGN PRESSURE (PSIG)	DESIGN TEMP (°F)
1	185	150
2	150	150

NOTES:
1. FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE 2-47E844-1.
2. ALL INSTRUMENTS ARE PREFIXED "2-" UNLESS OTHERWISE NOTED. ALL VALVES ARE PREFIXED 2-24 UNLESS OTHERWISE NOTED.
3. 2-FE-24-118 IS NOT INSTALLED.
4. UNIDS ON DRAWING ARE FOR REFERENCE ONLY AND ARE ABBREVIATED TO MEET SPACE CONSTRAINTS, REFER TO MEL FOR COMPLETE UNIDS.
5. VALVES 2-24-7A AND 2-24-7B ARE TO BE SET AS REQUIRED BY THE PACKING INSTALLED IN THE PUMP.

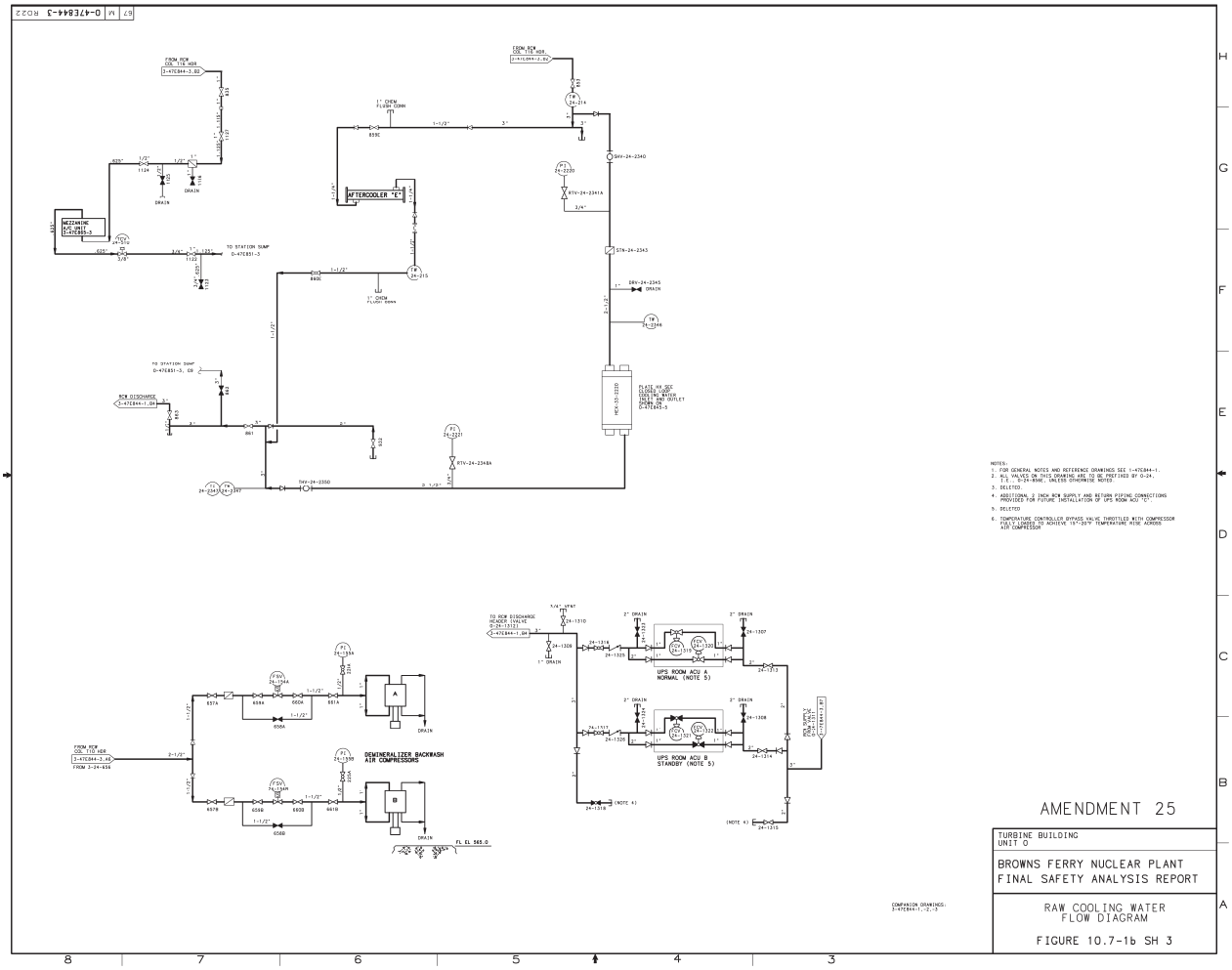
AMENDMENT 28

POWERHOUSE
UNIT 2

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER
FLOW DIAGRAM

FIGURE 10.7-1b SH 2



NOTES:
1. FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE 1-47E84-1.
2. ALL VALVES ON THIS DRAWING ARE TO BE PREFIXED BY O-24, UNLESS OTHERWISE NOTED
3. DELETED
4. ADDITIONAL 2 INCH RCW SUPPLY AND RETURN PIPING CONNECTIONS PROVIDED FOR FUTURE INSTALLATION OF UPS ROOM ACU "C".
5. DELETED
6. TEMPERATURE CONTROLLER BYPASS VALVE THROTTLED WITH COMPRESSOR FULL LOADED TO ACHIEVE 15°-25°F TEMPERATURE RISE ACROSS AIR COMPRESSOR

COMPASCON DRAWINGS:
3-47E844-1,-2,-3

AMENDMENT 25

TURBINE BUILDING
UNIT 0

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER
FLOW DIAGRAM

FIGURE 10.7-1b SH 3

REACTOR BLDG WALL

RCW SUPPLY TURBINE BLDG 3-47E844-3,A2

COL T16 IN TURBINE BLDG
COL R19 IN REACTOR BLDG

LOOP SEAL

SAMPLE 3-47E610-43-2,G1

EECW SYS TO D-67-683 1-47E859-1,G2

RCW CHARGING LINE

TO UNIT 2 RCW CROSSTIE HEADER 2-47E844-2, F1

FROM EECW (VLV 3-67-580) 3-47E859-1,F4

FROM EECW (VLV 3-67-581) 3-47E859-1,F4

RBCCW COOLER 3A

RBCCW COOLER 3B

AFTER-COOLER CLR-64-144

DRYWELL-TORUS ΔP COMPRESSOR CMP-64-142

COOLERS FOR REACTOR WATER RECIRCN PUMP DRIVE SYSTEM

FIRE PROTECTION FLUSH CONN EL 639'-0" U-R19

FIRE PROTECTION FLUSH CONN EL 621'-3" U-R19

FIRE PROTECTION FLUSH CONN EL 593'-0" U-R19

FIRE PROTECTION FLUSH LINE EL 565'-0" U-R18

FROM FIRE PROTECTION FLUSH LINE (VLV 3-26-855) 3-47E850-2,C6

TO HCV-90-132D 3-47E610-90-3,E8

FROM HCV-90-132B 3-47E610-90-3,D8

REACTOR BUILDING WALL

ABANDONED IN PLACE

TO CCW DISCHARGE 3-47E831-3,C6

RAW COOLING WATER BOOSTER PUMP

RCW BOOSTER PUMP DISCHARGE HEADER TO UNIT 2 2-47E844-2,D2

ABANDONED IN PLACE

OIL COOLER CLR-85-62B

OIL COOLER CLR-85-62A

CONTROL ROD DRIVE PUMPS UNIT 3

COL R18 HEADER-18"(UNIT 3)

VFD 3A COOLANT CABINET (3-47E817-3-1, B10)

VFD 3A COOLANT CABINET (3-47E817-3-1, A10)

VFD 3B COOLANT CABINET (3-47E817-3-3, B10)

VFD 3B COOLANT CABINET (3-47E817-3-3, A10)

TABLE A		
[1] ETC. DENOTES DESIGN PRESSURE & TEMP AS GIVEN BELOW		
LINE MARK NO.	DESIGN PRESSURE (PSIG)	DESIGN TEMP (°F)
1	185	150
2	150	150

NOTES:
1. FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE 3-47E844-1
2. ALL VALVES ON THIS DRAWING ARE PREFIXED BY THE UNIT NUMBER 3 AND SYSTEM NUMBER 24 UNLESS OTHERWISE NOTED. ALL INSTRUMENTS ARE PREFIXED WITH UNIT 3 UNLESS OTHERWISE NOTED.
3. UNIDS ON DRAWING ARE FOR REFERENCE ONLY AND ARE ABBREVIATED TO MEET SPACE CONSTRAINTS. REFER TO MEL FOR COMPLETE UNIDS.
4. VALVES 3-24-7A AND 3-24-7B ARE TO BE SET AS REQUIRED BY THE PACKING INSTALLED IN THE PUMP.

