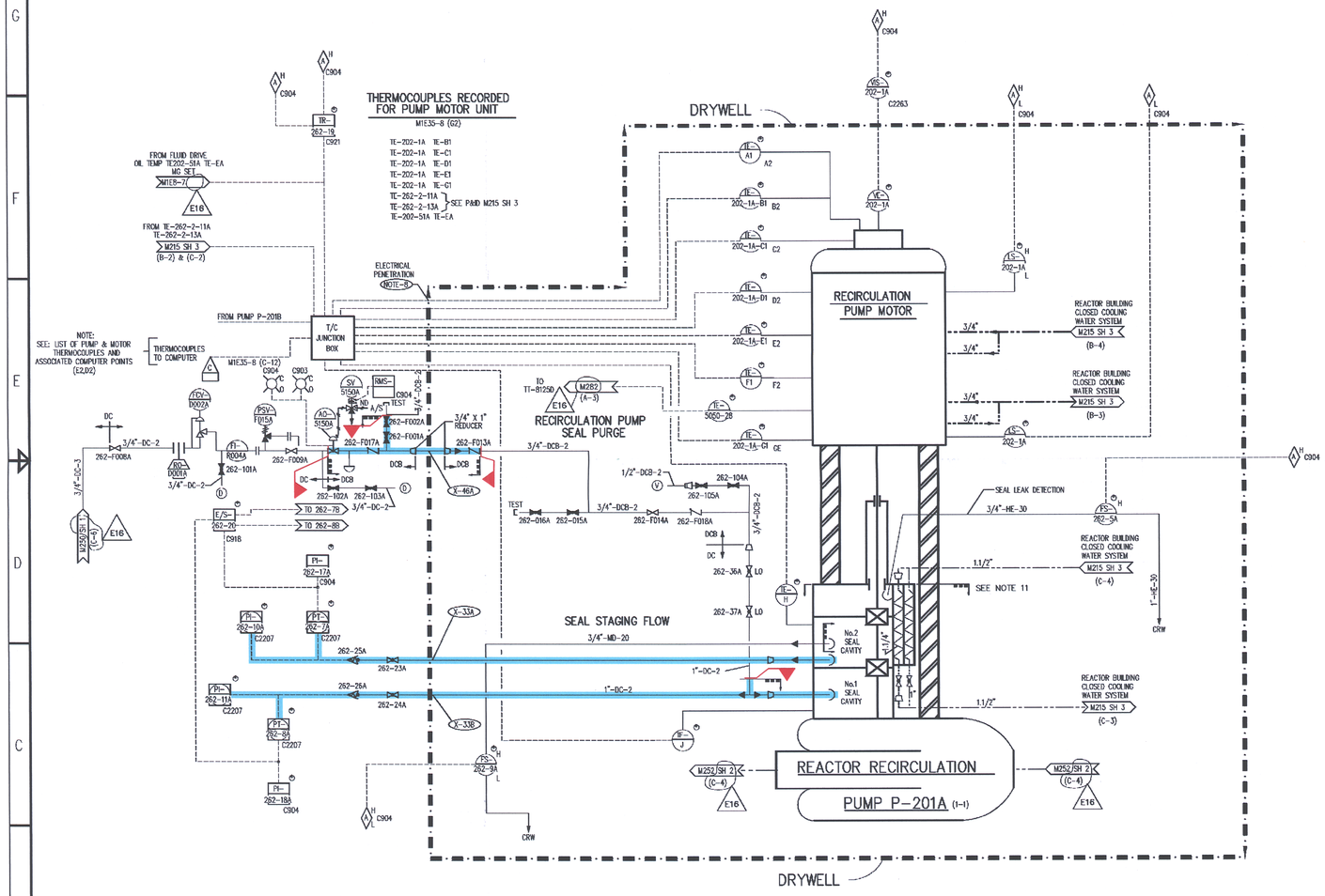


## NOTES:

1. PIPING HIGH POINT VENTS AND LOW POINT DRAINS ARE TO BE ADDED BY BECHTEL AT ALL SUCH HIGH POINTS OR LOW POINTS NOT SERVED BY EQUIPMENT VENTS AND DRAINS.
2. CHEMICAL CLEANING CONNECTIONS,VALVES ETC. IF REQUIRED, ARE TO BE PROVIDED BY BECHTEL AS NECESSARY.
3. WHERE THERMOCOUPLES ARE DESIGNATED TE-A1,A2 ETC.,A2 IS A SPARE.
4. FOR LOCATION AND IDENTIFICATION OF INSTRUMENTS, SEE BECO INSTRUMENT LIST M260-1.
5. ALL PIPING AND VALVING IS PROVIDED BY BECHTEL OR BECO UNLESS DESIGNATED BY ⊕(G.E.-APED SUPPLIED)
6. INSTRUMENTS,INSTRUMENT PIPING AND INSTRUMENT VALVING BEYOND THE ROOT VALVES SHALL BE INSTALLED IN ACCORDANCE WITH 22A1427AB, DESIGN SPECIFICATION,PROCESS INSTRUMENT PIPING AND TUBING INSTALLATION.
7. THIS DRAWING INCORPORATES REVISIONS 1,2,3, & 4 TO G.E. DRAWING NO. 117C2235. THE UNNUMBERED INSTRUMENTS ARE FURNISHED WITH THE RECIRCULATION PUMP AND MOTOR.
8. THERMOCOUPLES A-J,L1 & L3 TO BE WIRED OUT THROUGH DRYWELL TO T/C JUNCTION BOX.
9. CLOSED COOLING WATER SYSTEM TO AND FROM RECIRCULATION PUMP AND MOTOR SHALL BE CAPABLE OF CONTINUOUS OPERATION INCLUDING PERIODS OF DRYWELL ISOLATION.
10. REFER TO PIPING SPECIFICATION M300 & M600 FOR PIPING MATERIALS,VALVE CLASSIFICATIONS AND INSTRUMENT PIPING STANDARDS.
11. REFER TO FMPS Q-LIST TO IDENTIFY THE Q AND NON-Q COMPONENTS OF THE PUMP MECHANICAL SEAL.

