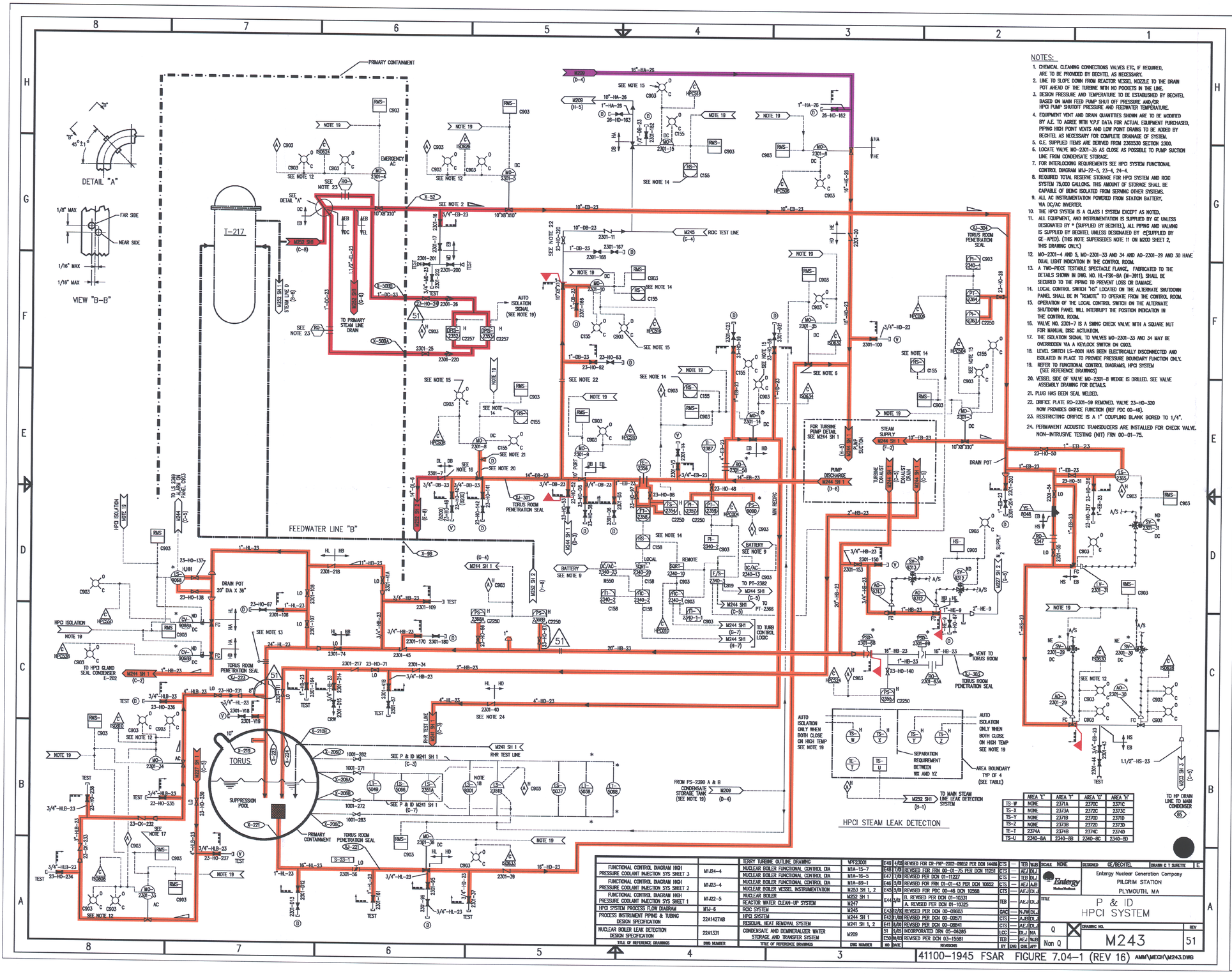

NOTES:

1. CHEMICAL CLEANING CONNECTIONS VALVES ETC, IF REQUIRED, ARE TO BE PROVIDED BY BECHTEL AS NECESSARY.
2. LINE TO SLOPE DOWN FROM REACTOR VESSEL NOZZLE TO THE DRAIN POT AHEAD OF THE TURBINE WITH NO POCKETS IN THE LINE.
3. DESIGN PRESSURE AND TEMPERATURE TO BE ESTABLISHED BY BECHTEL BASED ON MAIN FEED PUMP SHUT OFF PRESSURE AND/OR HPCI PUMP SHUTOFF PRESSURE AND FEEDWATER TEMPERATURE.
4. EQUIPMENT VENT AND DRAIN QUANTITIES SHOWN ARE TO BE MODIFIED BY A.E. TO AGREE WITH V.P.F. DATA FOR ACTUAL EQUIPMENT PURCHASED, PIPING HIGH POINT VENTS AND LOW POINT DRAINS TO BE ADDED BY BECHTEL AS NECESSARY FOR COMPLETE DRAINAGE OF SYSTEM.
5. C.E. SUPPLIED ITEMS ARE DERIVED FROM 2363530 SECTION 2.300.
6. LOCATE VALVE MO-2301-35 AS CLOSE AS POSSIBLE TO PUMP SUCTION LINE FROM CONDENSATE STORAGE.
7. FOR INTERLOCKING REQUIREMENTS SEE HPCI SYSTEM FUNCTIONAL CONTROL DIAGRAM MJJ-22-5, 23-4, 24-4.
8. REQUIRED TOTAL RESERVE STORAGE FOR HPCI SYSTEM AND ROIC SYSTEM 75,000 GALLONS. THIS AMOUNT OF STORAGE SHALL BE CAPABLE OF BEING ISOLATED FROM SERVING OTHER SYSTEMS.
9. ALL AC INSTRUMENTATION POWERED FROM STATION BATTERY, VIA DC/AC INVERTER.
10. THE HPCI SYSTEM IS A CLASS I SYSTEM EXCEPT AS NOTED.
11. ALL EQUIPMENT, AND INSTRUMENTATION IS SUPPLIED BY GE UNLESS DESIGNATED BY * (SUPPLIED BY BECHTEL). ALL PIPING AND VALVING IS SUPPLIED BY BECHTEL UNLESS DESIGNATED BY @(SUPPLIED BY GE-APED). (THIS NOTE SUPERSEDES NOTE 11 ON M200 SHEET 2, THIS DRAWING ONLY.)
12. MO-2301-4 AND 5, MO-2301-33 AND 34 AND AO-2301-29 AND 30 HAVE DUAL LIGHT INDICATION IN THE CONTROL ROOM.
13. A TWO-PIECE TESTABLE SPECTACLE FLANGE, FABRICATED TO THE DETAILS SHOWN IN DWG. NO. HL-FSK-8A (N-3011), SHALL BE SECURED TO THE PIPING TO PREVENT LOSS OR DAMAGE.
14. LOCAL CONTROL SWITCH "HS" LOCATED ON THE ALTERNATE SHUTDOWN PANEL SHALL BE IN "REMOTE" TO OPERATE FROM THE CONTROL ROOM.
15. OPERATION OF THE LOCAL CONTROL SWITCH ON THE ALTERNATE SHUTDOWN PANEL WILL INTERRUPT THE POSITION INDICATION IN THE CONTROL ROOM.
16. VALVE NO. 2301-7 IS A SWING CHECK VALVE WITH A SQUARE NUT FOR MANUAL DISC ACTUATION.
17. THE ISOLATION SIGNAL TO VALVES MO-2301-33 AND 34 MAY BE OVERRIDDEN VIA A KEYLOCK SWITCH ON C903.
18. LEVEL SWITCH LS-8001 HAS BEEN ELECTRICALLY DISCONNECTED AND ISOLATED IN PLACE TO PROVIDE PRESSURE BOUNDARY FUNCTION ONLY.
19. REFER TO FUNCTIONAL CONTROL DIAGRAMS, HPCI SYSTEM (SEE REFERENCE DRAWINGS)
20. VESSEL SIDE OF VALVE MO-2301-8 WEDGE IS DRILLED. SEE VALVE ASSEMBLY DRAWING FOR DETAILS.
21. PLUG HAS BEEN SEAL WELDED.
22. ORIFICE PLATE RO-2301-59 REMOVED. VALVE 23-HO-320 NOW PROVIDES ORIFICE FUNCTION (REF PDC 00-46).
23. RESTRICTING ORIFICE IS A 1" COUPLING BLANK BORED TO 1/4".
24. PERMANENT ACOUSTIC TRANSDUCERS ARE INSTALLED FOR CHECK VALVE. NON-INTRUSIVE TESTING (NIT) FRN 00-01-75.