COMPANION DRAWINGS:
1-,2-,3-47E844-1,-3
1-,2-47E844-2
D-47E844-3
3-47E844-2-ISI

AMENDMENT 28

POWERHOUSE UNIT 3

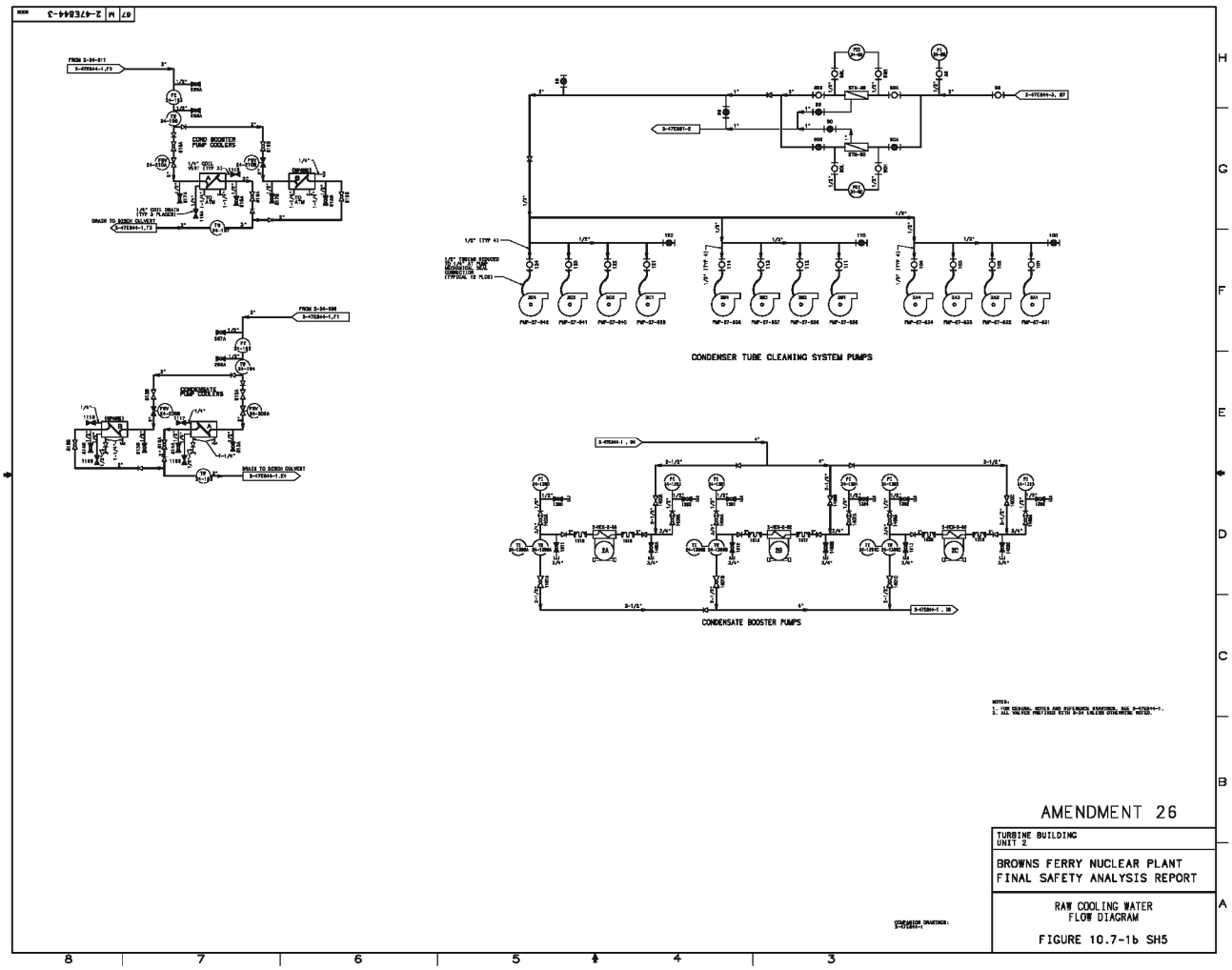
BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER FLOW DIAGRAM

