

- NOTES:
1. ALL VALVES ARE SAME SIZE AS PIPING, UNLESS OTHERWISE NOTED.
  2. ALL PRESSURE AND TEST CONNECTIONS ARE 1", UNLESS OTHERWISE NOTED.
  3. VALVE NUMBERS SHALL BE PREFIXED WITH THE UNIT NUMBER "3-" AND SYSTEM NUMBER "1-". I.E. 3-1-301. ALL INSTRUMENTS SHALL BE PREFIXED WITH THE UNIT NUMBER "3-", I.E. 3-FCV-1-15, UNLESS OTHERWISE NOTED.
  4. ALL DRAINS SHOWN WITH AN ARROW INDICATE CLOSED SYSTEM (CRW).
  5. [P] ETC. DENOTES DESIGN PRESSURE AND TEMPERATURE AS GIVEN IN TABLE THIS DRAWING.
  6. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH THE APPLICABLE CODES.
  7. THE DESIGN PRESSURE AND TEMPERATURE OF ALL DRAIN AND VENT LINES THROUGH THE LAST ISOLATION VALVE SHALL BE THE SAME AS THE PROCESS LINE.
  8. ORIFICE GOUGING SEE 0-47900-20 DETAIL P20.
  9. UNITS ON DRAWING ARE FOR REFERENCE ONLY AND ARE ABBREVIATED TO MEET SPACE CONSTRAINTS. REFER TO MEL FOR COMPLETE UNITS.
  10. VENT, DRAIN, AND TEST CONNECTIONS 1-1/2" AND BELOW CAN BE PROVIDED WITH WIRE CAPS OR HOSE CONNECTION FITTINGS WHERE REQUIRED BY PLANT CALCULATION CD-00999-923399.
  11. VALVES 3-FCV-1-58, 3-FCV-1-185 AND 3-FCV-1-59 MUST BE OPENED OR CONFIRMED OPEN FOLLOWING CLOSURE OF THE MAIN STEAM ISOLATION VALVES, FOLLOWING A LOCA, IN ORDER TO ESTABLISH THE PREFERRED FLOW PATH TO THE CONDENSER FOR MAIN STEAM ISOLATION VALVE LEAKAGE.
  12. ACOUSTIC VIBRATION SUPPRESSOR (STEAM LINES A AND D) SEE 3-728C229-1.

REFERENCE DRAWINGS:

- 3-47E812-1 FLOW DIAGRAM-HPCI SYSTEM
- 3-47E813-1 MECHANICAL CONTROL DIAGRAM - MAIN STEAM
- 3-47E813-1 FLOW DIAGRAM - RCIC SYSTEM
- 3-47E817-1 FLOW DIAGRAM - NUCLEAR BOILER
- 3-47E610-43 SERIES MECHANICAL CONTROL DIAGRAM - SAMPLING & WTE QUALITY SYSTEM
- 3-47E610-43 SERIES INSTRUMENT TABULATIONS FOR MAIN STEAM SYSTEM
- 3-728C229-1 VALVE MARKER TAG TABULATION

| RELIEF VALVE DATA |         |           |     |
|-------------------|---------|-----------|-----|
| VALVE ID          | ST LINE | SETPPOINT | ADS |
| 1-4               | A       | 1155      | N   |
| 1-179             | A       | 1155      | N   |
| 1-5               | A       | 1145      | Y   |
| 1-18              | B       | 1145      | Y   |
| 1-19              | B       | 1135      | Y   |
| 1-22              | B       | 1145      | Y   |
| 1-23              | B       | 1135      | N   |
| 1-30              | C       | 1145      | N   |
| 1-31              | C       | 1135      | N   |
| 1-34              | C       | 1135      | Y   |
| 1-41              | D       | 1155      | Y   |
| 1-180             | D       | 1155      | N   |
| 1-42              | D       | 1155      | N   |

| SYSTEM PRESS. - TEMP. DATA |                        |                  |
|----------------------------|------------------------|------------------|
| LINE NO.                   | DESIGN PRESSURE (PSIG) | DESIGN TEMP (°F) |
| 1                          | 1146                   | 582              |
| 2                          | 1045                   | 550              |
| 3                          | 825                    | 500              |
| 4                          | 150                    | 500              |
| 5                          | 860                    | 540              |
| 6                          | 1250                   | 575              |
| 7                          | 285                    | 415              |
| 8                          | 310                    | 425              |
| 9                          | 285                    | 415              |
| 10                         | 285                    | 415              |
| 11                         | 285                    | 415              |
| 12                         | 285                    | 415              |
| 13                         | 285                    | 415              |
| 14                         | 285                    | 415              |
| 15                         | 400                    | 450              |
| 16                         | 150                    | 400              |

