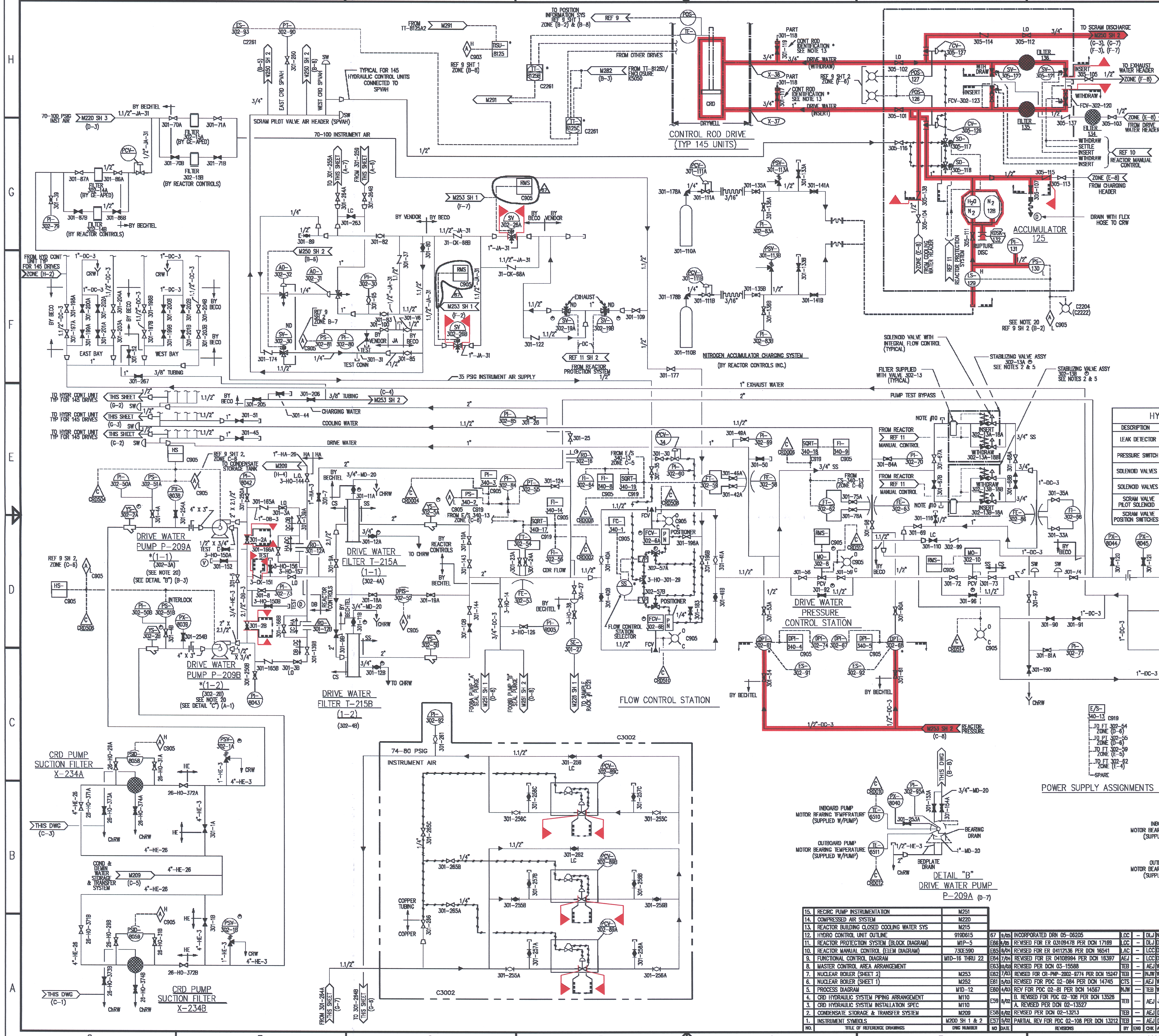

GENERAL NOTES

1. SOLENOID VALVES ARE SHOWN IN DE-ENERGIZED POSITION.
2. INSERT STABILIZING VALVE CLOSES ON DRIVE INSERT SIGNAL, WITHDRAW STABILIZING VALVE CLOSES ON DRIVE WITHDRAW SIGNAL, BUT DOES NOT STAY CLOSED DURING SETTLING.
3. PRESSURE AT THIS POINT SHALL NOT EXCEED Pr+5 PSIG (Pr IS DEFINED AS REACTOR PRESSURE IN THE SHROUD INNER ANNULUS IMMEDIATELY ABOVE THE CORE PLATE).
4. REACTOR PRESSURE SENSING LINE SENSES Pr.
5. STAB VALVE 302-13B IS AN ALTERNATE FOR STAB VALVE 302-13A.
6. BRASS COPPER SOLDERED JOINTS.
7. ALL PARTS NUMBERS ARE DERIVED FROM 236X530.
8. VENT VALVES WITH CAPS ARE PROVIDED AT ALL SYSTEM HIGH POINTS.
9. DRAIN VALVES WITH CAPS ARE PROVIDED AT ALL SYSTEM LOW POINTS.
10. PROVIDED FOR SYSTEM FLUSHING.
11. FOR INSTRUMENT FLUSHING, NO PERMANENT CONNECTIONS AT THIS POINT.
12. ALL INSTRUMENT LINES ARE 1/2"-80 SS UNLESS OTHERWISE NOTED.
13. SYSTEM DESIGN IS SHOWN FOR 145 CONTROL ROD DRIVES (CRD). TYPICAL VALVE NUMBERING IS: NO. – CONTROL ROD ID.
14. ALL MANUAL AND CHECK VALVES NUMBERS WITHOUT HYPENS ARE PREFIXED WITH "301-".
15. REFER TO BECHTEL PIPING SPEC. 6498-M-300 FOR BECHTEL PIPING MATERIALS, VALVE CLASSIFICATIONS AND INSTRUMENT PIPING STANDARDS.