FIGURE 10.7-1b SH 4

8 7 6 5 4 3

H G F E D C B A



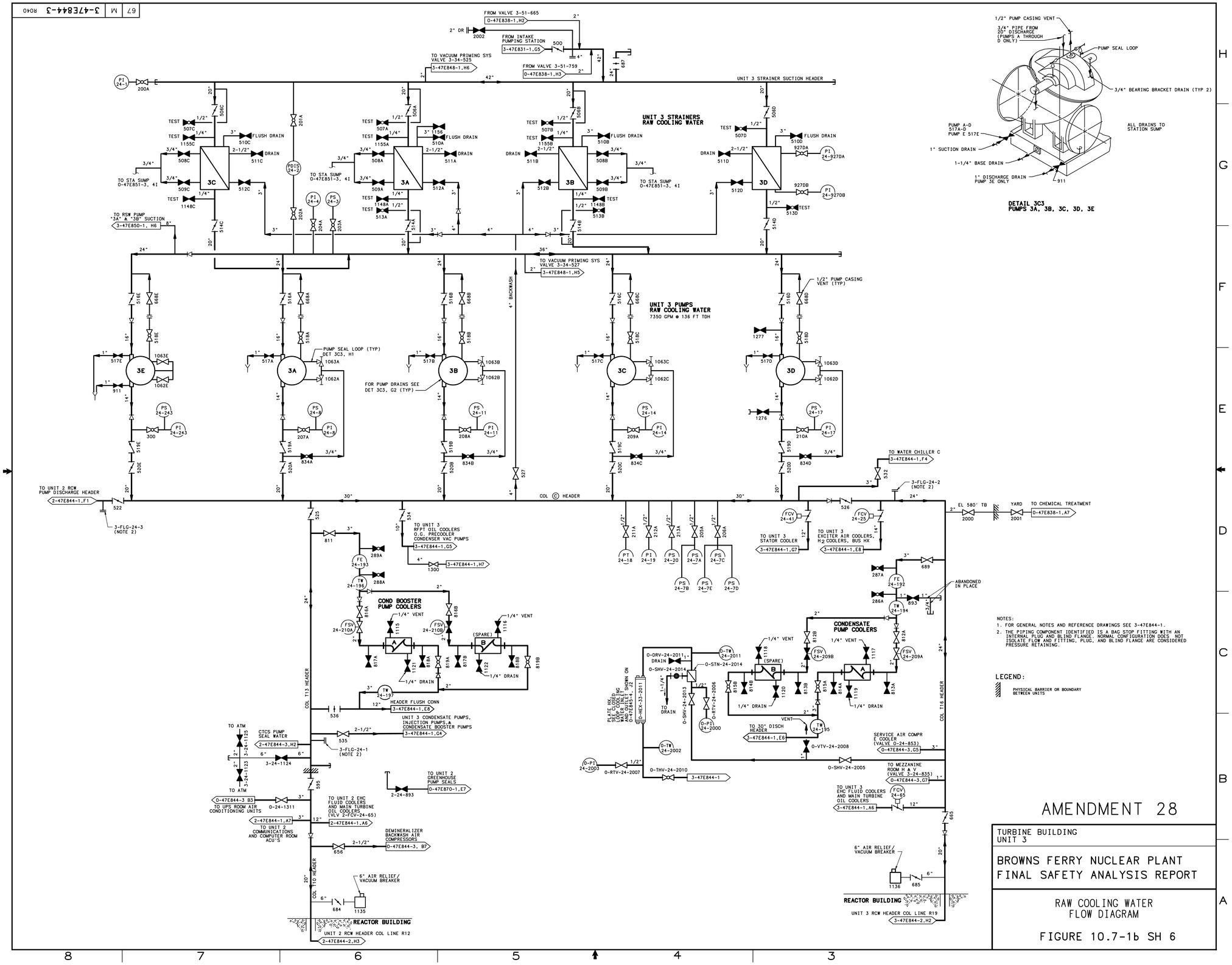
AMENDMENT 26

TURBINE BUILDING
UNIT 2

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER
FLOW DIAGRAM

FIGURE 10.7-1b SH5



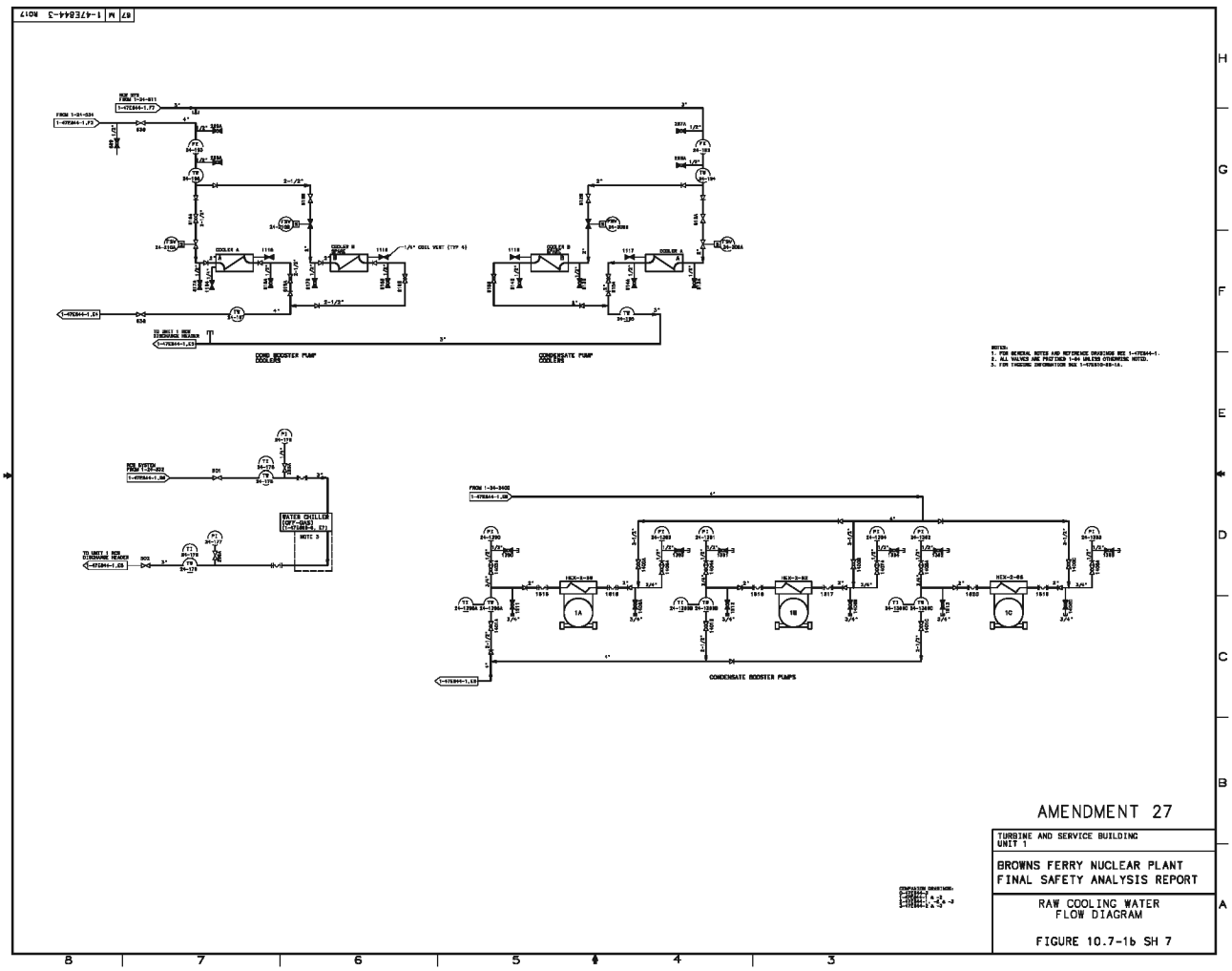
AMENDMENT 28

TURBINE BUILDING
UNIT 3

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER
FLOW DIAGRAM

FIGURE 10.7-1b SH 6


CONDENSATE BOOSTER PUMPS
AMENDMENT 27
TURBINE AND SERVICE BUILDING
UNIT 1
BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT
RAW COOLING WATER
FLOW DIAGRAM
FIGURE 10.7-1b SH 7

67 | M | 2-47E610-24-1C R028

ABANDONED IN PLACE

ABANDONED IN PLACE

ABANDONED IN PLACE

ABANDONED IN PLACE

ABANDONED IN PLACE

TO UNIT 1 CROSSTIE HEADER 1-47E610-24-1,F8

SAMPLING & WATER QUALITY 2-47E610-43-2,G1

THIS DWG,A3

TO CRD PMP HYDRAULIC PUMP 2A 2-47E610-85-1,E6

AFTER COOLER

ENERGIZED WHEN RHR PUMP A & C COOLER BLOWER NOT RUNNING 2-45E614-9

2-47E2847-6, F7

EECW SYS 2-47E610-67-2,H7

RHR PUMP SEALS 2A & 2C 2-47E610-67-2,E7

TO FSV-67-50 & 51 2-47E610-67-2,EA67

TO UNIT 1 BOOSTER PUMP 2-47E610-24-1,B8

DRYWELL TORUS OF AIR COMPRESSORS

2-45E777-21

TO DEMIN BACKWASH AIR COMPRESSORS 0-47E610-24-3,C8

TO A/C UNITS THIS DWG, A7

UNIT 3 RCW HEADER 3-47E610-24-1,H6

UNIT 1 RCW HEADER 1-47E610-24-1,H6

COL R12 (REACTOR) COL T10 (TURBINE)

2-45E779-11

RHR PUMPS 2-47E610-23-1,G6

TO RBCCW HEAT EXCH A 2-47E610-24-2,G5

ENERGIZED WHEN RHR PUMP 2B & 2D COOLER FANS NOT RUNNING 2-45E614-9

2-47E2847-7, D6

TURBINE OIL COOLER 2A

TURBINE OIL COOLER 2B

RHR PUMP SEALS 2-47E610-67-2,F8 2B & 2D

EECW SYS 2-47E610-67-2,H6

TO UNIT 1 BOOSTER PUMP 2-47E610-24-1,B8

2-47E610-24-2,F5

TO RBCCW HEAT EXCHANGER B

EECW SYS 2-47E610-67-2,G3

EECW SYS 2-47E610-67-2,F3

UNIT 3 CROSSTIE HEADER 3-47E610-24-1,F8

2-47E2847-4, E4

TURBINE OIL TANK

TO CCW DISCH 2-47E610-24-2,D1

TO SOUTH FAN ROOM DRAIN (O-47E851-3,G9)

EHC FLUID COOLER 2A

EHC FLUID COOLER 2B

FROM EHC SYSTEM 2-47E610-47-2

TO EHC SYSTEM 2-47E610-47-2

2-47E2847, E4

COMM RM ACU B O-ACU-31-7201

COMM RM ACU A O-ACU-31-7200

COMPTR RM ACU B O-ACU-31-7203

COMPTR RM ACU A O-ACU-31-7202

0-31-7042 0-31-7041 0-31-7039 0-31-7040 0-31-7037 0-31-7038

0-TCV-24-247 0-TCV-24-248 0-TCV-24-249 0-TCV-24-250 0-TCV-24-251 0-TCV-24-252

THIS DWG, E7

GENERATOR 2A GEN COOLER 2A

MOTOR 2A MOTOR 2A COOLER

MG SET 2A FLUID DRIVE 2-47E610-68-2,E7

FLUID DRIVE OIL COOLER 2A

MG SET 2A FLUID DRIVE 2-47E610-68-2,E6

GENERATOR 2B GEN COOLER 2B

MG SET 2B FLUID DRIVE 2-47E610-68-2,A7

FLUID DRIVE OIL COOLER 2B

MOTOR 2B MOTOR COOLER 2B

TO VFD 2A & 2B HEAT EXCHANGERS 2-47E610-24-2,B6

TO CCW DISCH 2-47E610-24-2,F2

FROM VFD 2A & 2B HEAT EXCHANGERS 2-47E610-24-2,B3

THIS DWG,G8

TO CCW DISCH 2-47E610-24-2,D8

GEN

GENERATOR H2 COOLER 2A

GENERATOR H2 COOLER 2B

GENERATOR H2 COOLER 2C

GENERATOR H2 COOLER 2D

2-47E2847-3, C4

2-47E2847-3, D4

2-45E779-11

FROM RCW 2-47E610-24-1D, B4

TO CCW DISCH 2-47E610-24-2,F2

EXCITER AIR COOLER 2A

EXCITER AIR COOLER 2B

BUS HEAT EXCHANGER CLR-262-0002

TO CCW DISCH 2-47E610-24-2,F2

NOTES:
1. FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE O-47E610-24-3,
2. ALL COMPONENTS PREFIX IS 2- UNLESS OTHERWISE NOTED.