## LIST OF PUMP & MOTOR THERMOCOUPLES & ASSOCIATED COMPUTER POINTS

| | | | |
|---|---|---|---|
| | TE-A1,A2 | – THRUST BEARING,UPPER FACE | REC 118 |
| TE-202-1A | TE-B1,B2 | – THRUST BEARING,LOWER FACE | |
| TE-202-1A | TE-C1,C2 | – UPPER GUIDE BEARING | |
| TE-202-1A | TE-D1,D2 | – MOTOR WINDING "A" | |
| TE-202-1A | TE-E1,E2 | – MOTOR WINDING "B" | |
| | TE-F1,F2 | – MOTOR WINDING "C" | REC 080 |
| TE-202-1A | TE-G1,G2 | – LOWER GUIDE BEARING | |
| | TE-H | – #2 SEAL CAVITY | REC 124 |
| | TE-J | – #1 SEAL CAVITY | REC 122 |
| | TE-262-2-11A | – MOTOR BEARING OIL COOLING WATER | |
| | TE-262-2-13A | – SEAL CAVITY COOLING WATER | |
| | TE-5050-28 | – MOTOR AIR OUTLET | |
| | TE-G1A | – DRIVE MOTOR OUTBOARD BRG TEMP | REC 088 |
| | TE-G2A | – DRIVE MOTOR INBOARD BRG TEMP | REC 092 |
| | TE-J1A | – GENERATOR OUTBOARD BRG TEMP | REC 096 |
| | TE-J2A | – GENERATOR INBOARD BRG TEMP | REC 100 |
| | TE-1A | – FLUID DRIVE IMP OUTBOARD BRG TEMP | REC 104 |
| | TE-1B | – FLUID DRIVE IMP INBOARD BRG TEMP | REC 105 |
| | TE-1C | – FLUID DRIVE RUNNER INBOARD BRG TEMP | REC 108 |
| | TE-1D | – FLUID DRIVE RUNNER OUTBOARD BRG TEMP | REC 106 |
| | TE-H2 | – GENERATOR WINDING TEMP "A" PHASE | REC 084 |

SYSTEM INTENDED FUNCTION BOUNDARY

COMPONENTS SUBJECT TO AMR

PRIMARY CONTAINMENT PENETRATIONS AMRM-20

| TITLE OF REFERENCE DRAWINGS | DWG NUMBER |
|---|---|
| HVAC TEMP CONTROL DIAGS.FOR REACTOR BLDG.REACTOR BLDG.AUX BAY & BOILER ROOM | M282 |
| CONTROL ROD DRIVE HYDRAULIC SYSTEM | M250 SH 2 |
| COOLING WATER SYSTEM-REACTOR BUILDING | M215 SH 3 |
| VARIABLE SPEED RECIRC.PUMP & MG SET ELEMENTARY DIAGRAM | M1E35-8 |
| RECIRC FLOW CONTROL SYS.BLOCK DIAGRAM | M1E8-7 SH 1 |
| NUCLEAR BOILER SYS.P & ID | M252 |

| NO | DATE | REVISIONS | BY | ENG | CHK | APP |
|---|---|---|---|---|---|---|
| E16 | 6/8/93 | REVISED PER DCN 03-15590 | TEB | – | AEJ | WJB |
| E15 | 8/8/97 | REVISED FOR PR 97.0490 PER DCN 02166 | TEB | – | AEJ | DLJ |
| E14 | 6/9/97 | REVISED FOR PR 97.0667 PER DCN 01509 | TEB | – | AEJ | DLJ |
| E13 | 2/25/97 | REVISED PER DCN 97-01168 | CTS | – | AEJ | DLJ |
| E12 | 2/25/97 | ELECTRONIC CONVERSION PER DCN 97-00230 | TEB | – | AEJ | AJB |
| E11 | 5/26/92 | REVISED PER PDC 92-53 | CTS | RMB | SJM | ETA |
| E10 | 4/24/92 | B. REVISED PER PDC 92-58<br>A. REVISED PER FRN 93-510-305 | TEB<br>CTS | NRE<br>RMM | SJM<br>SJM | NJR |
| E9 | 4/24/91 | REVISED PER PR 93.9407.01 | JLP | JRT | SJM | SD |
| E8 | 4/24/91 | PER PHOENIX PROJECT CHANGE RECORD APPENDIX (B-39) | JLP<br>AEJ | N/A | RMB<br>PGH | SD<br>LPO |

SCALE NONE | DESIGNED BECHTEL | DRAWN J PERUZZI | E

BOSTON EDISON

PILGRIM STATION NO. 093
BOSTON EDISON COMPANY

TITLE
P & ID
RECIRCULATION PUMP A
INSTRUMENTATION

Q ☒ Non Q

DRAWING NO. M251 SH 1 REV E16

| NO. | DATE | DESCRIPTION | BY | ENG | CHK | APP |
|---|---|---|---|---|---|---|
| 0 | 6-16-05 | . | . | . | . | . |

REVISIONS

LRA-M-251-SH-01-0

CAD FILE LRA-M-251-SH-01_E16.DGN
MASTER FILE M251SH1-CALS_E16.CAL

41100-1953 FSAR FIGURE 4.3-3 (REV 16) Q:\MECH\P&ID\M251SH1.DWG

N-15