16. THE CONTROL ROD DRIVE & HYDRAULIC SYSTEM IS A CLASS 1 SYSTEM ONLY AS NOTED.
17. THIS DRAWING INCORPORATES REVISIONS 1, 2, 3 & 4 OF GE-APED DRAWING 104R966 (M-IT-6).
18. ALL EQUIPMENT AND INSTRUMENTATION ARE SUPPLIED BY GE-APED UNLESS DESIGNATED BY * (BECHTEL OR BECO SUPPLIED). ALL PIPING AND VALVING ARE SUPPLIED BY BECHTEL EXCEPT AS SUB-CONTRACTED TO REACTOR CONTROL, INC. AS NOTED, OR UNLESS DESIGNATED BY ⊙(GE-APED SUPPLIED).
19. REFER TO M215 FOR COOLING WATER HEADERS, REFER TO WORTHINGTON DWG RX-150684 (M9-2) AND GE DWG 657D145 (M9-1) FOR CRD PUMP AND COOLING WATER SYSTEM.
20. ALARM ACTUATED ON HIGH LEVEL OR LOW PRESSURE.
21. FOR LOCATION AND IDENTIFICATION OF INSTRUMENTS SEE MPL ITEM NO. 990.

HYDRAULIC CONTROL UNIT INSTRUMENTS

DESCRIPTION	IDENTITY	FUNCTION	SETTING
LEAK DETECTOR	LS-129 ZONE (F-3)	ALARM, CONTROL ROOM & LOCAL INDICATION	CONTACTS OPEN ON RISING LIQUID LEVEL
PRESSURE SWITCH	PS-130 ZONE (F-2)	ALARM, CONTROL ROOM & LOCAL INDICATION	CONTACTS OPEN ON DECREASING PRESS.
SOLENOID VALVES	ZONE (H-2) & (H-3)	DIRECTION CONT / WITHDRAW	————
SOLENOID VALVES	ZONE (H-2) & (H-3)	DIRECTION CONT / INSERT	————
SCRAM VALVE PILOT SOLENOID	ZONE (G-3)	SCRAM	————
SCRAM VALVE POSITION SWITCHES	ZONE (H-3)	POSITION INDICATOR, CONTROL ROOM	CONTACTS CLOSE WHEN VALVES ARE OPEN