REFERENCE DRAWINGS:

2-45E614-9	WIRING DIAGRAM-120V AC/250V DC VALVES & MISC SCHEMATIC DIAGRAM
2-45E779-11,3 & -16	WIRING DIAGRAM-480V SHUTDOWN AUXILIARY POWER SCHEMATIC DIAGRAM
2-45N2645-4	WIRING DIAGRAM-FIRE PROTECTION CONNECTION DIAGRAM
45N2635 SERIES	WIRING DIAGRAM-LOCAL INSTRUMENT PANEL CONNECTION DIAGRAM
O-47E600-2	MECHANICAL SYMBOLS AND FLOW DIAGRAM INDEX
2-47E610-47-4	MECH CONTROL DIA-TURBINE
2-47E610-43-2	MECH CONTROL DIA-SAMPLING & WATER QUALITY SYSTEM
2-47E610-85-1	MECH CONTROL DIA-CRD SYSTEM
2-47E610-23-1	MECH CONTROL DIA-RHR SERVICE WATER SYSTEM
2-47E610-67-2	MECH CONTROL DIA-EECW

SYMBOL:

TCV — THIS BOX REPRESENTS THE VALVE POSITIONER AND IS PART OF THE VALVE

COMPANION DRAWINGS: 2-47E610-24-1D, O-47E610-24-3, 1-47E610-24-1, 2-47E610-24-2

AMENDMENT 28

POWERHOUSE UNIT 2

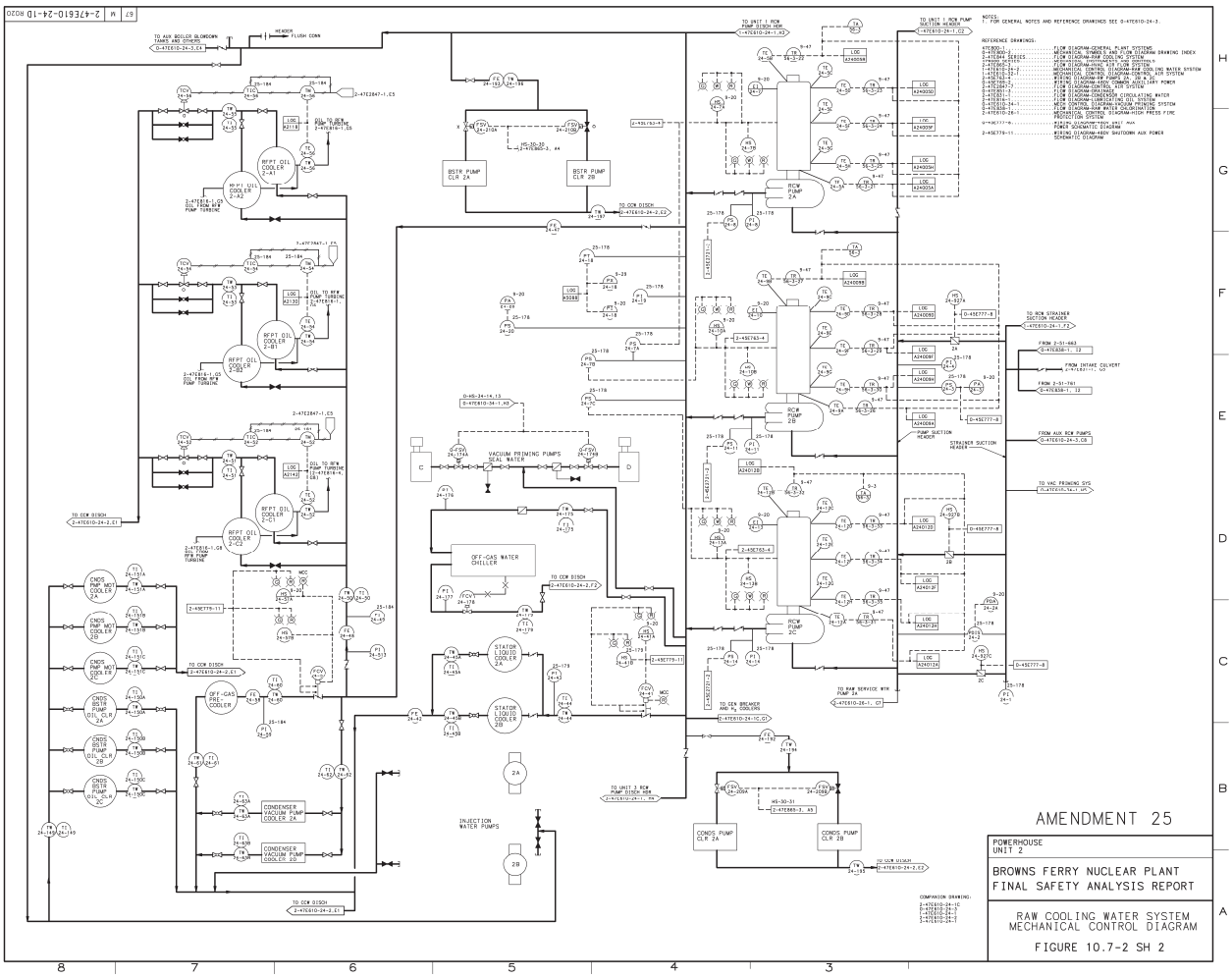
BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

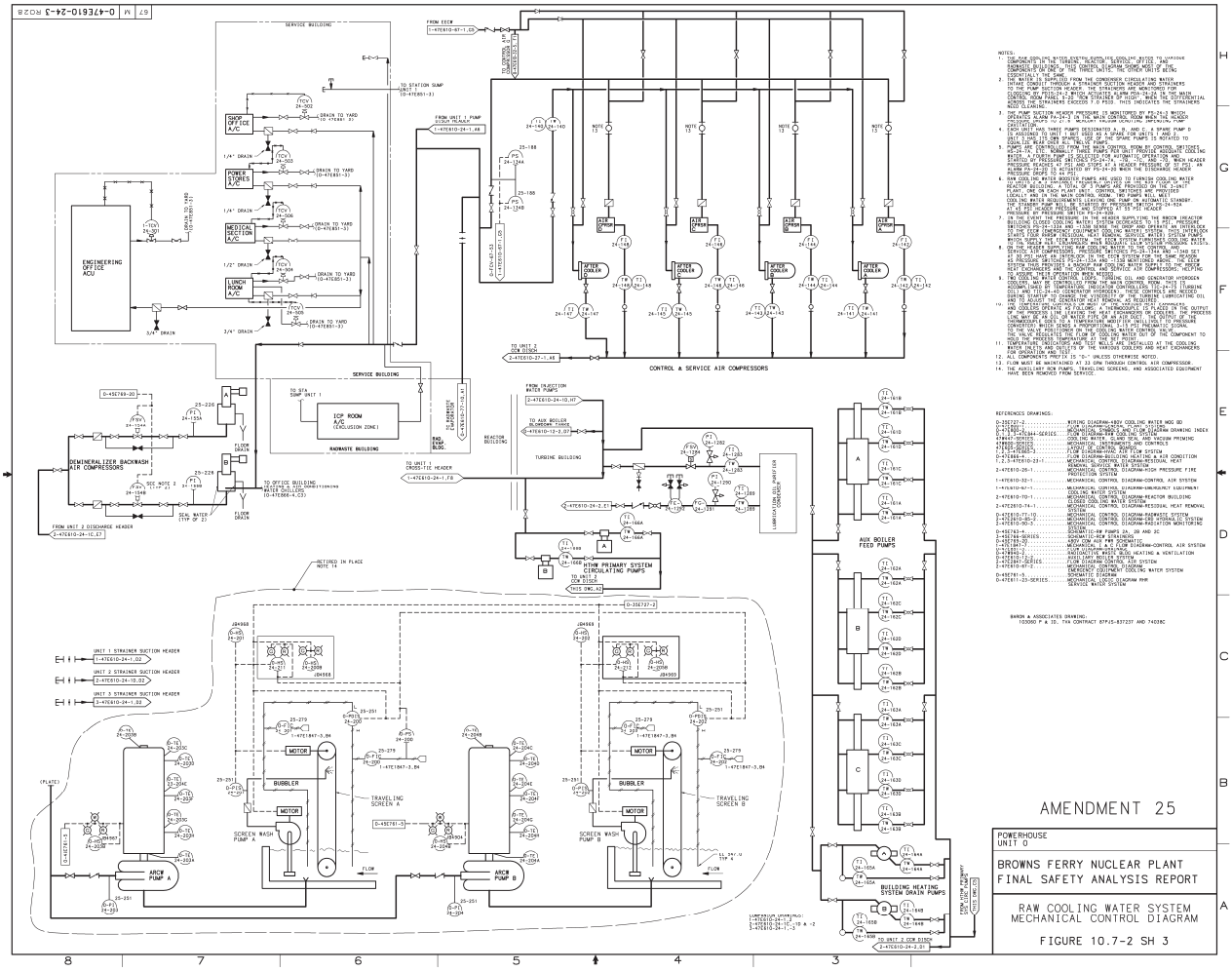
RAW COOLING WATER SYSTEM
MECHANICAL CONTROL DIAGRAM