AMENDMENT 29

POWERHOUSE UNIT 3

BROWNS FERRY NUCLEAR PLANT

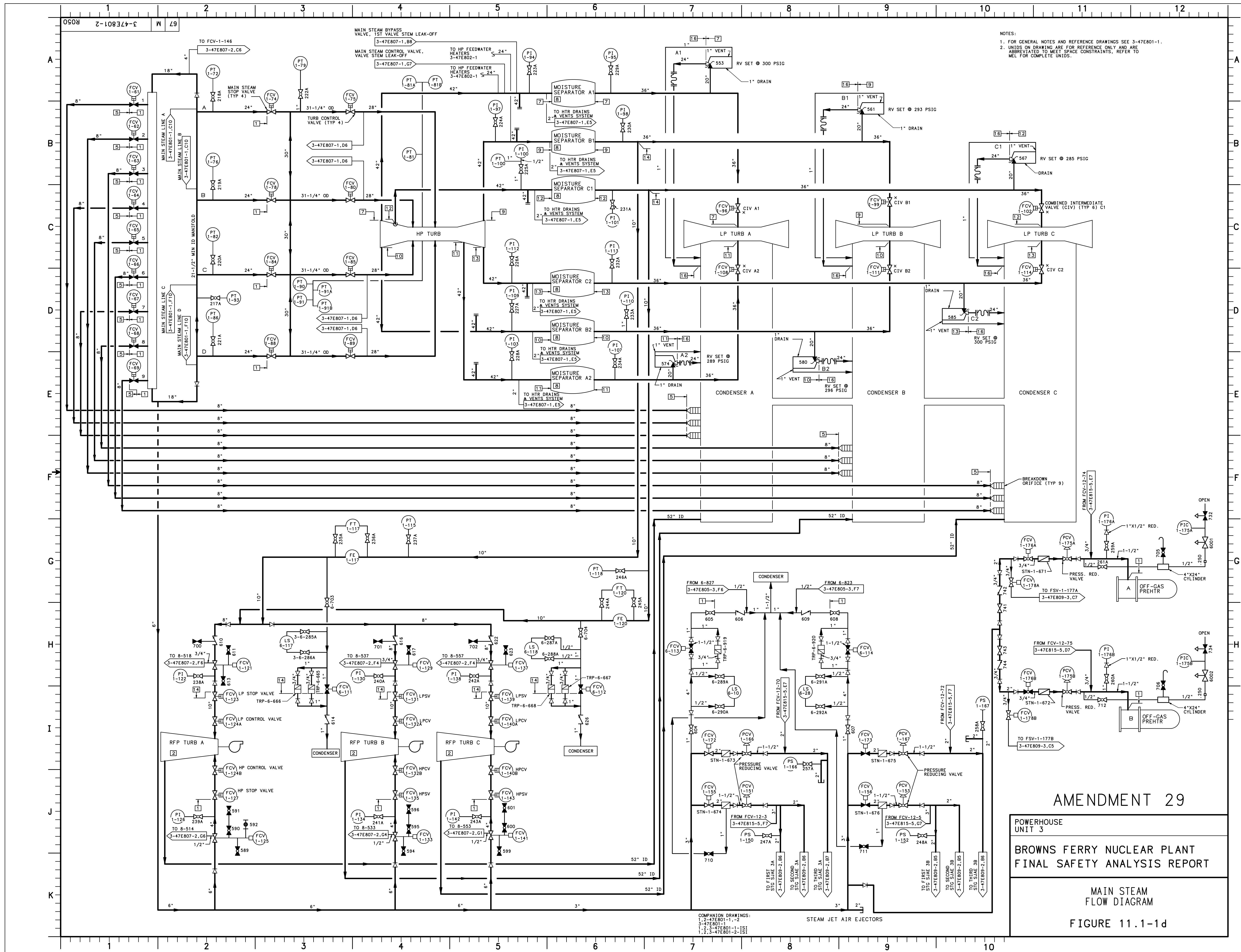
FINAL SAFETY ANALYSIS REPORT