SYSTEM INTENDED FUNCTION BOUNDARY

COMPONENTS SUBJECT TO AMR

REACTOR COOLANT SYSTEM PRESSURE BOUNDARY AMRM-33

NO.	TITLE OF REFERENCE DRAWINGS	DWG NUMBER
15.	RECIRC PUMP INSTRUMENTATION	M251
14.	COMPRESSED AIR SYSTEM	M220
13.	REACTOR BUILDING CLOSED COOLING WATER SYS	M215
12.	HYDRO CONTROL UNIT OUTLINE	919D615
11.	REACTOR PROTECTION SYSTEM (BLOCK DIAGRAM)	M1P-5
10.	REACTOR MANUAL CONTROL (ELEM DIAGRAM)	730E590
9.	FUNCTIONAL CONTROL DIAGRAM	M1D-16 THRU 22
8.	MASTER CONTROL AREA ARRANGEMENT	
7.	NUCLEAR BOILER (SHEET 2)	M253
6.	NUCLEAR BOILER (SHEET 1)	M252
5.	PROCESS DIAGRAM	M1D-12
4.	CRD HYDRAULIC SYSTEM PIPING ARRANGEMENT	M110
3.	CRD HYDRAULIC SYSTEM INSTALLATION SPEC	M110
2.	CONDENSATE STORAGE & TRANSFER SYSTEM	M209
1.	INSTRUMENT SYMBOLS	M200 SH 1 & 2

NO	DATE	REVISIONS	BY	ENG	CHK	APP
67	9/05	INCORPORATED DRN 05-06205	LCC	–	DLJ	NA
E66	4/05	REVISED FOR ER 03109478 PER DCN 17169	LCC	–	DLJ	DLJ
E65	8/04	REVISED FOR ER 04112136 PER DCN 16541	LAC	–	LCC	DLJ
E64	7/04	REVISED FOR ER 04108994 PER DCN 16397	AEJ	–	LCC	DLJ
E63	10/03	REVISED PER DCN 03-15588	TEB	–	AEJ	WJB
E62	7/03	REVISED FOR CR-PNP-2002-9774 PER DCN 15247	TEB	—	NJW	WJB
E61	5/03	REVISED FOR PDC 02-084 PER DCN 14745	CTS	—	AEJ	WJB
E60	4/03	REV FOR PDC 02-81 PER DCN 14567	NJW	—	TEB	WJB
E59	8/02	B. REVISED FOR PDC 02-108 PER DCN 13526 A. REVISED PER DCN 02-13527	TEB	—	AEJ	JAT
E58	6/02	REVISED PER DCN 02-13213	TEB	–	AEJ	DLJ
E57	5/02	PARTIAL REV FOR PDC 02-108 PER DCN 13212	TEB	–	AEJ	DLJ

SCALE NONE | DESIGNED REACTOR CONTROLS | DRAWN BECO | E

Entergy Nuclear Northeast

Entergy Nuclear Generation Company
PILGRIM STATION
PLYMOUTH, MA

TITLE
P & ID CONTROL ROD DRIVE HYDRAULIC SYSTEM

Q ☒ | Non Q

DRAWING NO. M250 SH 1 | REV 67

AMM\MECH\M250SH1.DWG 41100-1952 FSAR DWG FIGURE 3.4-9 (REV 16)

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

REVISIONS

LRA-M-250-SH-01-0

CAD FILE LRA-M-250-SH-01_E67.DGN

RASTER FILE M250SH1-CALS_E67.CAL