	AREA 'E'	AREA 'F'	AREA 'G'	AREA 'H'
TS-W	NONE	2371A	2370C	2371C
TS-X	NONE	2373A	2372C	2373C
TS-Y	NONE	2371B	2370D	2371D
TS-Z	NONE	2373B	2372D	2373D
TE-T	2374A	2374B	2374C	2374D
TS-U	2340-8A	2340-8B	2340-8C	2340-8D

TITLE OF REFERENCE DRAWINGS	DWG NUMBER
FUNCTIONAL CONTROL DIAGRAM HIGH PRESSURE COOLANT INJECTION SYS SHEET 3	M1J24-4
FUNCTIONAL CONTROL DIAGRAM HIGH PRESSURE COOLANT INJECTION SYS SHEET 2	M1J23-4
FUNCTIONAL CONTROL DIAGRAM HIGH PRESSURE COOLANT INJECTION SYS SHEET 1	M1J22-5
HPCI SYSTEM PROCESS FLOW DIAGRAM	M1J-6
PROCESS INSTRUMENT PIPING & TUBING DESIGN SPECIFICATION	22A1427AB
NUCLEAR BOILER LEAK DETECTION DESIGN SPECIFICATION	22A1331

TITLE OF REFERENCE DRAWINGS	DWG NUMBER
TERRY TURBINE OUTLINE DRAWING	MFF2301
NUCLEAR BOILER FUNCTIONAL CONTROL DIA	M1A-15-7
NUCLEAR BOILER FUNCTIONAL CONTROL DIA	M1A-16-5
NUCLEAR BOILER FUNCTIONAL CONTROL DIA	M1A-69-1
NUCLEAR BOILER VESSEL INSTRUMENTATION	M253 SH 1, 2
NUCLEAR BOILER	M252 SH 1
REACTOR WATER CLEAN-UP SYSTEM	M247
ROIC SYSTEM	M245
HPCI SYSTEM	M244 SH 1
RESIDUAL HEAT REMOVAL SYSTEM	M241 SH 1, 2
CONDENSATE AND DEMINERALIZER WATER STORAGE AND TRANSFER SYSTEM	M209

NO	DATE	REVISIONS	BY	ENG	CHK	APP
E49	4/00	REVISED FOR CR-PNP-2002-09652 PER DCN 14498	CTS	—	TEB	WJB
E48	7/99	REVISED FOR FRN 00-01-75 PER DCN 11251	CTS	—	AEJ	DLJ
E47	7/99	REVISED PER DCN 01-11227	CTS	—	TEB	DLJ
E46	5/99	REVISED FRN 01-01-43 PER DCN 10852	CTS	—	AEJ	AJB
E45	5/99	REVISED FOR PDC 00-46 DCN 10598	CTS	—	AEJ	DLJ
E44	5/99	B. REVISED PER DCN 01-10331 A. REVISED PER DCN 01-10325	TEB	—	AEJ	DLJ
E43	12/98	REVISED PER DCN 00-09803	GAC	—	NJW	DLJ
E42	11/98	REVISED PER DCN 00-09571	CTS	—	AJB	DLJ
E41	8/98	REVISED PER DCN 00-08941	CTS	—	AEJ	DLJ
51	5/98	INCORPORATED FRN 05-06285	LCC	—	DLJ	NA
E50	8/03	REVISED PER DCN 03-15581	TEB	—	AEJ	WJB

SCALE NONE | DESIGNED GE/BECHTEL | DRAWN C T SURETTE | E

Entergy Nuclear Generation Company
PILGRIM STATION
PLYMOUTH, MA

TITLE
P & ID
HPCI SYSTEM

Q | Non Q | DRAWING NO. M243 | REV 51

NO	DATE	DESCRIPTION	BY	ENG	CHK	APP
0	11-14-05					

REVISIONS
LRA-M-243-0

CAD FILE LRA-M-243_E51.DGN
RASTER FILE M243-CALS_E51.CAL

41100-1945 FSAR FIGURE 7.04-1 (REV 16) AMM\MECH\M243.DWG

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