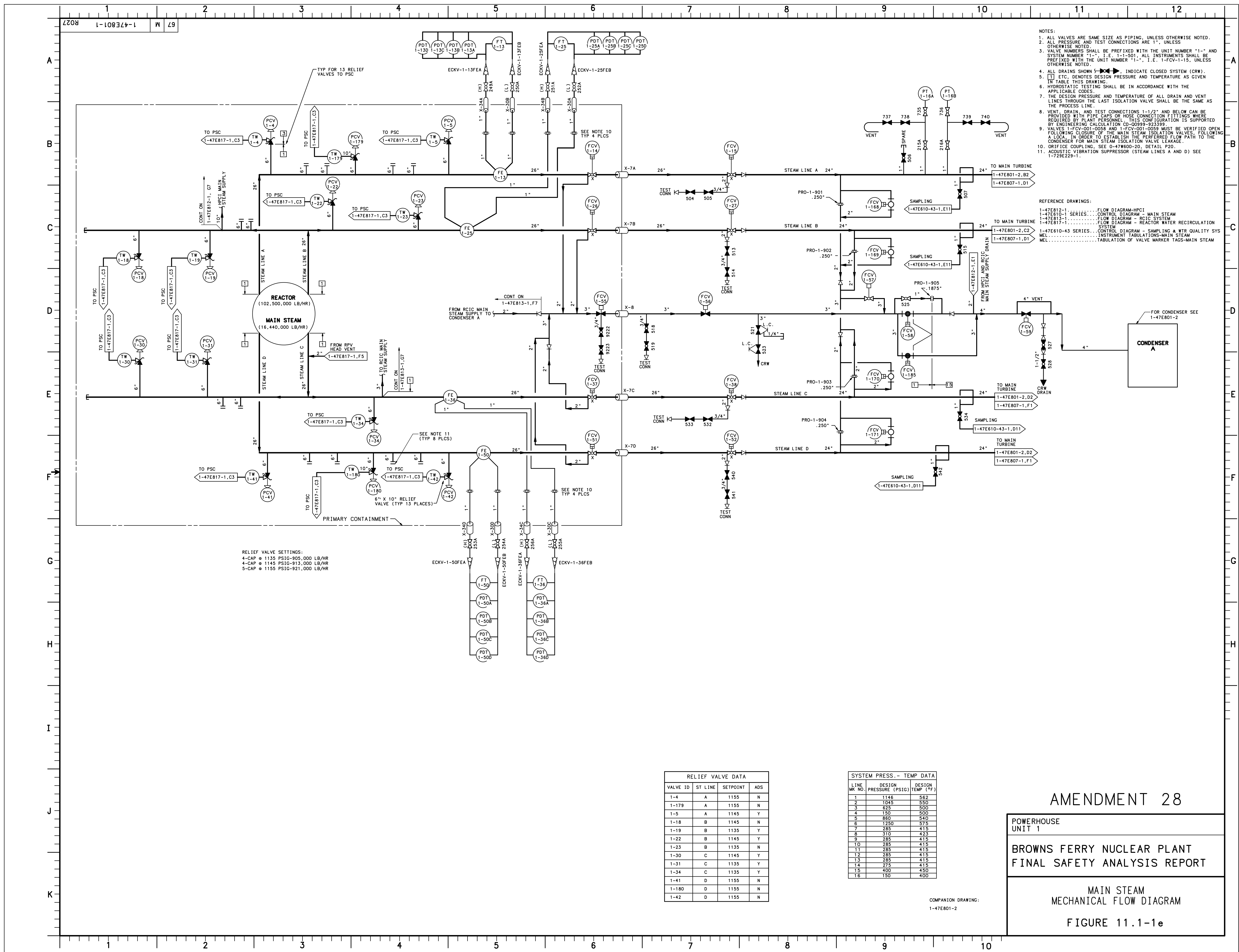
MAIN STEAM FLOW DIAGRAM

FIGURE 11.1-1c

COMPANION DRAWINGS:

- 1,2-47E801-1-2
- 3-47E801-2
- 1,2-3-47E801-1-151
- 1,2-3-47E801-2-151





- NOTES:
1. ALL VALVES ARE SAME SIZE AS PIPING, UNLESS OTHERWISE NOTED.
  2. ALL PRESSURE AND TEST CONNECTIONS ARE 1", UNLESS OTHERWISE NOTED.
  3. VALVE NUMBERS SHALL BE PREFIXED WITH THE UNIT NUMBER "1-" AND SYSTEM NUMBER "1-1". I.E. 1-1-501. ALL INSTRUMENTS SHALL BE PREFIXED WITH THE UNIT NUMBER "1-", I.E. 1-FCV-1-15, UNLESS OTHERWISE NOTED.
  4. ALL DRAINS SHOWN WITH INDICATE CLOSED SYSTEM (CRW).
  5. [E] ETC. DENOTES DESIGN PRESSURE AND TEMPERATURE AS GIVEN IN TABLE THIS DRAWING.
  6. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH THE APPLICABLE CODES.
  7. THE DESIGN PRESSURE AND TEMPERATURE OF ALL DRAIN AND VENT LINES THROUGH THE LAST ISOLATION VALVE SHALL BE THE SAME AS THE PROCESS LINE.
  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 CO-00999-033399.
  9. VALVES 1-FCV-001-008 AND 1-FCV-001-009 MUST BE VERIFIED OPEN FOLLOWING CLOSURE OF THE MAIN STEAM ISOLATION VALVES. FOLLOWING A LOCAL IN ORDER TO ESTABLISH THE PREFERRED FLOW PATH TO THE CONDENSER FOR MAIN STEAM ISOLATION VALVE LEAKAGE.
  10. ORIFICE COUPLING. SEE 0-47W00-20, DETAIL P20.
  11. ACOUSTIC VIBRATION SUPPRESSOR (STEAM LINES A AND D) SEE 1-72E222-1.

- REFERENCE DRAWINGS:
- 1-47E812-1 SERIES.....FLOW DIAGRAM-HPCI
  - 1-47E810-1 SERIES.....CONTROL DIAGRAM - MAIN STEAM
  - 1-47E813-1 SERIES.....FLOW DIAGRAM - REID SYSTEM
  - 1-47E817-1 SERIES.....FLOW DIAGRAM - REACTOR WATER RECIRCULATION SYSTEM
  - 1-47E810-43 SERIES.....CONTROL DIAGRAM - SAMPLING & WTR QUALITY SYS
  - MEL.....INSTRUMENT TABULATION-MAIN STEAM
  - MEL.....TABULATION OF VALVE MARKER TAGS-MAIN STEAM

RELIEF VALVE SETTINGS:  
 4-CAP @ 1135 PSIG-905,000 LB/HR  
 4-CAP @ 1145 PSIG-913,000 LB/HR  
 5-CAP @ 1155 PSIG-921,000 LB/HR

| VALVE ID | ST LINE | SETPPOINT | ADS |
|----------|---------|-----------|-----|
| 1-4      | A       | 1155      | N   |
| 1-179    | A       | 1155      | N   |
| 1-5      | A       | 1145      | Y   |
| 1-18     | B       | 1145      | N   |
| 1-19     | B       | 1135      | Y   |
| 1-22     | B       | 1145      | Y   |
| 1-23     | B       | 1135      | N   |
| 1-30     | C       | 1145      | Y   |
| 1-31     | C       | 1135      | Y   |
| 1-34     | C       | 1135      | Y   |
| 1-41     | D       | 1155      | N   |
| 1-180    | D       | 1155      | N   |
| 1-42     | D       | 1155      | N   |

| LINE NR NO. | DESIGN PRESSURE (PSIG) | DESIGN TEMP (°F) |
|-------------|------------------------|------------------|
| 1           | 1145                   | 562              |
| 2           | 1045                   | 550              |
| 3           | 825                    | 500              |
| 4           | 150                    | 500              |
| 5           | 860                    | 540              |
| 6           | 1250                   | 575              |
| 7           | 285                    | 415              |
| 8           | 310                    | 423              |
| 9           | 285                    | 415              |
| 10          | 285                    | 415              |
| 11          | 285                    | 415              |
| 12          | 285                    | 415              |
| 13          | 285                    | 415              |
| 14          | 275                    | 415              |
| 15          | 400                    | 450              |
| 16          | 150                    | 400              |

AMENDMENT 28

POWERHOUSE  
UNIT 1

BROWNS FERRY NUCLEAR PLANT  
FINAL SAFETY ANALYSIS REPORT

MAIN STEAM  
MECHANICAL FLOW DIAGRAM

FIGURE 11.1-1e

COMPANION DRAWING:  
1-47E801-2

