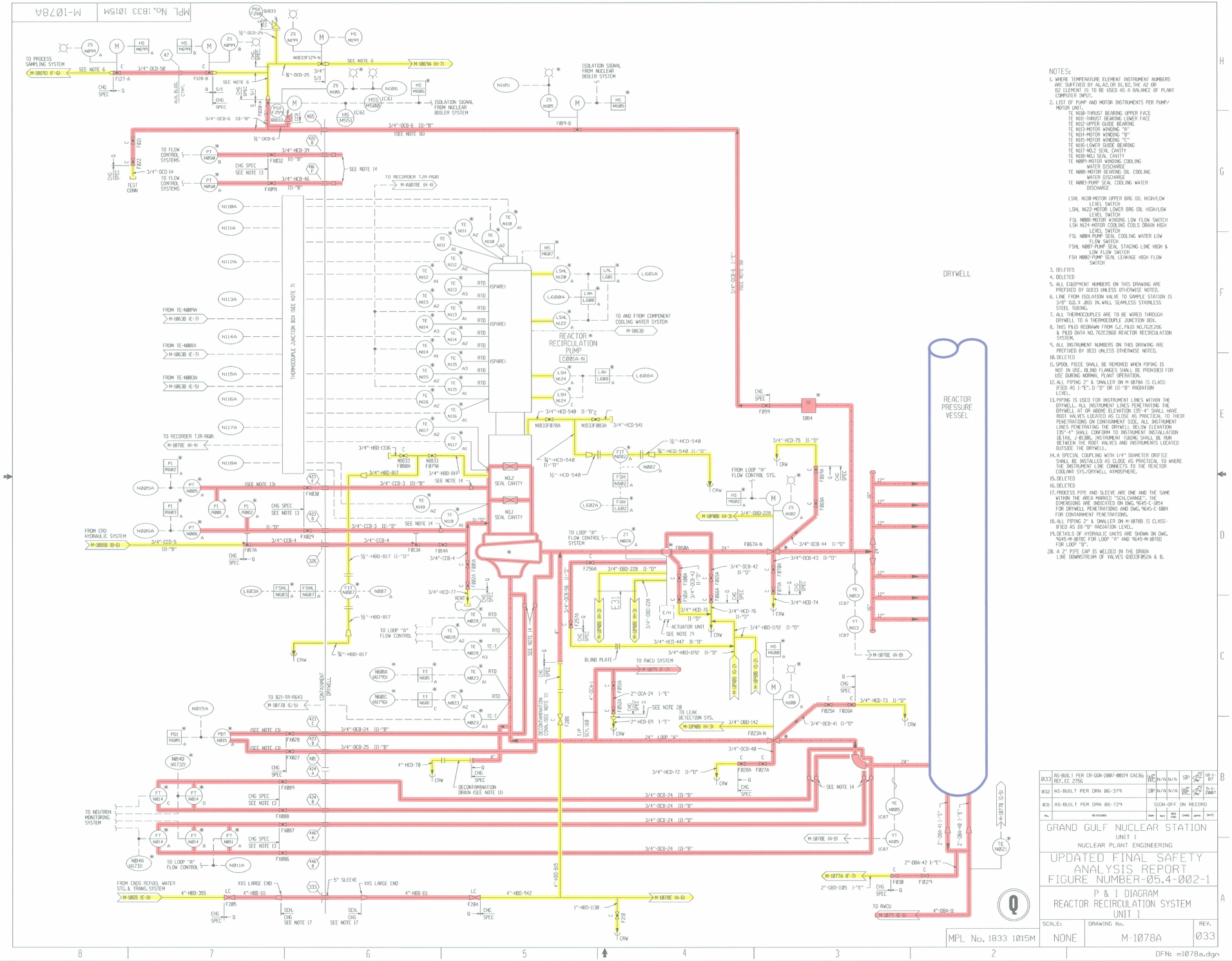
MPL No. 1B33 1015M | M-1078A



NOTES:

1. WHERE TEMPERATURE ELEMENT INSTRUMENT NUMBERS ARE SUFFIXED BY A1, A2, OR B1, B2, THE A2 OR B2 ELEMENT IS TO BE USED AS A BALANCE OF PLANT COMPUTER INPUT.
2. LIST OF PUMP AND MOTOR INSTRUMENTS PER PUMP/MOTOR UNIT.
   - TE N118-THRUST BEARING UPPER FACE
   - TE N111-THRUST BEARING LOWER FACE
   - TE N112-UPPER GUIDE BEARING
   - TE N113-MOTOR WINDING "A"
   - TE N114-MOTOR WINDING "B"
   - TE N115-MOTOR WINDING "C"
   - TE N116-LOWER GUIDE BEARING
   - TE N117-NOZ SEAL CAVITY
   - TE N118-NOJ SEAL CAVITY
   - TE N0M9-MOTOR WINDING COOLING WATER DISCHARGE
   - TE N001-MOTOR BEARING OIL COOLING WATER DISCHARGE
   - TE N003-PUMP SEAL COOLING WATER DISCHARGE
   - LSHL N120-MOTOR UPPER BRG OIL HIGH/LOW LEVEL SWITCH
   - LSHL N122-MOTOR LOWER BRG OIL HIGH/LOW LEVEL SWITCH
   - FSL N008-MOTOR WINDING LOW FLOW SWITCH
   - LSH N124-MOTOR COOLING COILS DRAIN HIGH LEVEL SWITCH
   - FSL N004-PUMP SEAL COOLING WATER LOW FLOW SWITCH
   - FSHL N007-PUMP SEAL STAGING LINE HIGH & LOW FLOW SWITCH
   - FSH N002-PUMP SEAL LEAKAGE HIGH FLOW SWITCH
3. DELETED
4. DELETED
5. ALL EQUIPMENT NUMBERS ON THIS DRAWING ARE PREFIXED BY Q1B33 UNLESS OTHERWISE NOTED.
6. LINE FROM ISOLATION VALVE TO SAMPLE STATION IS 3/8" O.D. X .065 IN. WALL SEAMLESS STAINLESS STEEL TUBING.
7. ALL THERMOCOUPLES ARE TO BE WIRED THROUGH DRYWELL TO A THERMOCOUPLE JUNCTION BOX.
8. THIS P&ID REDRAWN FROM G.E. P&ID NO.762E286 & P&ID DATA NO. 762E286B REACTOR RECIRCULATION SYSTEM.
9. ALL INSTRUMENT NUMBERS ON THIS DRAWING ARE PREFIXED BY 1B33 UNLESS OTHERWISE NOTED.
10. DELETED
11. SPOOL PIECE SHALL BE REMOVED WHEN PIPING IS NOT IN USE. BLIND FLANGES SHALL BE PROVIDED FOR USE DURING NORMAL PLANT OPERATION.
12. ALL PIPING 2" & SMALLER ON M-1078A IS CLASSIFIED AS I-"E", II-"D" OR III-"B" RADIATION LEVEL.
13. PIPING IS USED FOR INSTRUMENT LINES WITHIN THE DRYWELL. ALL INSTRUMENT LINES PENETRATING THE DRYWELL AT OR ABOVE ELEVATION 135'-4" SHALL HAVE ROOT VALVES LOCATED AS CLOSE AS PRACTICAL TO THEIR PENETRATIONS ON CONTAINMENT SIDE. ALL INSTRUMENT LINES PENETRATING THE DRYWELL BELOW ELEVATION 135'-4" SHALL CONFORM TO INSTRUMENT INSTALLATION DETAIL J-0138G. INSTRUMENT TUBING SHALL BE RUN BETWEEN THE ROOT VALVES AND INSTRUMENTS LOCATED OUTSIDE THE DRYWELL.
14. A SPECIAL COUPLING WITH 1/4" DIAMETER ORIFICE SHALL BE INSTALLED AS CLOSE AS PRACTICAL TO WHERE THE INSTRUMENT LINE CONNECTS TO THE REACTOR COOLANT SYS./DRYWELL ATMOSPHERE.
15. DELETED
16. DELETED
17. PROCESS PIPE AND SLEEVE ARE ONE AND THE SAME WITHIN THE AREA MARKED "SCHL.CHANGE". THE DIMENSIONS ARE INDICATED ON DWG. 9645-C-1054 FOR DRYWELL PENETRATIONS AND DWG. 9645-C-1004 FOR CONTAINMENT PENETRATIONS.
18. ALL PIPING 2" & SMALLER ON M-1078B IS CLASSIFIED AS III-"B" RADIATION LEVEL.
19. DETAILS OF HYDRAULIC UNITS ARE SHOWN ON DWG. 9645-M-1078E FOR LOOP "A" AND 9645-M-1078D FOR LOOP "B".
20. A 2" PIPE CAP IS WELDED IN THE DRAIN LINE DOWNSTREAM OF VALVES Q1B33F052A & B.

COMPONENTS SUBJECT TO AMR

- REACTOR VESSEL AMM01
- REACTOR COOLANT SYSTEM PRESSURE BOUNDARY AMM03
- NON-SAFETY RELATED SYSTEMS & COMPONENTS AFFECTING SAFETY RELATED SYSTEMS AMM20

NO.	REVISIONS	DWN	REV	REQ ENG	CHKD	APPR	DATE
Ø33	AS-BUILT PER CR-GGN-2007-00819 EA136J REF.EC 2756	WE	N/A	N/A	N/A	SEP	10-15-07
Ø32	AS-BUILT PER DRN 06-379	SEP	N/A	N/A	N/A	WE	5-1-2007
Ø31	AS-BUILT PER DRN 06-729	SIGN-OFF ON RECORD					

GRAND GULF NUCLEAR STATION
UNIT 1
NUCLEAR PLANT ENGINEERING

UPDATED FINAL SAFETY ANALYSIS REPORT
FIGURE NUMBER-05.4-002-1

P & I DIAGRAM
REACTOR RECIRCULATION SYSTEM
UNIT 1

SCALE:	DRAWING No.	REV.
NONE	M-1078A	Ø33

MPL No. 1B33 1015M

DFN: m1078a.dgn

NO.	DATE	DESCRIPTION	BY	ENG	CHK	APP
0	10-16-2011					

REVISIONS

LRA-M-1078A

CAD FILE: m1078a.DGN

MASTER FILE:

D012