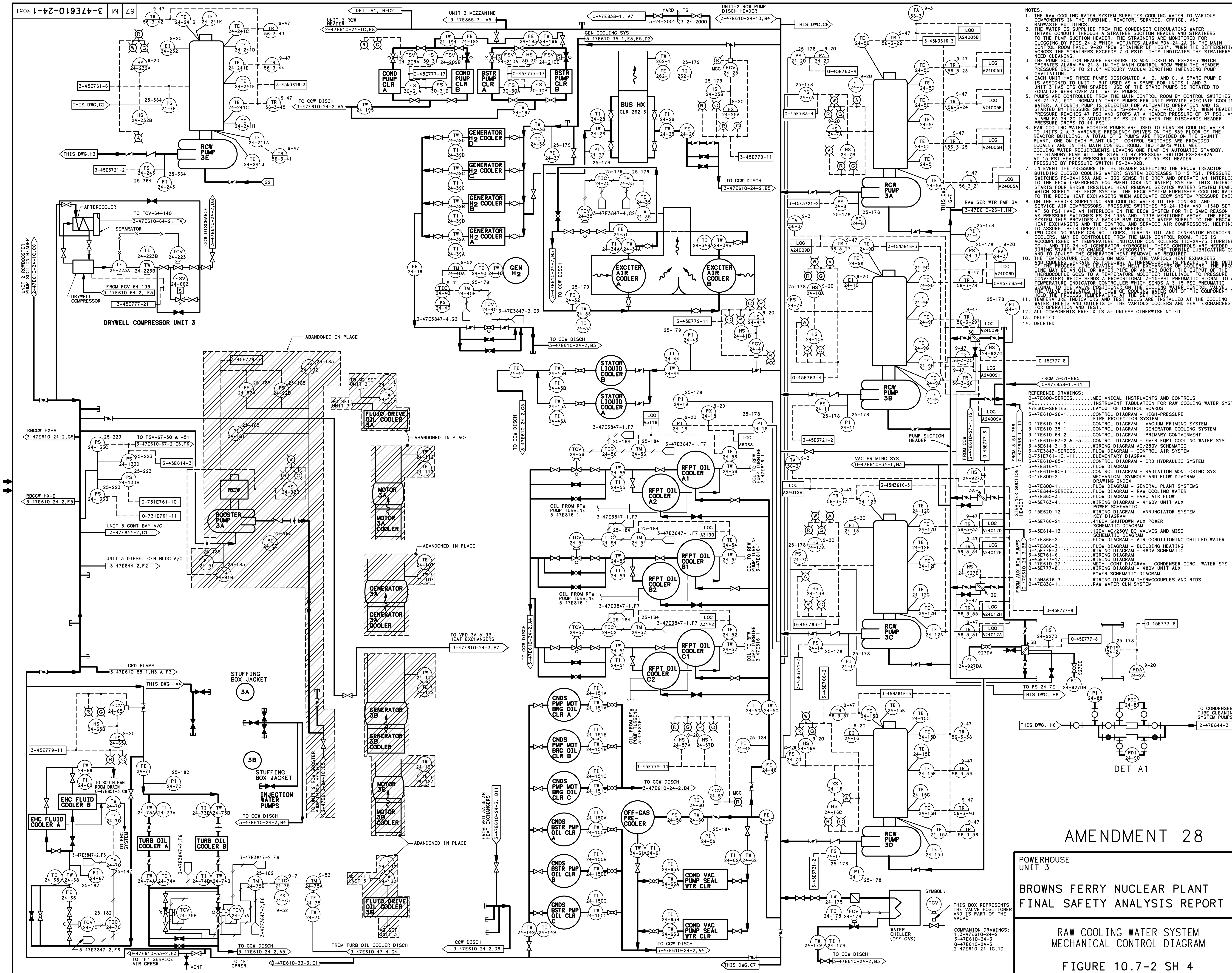
FIGURE 10.7-2 SH 1

8 | 7 | 6 | 5 | 4 | 3

H | G | F | E | D | C | B | A


AMENDMENT 25
POWERHOUSE
UNIT 2
BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT
RAW COOLING WATER SYSTEM
MECHANICAL CONTROL DIAGRAM
FIGURE 10.7-2 SH 2


CONTROL & SERVICE AIR COMPRESSORS
AUX BOILER FEED PUMPS
HTRW PRIMARY SYSTEM CIRCULATING PUMPS
BUILDING HEATING SYSTEM DRAIN PUMPS
ARCR PUMP A
ARCR PUMP B
TRAVELING SCREEN A
TRAVELING SCREEN B
SCREEN WASH PUMP A
SCREEN WASH PUMP B
DEMINERALIZER BACKWASH AIR COMPRESSORS
ENGINEERING OFFICE A/C
POWER STORES A/C
MEDICAL SECTION A/C
LUNCH ROOM A/C
ICP ROOM A/C (EXCLUSION ZONE)
SERVICE BUILDING
RADWASTE BUILDING
TURBINE BUILDING
REACTOR BUILDING
AMENDMENT 25
POWERHOUSE UNIT 0
BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT
RAW COOLING WATER SYSTEM MECHANICAL CONTROL DIAGRAM
FIGURE 10.7-2 SH 3



NOTES:

1. THE RAW COOLING WATER SYSTEM SUPPLIES COOLING WATER TO VARIOUS COMPONENTS IN THE TURBINE, REACTOR, SERVICE, OFFICE, AND RADWASTE BUILDINGS.
2. THE WATER IS SUPPLIED FROM THE CONDENSER CIRCULATING WATER INTAKE CONDUIT THROUGH A STRAINER SUCTION HEADER AND STRAINERS TO THE PUMP SUCTION HEADER. THE STRAINERS ARE MONITORED FOR CLOGGING BY PDIS-24-2 WHICH ACTUATES ALARM PDA-24-2A IN THE MAIN CONTROL ROOM PANEL 9-20 "RCW STRAINER DP HIGH", WHEN THE DIFFERENTIAL ACROSS THE STRAINERS EXCEEDS 7.0 PSID. THIS INDICATES THE STRAINERS NEED CLEANING.
3. THE PUMP SUCTION HEADER PRESSURE IS MONITORED BY PS-24-3 WHICH OPERATES ALARM PA-24-3 IN THE MAIN CONTROL ROOM WHEN THE HEADER PRESSURE DROPS TO 21.6" MERCURY VACUUM DENOTING IMPENDING PUMP CAVITATION.
4. EACH UNIT HAS THREE PUMPS DESIGNATED A, B, AND C. A SPARE PUMP D IS ASSIGNED TO UNIT 1 BUT USED AS A SPARE FOR UNITS 1 AND 2. UNIT 3 HAS ITS OWN SPARES. USE OF THE SPARE PUMPS IS ROTATED TO EQUALIZE WEAR OVER ALL TWELVE PUMPS.
5. PUMPS ARE CONTROLLED FROM THE MAIN CONTROL ROOM BY CONTROL SWITCHES HS-24-7A, ETC. NORMALLY THREE PUMPS PER UNIT PROVIDE ADEQUATE COOLING WATER. A FOURTH PUMP IS SELECTED FOR AUTOMATIC OPERATION AND IS STARTED BY PRESSURE SWITCHES PS-24-7A, -7B, -7C, OR -7D, WHEN HEADER PRESSURE REACHES 47 PSI AND STOPS AT A HEADER PRESSURE OF 57 PSI. AN ALARM PA-24-20 IS ACTUATED BY PS-24-20 WHEN THE DISCHARGE HEADER PRESSURE DROPS TO 44 PSI.
6. RAW COOLING WATER BOOSTER PUMPS ARE USED TO FURNISH COOLING WATER TO UNITS 2 & 3 VARIABLE FREQUENCY DRIVES ON THE 639 FLOOR OF THE REACTOR BUILDING. A TOTAL OF 3 PUMPS ARE PROVIDED ON THE 3-UNIT PLANT, ONE ON EACH PLANT UNIT. CONTROL SWITCHES ARE PROVIDED LOCALLY AND IN THE MAIN CONTROL ROOM. TWO PUMPS WILL MEET COOLING WATER REQUIREMENTS LEAVING ONE PUMP ON AUTOMATIC STANDBY. THE STANDBY PUMP WILL BE STARTED BY PRESSURE SWITCH PS-24-92A AT 45 PSI HEADER PRESSURE AND STOPPED AT 55 PSI HEADER PRESSURE BY PRESSURE SWITCH PS-24-92B.
7. IN EVENT THE PRESSURE IN THE HEADER SUPPLYING THE RBCCW (REACTOR BUILDING CLOSED COOLING WATER) SYSTEM DECREASES TO 15 PSI, PRESSURE SWITCHES PS-24-133A AND -133B SENSE THE DROP AND OPERATE AN INTERLOCK TO THE EECW (EMERGENCY EQUIPMENT COOLING WATER) SYSTEM. THIS INTERLOCK STARTS FOUR RHRSW (RESIDUAL HEAT REMOVAL SERVICE WATER) SYSTEM PUMPS WHICH SUPPLY THE EECW SYSTEM. THE EECW SYSTEM FURNISHES COOLING WATER TO THE RBCCW HEAT EXCHANGERS WHEN ADEQUATE EECW SYSTEM PRESSURE EXISTS.
8. ON THE HEADER SUPPLYING RAW COOLING WATER TO THE CONTROL AND SERVICE AIR COMPRESSORS, PRESSURE SWITCHES PS-24-134A AND -134B SET AT 30 PSI HAVE AN INTERLOCK IN THE EECW SYSTEM FOR THE SAME REASON AS PRESSURE SWITCHES PS-24-133A AND -133B MENTIONED ABOVE. THE EECW SYSTEM THUS PROVIDES A BACKUP RAW COOLING WATER SUPPLY TO THE RBCCW HEAT EXCHANGERS AND THE CONTROL AND SERVICE AIR COMPRESSORS; HELPING TO ASSURE THEIR OPERATION WHEN NEEDED.
9. TWO COOLING WATER CONTROL LOOPS, TURBINE OIL AND GENERATOR HYDROGEN COOLERS, MAY BE CONTROLLED FROM THE MAIN CONTROL ROOM. THIS IS ACCOMPLISHED BY TEMPERATURE INDICATOR CONTROLLERS TIC-24-75 (TURBINE OIL) AND TIC-24-40 (GENERATOR HYDROGEN). THESE CONTROLS ARE NEEDED DURING STARTUP TO CHANGE THE VISCOSITY OF THE TURBINE LUBRICATING OIL AND TO ADJUST THE GENERATOR HEAT REMOVAL AS REQUIRED.
10. THE TEMPERATURE CONTROLS ON MOST OF THE VARIOUS HEAT EXHANGERS AND COOLERS OPERATE AS FOLLOWS: A THERMOCOUPLE IS PLACED IN THE OUTPUT OF THE PROCESS LINE LEAVING THE HEAT EXCHANGERS OR COOLERS. THE PROCESS LINE MAY BE AN OIL OR WATER PIPE OR AN AIR DUCT. THE OUTPUT OF THE THERMOCOUPLE GOES TO A TEMPERATURE MODIFIER (MILLIVOLT TO PRESSURE CONVERTER) WHICH SENDS A PROPORTIONAL 3-15-PSI PNEUMATIC SIGNAL TO A TEMPERATURE INDICATOR CONTROLLER WHICH SENDS A 3-15-PSI PNEUMATIC SIGNAL TO THE VALVE POSITIONER ON THE COOLING WATER CONTROL VALVE. THE VALVE REGULATES THE FLOW OF COOLING WATER OUT OF THE COMPONENT TO HOLD THE PROCESS TEMPERATURE AT THE SET POINT.
11. TEMPERATURE INDICATORS AND TEST WELLS ARE INSTALLED AT THE COOLING WATER INLETS AND OUTLETS OF THE VARIOUS COOLERS AND HEAT EXCHANGERS FOR OPERATION AND TEST.
12. ALL COMPONENTS PREFIX IS 3- UNLESS OTHERWISE NOTED
13. DELETED
14. DELETED

REFERENCE DRAWINGS:

0-47E600-SERIES.......MECHANICAL INSTRUMENTS AND CONTROLS
MEL...................INSTRUMENT TABULATION FOR RAW COOLING WATER SYSTEM
47E605-SERIES.........LAYOUT OF CONTROL BOARDS
3-47E610-26-1.........CONTROL DIAGRAM - HIGH-PRESSURE FIRE PROTECTION SYSTEM
0-47E610-34-1.........CONTROL DIAGRAM - VACUUM PRIMING SYSTEM
3-47E610-35-1.........CONTROL DIAGRAM - GENERATOR COOLING SYSTEM
3-47E610-64-2.........CONTROL DIAGRAM - PRIMARY CONTAINMENT
3-47E610-67-2 & -3....CONTROL DIAGRAM - EMER EQPT COOLING WATER SYS
3-45E614-3,-9.........WIRING DIAGRAM AC/250V SCHEMATIC
3-47E3847-SERIES......FLOW DIAGRAM - CONTROL AIR SYSTEM
0-731E761-10,-11......ELEMENTARY DIAGRAM
3-47E610-85-1.........CONTROL DIAGRAM - CRD HYDRAULIC SYSTEM
3-47E816-1............FLOW DIAGRAM
3-47E610-90-3.........CONTROL DIAGRAM - RADIATION MONITORING SYS
0-47E800-2............MECHANICAL SYMBOLS AND FLOW DIAGRAM DRAWING INDEX
0-47E800-1............FLOW DIAGRAM - GENERAL PLANT SYSTEMS
3-47E844-SERIES.......FLOW DIAGRAM - RAW COOLING WATER
3-47E865-3............FLOW DIAGRAM - HVAC AIR FLOW
0-45E763-4............WIRING DIAGRAM - 4160V UNIT AUX POWER SCHEMATIC
0-45E620-12...........WIRING DIAGRAM - ANNUNCIATOR SYSTEM KEY DIAGRAM
3-45E766-21...........4160V SHUTDOWN AUX POWER SCHEMATIC DIAGRAM
3-45E614-13...........120V AC/250V DC VALVES AND MISC SCHEMATIC DIAGRAM
0-47E866-2............FLOW DIAGRAM - AIR CONDITIONING CHILLED WATER
0-47E866-3............FLOW DIAGRAM - BUILDING HEATING
3-45E779-3, 11........WIRING DIAGRAM - 480V SCHEMATIC
3-45E761-6............WIRING DIAGRAM
3-45E777-17...........WIRING DIAGRAM
3-47E610-27-1.........MECH. CONT DIAGRAM - CONDENSER CIRC. WATER SYS.
0-45E777-8............WIRING DIAGRAM - 480V UNIT AUX POWER SCHEMATIC DIAGRAM
3-45N3616-3...........WIRING DIAGRAM THERMOCOUPLES AND RTDS
0-47E838-1............RAW WATER CLN SYSTEM

SYMBOL:

THIS BOX REPRESENTS THE VALVE POSITIONER AND IS PART OF THE VALVE

COMPANION DRAWINGS:
1.3-47E610-24-2
3-47E610-24-3
0-47E610-24-3
2-47E610-24-1C,1D

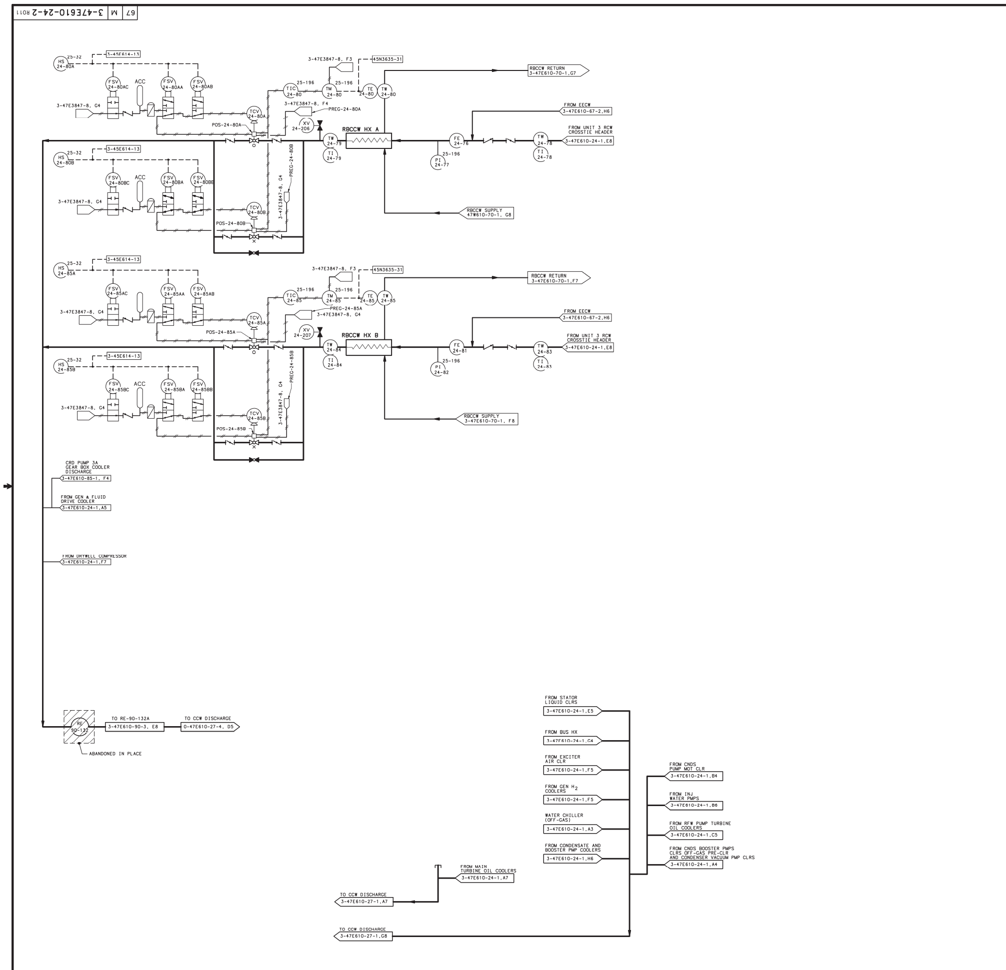
AMENDMENT 28

POWERHOUSE
UNIT 3

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER SYSTEM
MECHANICAL CONTROL DIAGRAM

FIGURE 10.7-2 SH 4



NOTES:

1. FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE 3-47E610-24-1.
2. ALL COMPONENTS AND VALVES PREFIX IS 3- UNLESS OTHERWISE NOTED.
3. INSTRUMENTS 0-FT-24-206, 0-FE-24-206, 0-FT-24-207 AND 0-FE-24-207 UTILIZE THESE FLOW TEST POINTS FOR LOAD TEST.

REFERENCE DRAWING:

3-45E614-13..............SCHEMATIC DIAGRAM 120V AC/250V DC VALVES & MISC
0-47E610-27-4............CONTROL DIAGRAM - CCW
3-47E3847-8..............SCHEMATIC DIAGRAM CONTROL AIR
3-47E610-70-1............CONTROL DIAGRAM RBCCW
3-47E610-90-3............CONTROL DIAGRAM - RAD MONITORING SYSTEM
45N3635-31...............CONNECTION DIAGRAM -LOCAL INSTRUMENT PANELS

SYMBOLS:

THIS BOX REPRESENTS THE VALVE POSITIONER AND IS PART OF THE VALVE.

CONTROL AIR SYMBOL

FLOW TEST POINT SEE NOTE 3

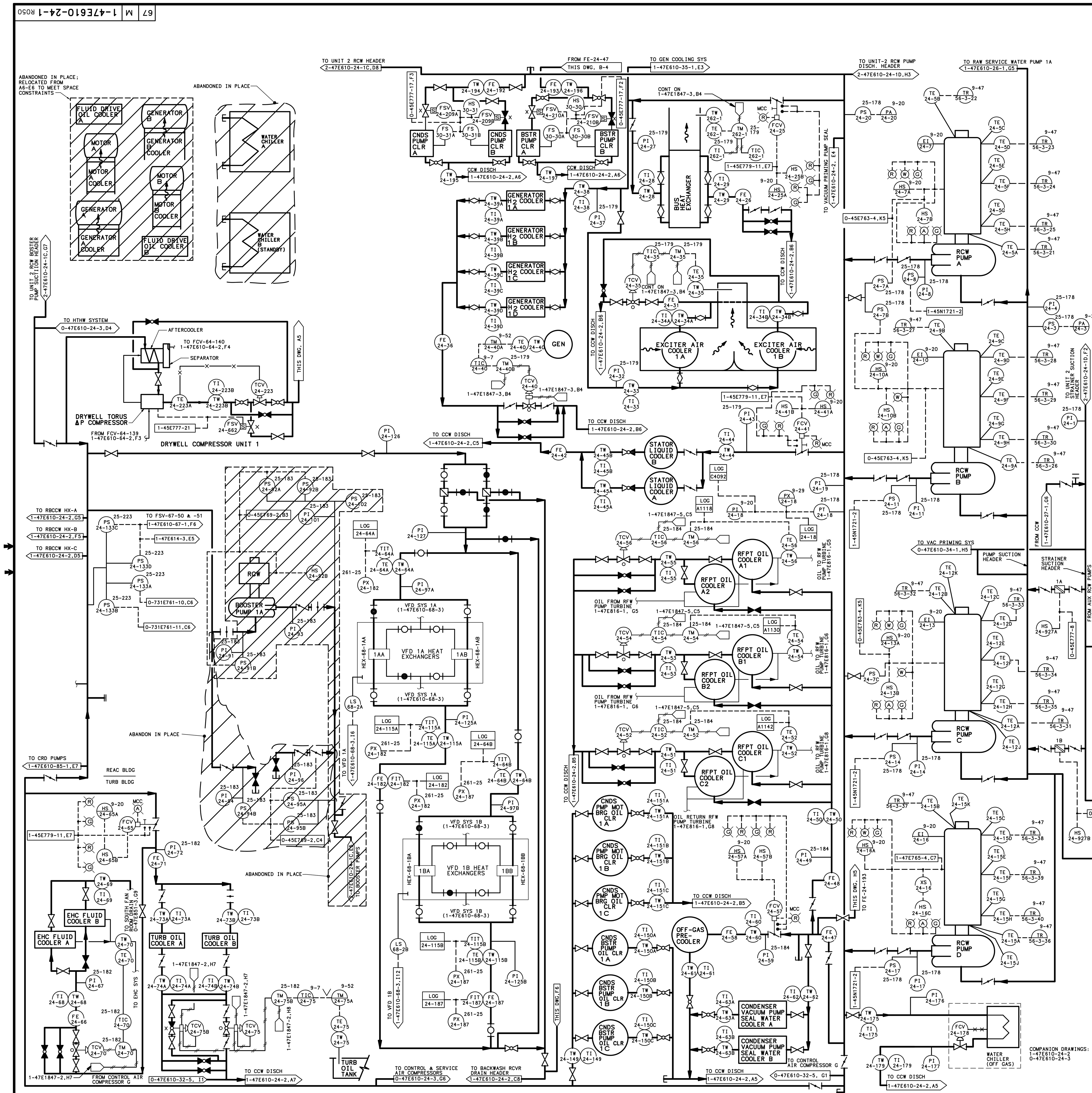
AMENDMENT 25

POWERHOUSE
UNIT 3

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER SYSTEM
MECHANICAL CONTROL DIAGRAM

FIGURE 10.7-2 SH 5



NOTES:

1. FOR SYSTEM OPERATION REFER TO MECHANICAL FLOW DIAGRAMS, SCHEMATIC DIAGRAMS, REFERENCE DRAWINGS, SYSTEM OPERATION INSTRUCTIONS AND DESIGN CRITERIA.
2. THE WATER IS SUPPLIED FROM THE CONDENSER CIRCULATING WATER INTAKE CONDUIT THROUGH A STRAINER SUCTION HEADER AND STRAINERS TO THE PUMP SUCTION HEADER. THE STRAINERS ARE MONITORED FOR CLOGGING BY PDIS-24-2 WHICH ACTUATES ALARM PDA-24-2A IN THE MAIN CONTROL ROOM PANEL 9-20 "RCW STRAINER DP HIGH", WHEN THE DIFFERENTIAL ACROSS THE STRAINERS EXCEEDS 7.0 PSID. THIS INDICATES THE STRAINERS NEED CLEANING.
3. THE PUMP SUCTION HEADER PRESSURE IS MONITORED BY PS-24-3 WHICH OPERATES ALARM PA-24-3 IN THE MAIN CONTROL ROOM WHEN THE HEADER PRESSURE DROPS TO 21.6" MERCURY VACUUM DENOTING IMPENDING PUMP CAVITATION.
4. EACH UNIT HAS THREE PUMPS DESIGNATED A, B, AND C. A SPARE PUMP D IS ASSIGNED TO UNIT 1 BUT USED AS A SPARE FOR UNITS 1 AND 2. UNIT 3 HAS ITS OWN SPARE. USE OF THE SPARE PUMPS IS ROTATED TO EQUALIZE WEAR OVER ALL TWELVE PUMPS.
5. PUMPS ARE CONTROLLED FROM THE MAIN CONTROL ROOM BY CONTROL SWITCHES HS-24-7A, ETC. NORMALLY THREE PUMPS PER UNIT PROVIDE ADEQUATE COOLING WATER. A FOURTH PUMP IS SELECTED FOR AUTOMATIC OPERATION AND IS STARTED BY PRESSURE SWITCHES PS-24-7A, -7B, -7C, AND -7D, WHEN HEADER PRESSURE REACHES 47 PSI AND STOPS AT A HEADER PRESSURE OF 57 PSI. AN ALARM PA-24-20 IS ACTUATED BY PS-24-20 WHEN THE DISCHARGE HEADER PRESSURE DROPS TO 44 PSI.
6. RAW COOLING WATER BOOSTER PUMP 1A IS USED TO FURNISH COOLING WATER TO UNITS 2 & 3 VARIABLE FREQUENCY DRIVES ON THE 639 FLOOR OF THE REACTOR BUILDING. A TOTAL OF 3 PUMPS ARE PROVIDED ON THE 3-UNIT PLANT, ONE ON EACH PLANT UNIT. CONTROL SWITCHES ARE PROVIDED LOCALLY AND IN THE MAIN CONTROL ROOM. TWO PUMPS WILL MEET COOLING WATER REQUIREMENTS LEAVING ONE PUMP ON AUTOMATIC STANDBY. THE STANDBY PUMP WILL BE STARTED BY PRESSURE SWITCH PS-24-92A AT 45 PSI HEADER PRESSURE AND STOPPED AT 55 PSI HEADER PRESSURE BY PRESSURE SWITCH PS-24-92B.
7. IN EVENT THE PRESSURE IN THE HEADER SUPPLYING THE RBCCW (REACTOR BUILDING CLOSED COOLING WATER) SYSTEM DECREASES TO 15 PSI, PRESSURE SWITCHES PS-24-133A AND -133B SENSE THE DROP AND OPERATE AN INTERLOCK TO THE EECW (EMERGENCY EQUIPMENT COOLING WATER) SYSTEM. THIS INTERLOCK STARTS FOUR RHRSW (RESIDUAL HEAT REMOVAL SERVICE WATER) SYSTEM PUMPS WHICH SUPPLY THE EECW SYSTEM. THE EECW SYSTEM FURNISHES COOLING WATER TO THE RBCCW HEAT EXCHANGERS WHEN ADEQUATE EECW SYSTEM PRESSURE EXISTS.
8. ON THE HEADER SUPPLYING RAW COOLING WATER TO THE CONTROL AND SERVICE AIR COMPRESSORS, PRESSURE SWITCHES PS-24-134A AND -134B SET AT 30 PSI HAVE AN INTERLOCK IN THE EECW SYSTEM FOR THE SAME REASON AS PRESSURE SWITCHES PS-24-133A AND -133B MENTIONED ABOVE. THE EECW SYSTEM THUS PROVIDES A BACKUP RAW COOLING WATER SUPPLY TO THE RBCCW HEAT EXCHANGERS AND THE CONTROL AND SERVICE AIR COMPRESSORS; HELPING TO ASSURE THEIR OPERATION WHEN NEEDED.
9. TWO COOLING WATER CONTROL LOOPS, TURBINE OIL AND GENERATOR HYDROGEN COOLERS, MAY BE CONTROLLED FROM THE MAIN CONTROL ROOM. THIS IS ACCOMPLISHED BY TEMPERATURE INDICATOR CONTROLLERS TIC-24-75 (TURBINE OIL) AND TIC-24-40 (GENERATOR HYDROGEN). THESE CONTROLS ARE NEEDED DURING STARTUP TO CHANGE THE VISCOSITY OF THE TURBINE LUBRICATING OIL AND TO ADJUST THE GENERATOR HEAT REMOVAL AS REQUIRED.
10. THE TEMPERATURE CONTROLS ON MOST OF THE VARIOUS HEAT EXCHANGERS AND COOLERS OPERATE AS FOLLOWS: A THERMOCOUPLE IS PLACED IN THE OUTPUT OF THE PROCESS LINE LEAVING THE HEAT EXCHANGERS OR COOLERS. THE PROCESS LINE MAY BE AN OIL OR WATER PIPE OR AN AIR DUCT. THE OUTPUT OF THE THERMOCOUPLE GOES TO A TEMPERATURE MODIFIER (MILLIVOLT TO PRESSURE CONVERTER) WHICH SENDS A PROPORTIONAL 3-15-PSI PNEUMATIC SIGNAL TO A TEMPERATURE INDICATOR CONTROLLER WHICH SENDS A 3-15-PSI PNEUMATIC SIGNAL TO THE VALVE POSITIONER ON THE COOLING WATER CONTROL VALVE. THE VALVE REGULATES THE FLOW OF COOLING WATER OUT OF THE COMPONENT TO HOLD THE PROCESS TEMPERATURE AT THE SET POINT.
11. TEMPERATURE INDICATORS AND TEST WELLS ARE INSTALLED AT THE COOLING WATER INLETS AND OUTLETS OF THE VARIOUS COOLERS AND HEAT EXCHANGERS FOR OPERATION AND TEST.
12. DELETED.
13. DELETED.
14. DELETED.
15. ALL COMPONENTS SHOWN HAVE UNIT 1 PREFIX, UNLESS NOTED OTHERWISE.
16. FOR INSTRUMENT SETPOINTS REFER TO INSTRUMENT TABULATIONS AND THE NUCLEAR ENGINEERING SCALING AND SETPOINT DOCUMENT MANUAL (NESSDM).
17. DELETED.
18. DELETED.

REFERENCE DRAWINGS:

3-45E766-SERIES..........SCHEMATIC-RCW STRAINERS
MEL.......................INSTRUMENT TABULATION
1-47E600-SERIES..........MECHANICAL INSTRUMENTS AND CONTROLS
1-47E610-23-1............CONTROL DIAGRAM-RHR SERVICE WATER
1-47E610-26-1............CONTROL DIAGRAM-HIGH-PRESSURE FIRE PROTECTION SYSTEM
1-47E610-64-2............CONTROL DIAGRAM-PRIMARY CONTAINMENT
1-47E610-67-1............CONTROL DIAGRAM-EMERGENCY EQUIPMENT COOLING WATER
1-47E610-70-1............CONTROL DIAGRAM-REACTOR BUILDING CLOSED COOLING WATER SYSTEM
1-47E610-85-1............CONTROL DIAGRAM-CRD HYDRAULIC SYSTEM
1-47E844-SERIES..........FLOW DIAGRAM-RAW COOLING WATER SYSTEM
0-45E763-4...............SCHEMATIC-RW PUMPS 2A, 2B & 2C
0-47W447-SERIES..........COOLING WATER, GLAND SEAL, & VACUUM PRIMING
47E605-SERIES............LAYOUT OF CONTROL BOARDS
2-47E610-68-2............CONTROL DIAGRAM-REACTOR WATER RECIRCULATION SYSTEM
1-47E610-74-1A...........CONTROL DIAGRAM-RESIDUAL HEAT REMOVAL
1-47E610-3-SERIES........REACTOR FEEDWATER SYSTEM
0-47E800-1...............FLOW DIAGRAM-GENERAL PLANT SYSTEMS
0-47E800-2...............MECHANICAL SYMBOLS AND FLOW DIAGRAM DRAWING INDEX
1-47E1847-6,-7,-8........FLOW DIAGRAM-CONTROL AIR
3-47E3847-8..............FLOW DIAGRAM-CONTROL AIR
1-47E610-90-3............MECH CONTROL DIAGRAM-RADIATION MONITORING SYS
2-47E610-32-3............MECH CONTROL DIAGRAM-CONTROL AIR SYS
0-45E761-SERIES..........SCHEMATIC DIAGRAM-4160V COMMON AUX POWER-DC SCHEM
0-45E769-SERIES..........SCHEMATIC DIAGRAM-480V COMMON AUX POWER SCHEM
0-35E727-2...............SCHEMATIC DIAGRAM-480V COOLING WATER MOG BD-SCHEM
1-47E610-27-1............MECH CONT DIAGRAM-CONDENSER CIRC WATER SYSTEM
0-47E610-34-1............MECH CONT DIAGRAM PRIMING SYSTEM
1,2,3-45E777-17..........WIRING DIAGRAM
0-45E777-8...............WIRING DIAGRAM - 480V UNIT AUX POWER SCHEMATIC DIAGRAM
1-45E779-3...............WIRING DIAGRAM
0-45E765-5...............WIRING DIAGRAM
1-47E810-1...............FLOW DIAGRAM-LUBE OIL SYSTEM
1-47E610-43-2..........CONTROL DIAGRAM-SAMPLING & WATER QUALITY SYSTEM
1-47E610-66-1...........CONTROL DIAGRAM, OFF-GAS SYSTEM

SYMBOL:

THIS BOX REPRESENTS THE VALVE POSITIONER AND IS PART OF THE VALVE

COMPANION DRAWINGS:
1-47E610-24-2
0-47E610-24-3

AMENDMENT 29

POWERHOUSE
UNIT 1

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

RAW COOLING WATER SYSTEM
MECHANICAL CONTROL DIAGRAM

FIGURE 10.7-2 SH 6