MPL NO. 1C11 1015M

M-1081A

SCRAM DISCHARGE VOLUME PIPING

CONTAINMENT BUILDING

AUXILIARY BUILDING

SCRAM VALVE PILOT AIR HEADER

PUMP SUCTION FILTER

PUMP SUCTION FILTER

PUMP BACKWASH SUCTION FILTER

DRIVE WATER PUMP

DRIVE WATER PUMP

DRIVE WATER FILTER

DRIVE WATER FILTER

TO SUPPRESSION POOL TERMINATE BELOW EL.111'-0" (SEE NOTE 6)

TO SUPPRESSION POOL TERMINATE BELOW EL.111'-0" (SEE NOTE 6)

FROM OTHER HCU'S

FROM OTHER HCU'S

FR. HCU

FROM OTHER HYDRAULIC CONTROL UNITS

FROM OTHER HYDRAULIC CONTROL UNITS

FROM HYDRAULIC CONTROL UNIT M-1081B (G-2)

TO HYDRAULIC CONTROL UNITS M-1081B (H-2)

TO HYDRAULIC CONTROL UNITS M-1081B (H-2)

FROM REACTOR PROTECTION SYSTEM

FROM REACTOR PROTECTION SYSTEM

FROM REACTOR PROTECTION SYSTEM

FROM REACTOR PROTECTION SYSTEM

FROM REACTOR PROTECTION SYSTEM

TO REACTOR PROTECTION SYSTEM

TO REACTOR PROTECTION SYSTEM

TO MSTR. AIR SUPPLY M-1081B (A-6)

FROM CONDENSATE SYS. M-1081B (C-8)

TO CONDENSATE STORAGE TANK M-1085 (F-3)

TO & FROM COMPONENT COOLING WATER SYSTEM M-1083

TO & FROM COMPONENT COOLING WATER SYSTEM M-1083

TO RPS

TO RPS

TO CRD HYDR.SYS. M-1081B (C-8)

VENT VALVE ELEVATION

SCRAM VOLUME

SCRAM ELEVATION

HALF THE INSTRUMENT VOLUME

ROD BLOCK ELEVATION

INSTRUMENT VOLUME

ALARM ELEVATION 3-1 GAL

TEST CONNECTION

ROD WITHDRAWAL BLOCK

POSITIVE PRESSURE SEAL LINE

AT 90° SIDE

AT 270° SIDE

1. ALL EQUIPMENT NUMBERS ARE PREFIXED BY N1C11 UNLESS OTHERWISE NOTED.
2. ALL INSTRUMENT NUMBERS ARE PREFIXED BY 1C11 UNLESS OTHERWISE NOTED.
3. THIS P. & I.D. REDRAWN FROM GE, P. &I.D. NO. 767E673 REV.-2, CONTROL ROD DRIVE HYDRAULIC SYSTEM.
4. DELETED.
5. THE DRIVE WATER INSERT AND WITHDRAWAL LINES WILL BE ARRANGED IN MULTIPLE PENETRATIONS.
6. SCRAM DISCHARGE VENT AND DRAIN MUST BE SUBMERGED DUE TO STEAM LEAKOFF.
7. CONTINUOUS FLOW TO REACTOR SAMPLE STATION SHOULD BE 1 LITER/MIN. MAXIMUM.
8. INSTRUMENTS AND EQUIPMENT WITH XX SUFFIX DESIGNATION ARE TYPICAL FOR 193. SEE THE INSTRUMENT INDEX FOR THE SUFFIX LETTERS ASSOCIATED WITH EACH CONTROL ROD.
9. DELETED.
10. DELETED.
11. SCRAM DISCHARGE VOLUME PIPING IE-41 ON THIS DRAWING IS SUPPLIED BY SUBCONTRACTOR UNLESS OTHERWISE NOTED.
12. ALL PIPING 2" AND SMALLER IS CLASSIFIED AS III-"S" RADIATION LEVEL, UNLESS OTHERWISE NOTED.
13. DELETED.
14. ALL START-UP STRAINERS HAVE BEEN REPLACED BY RING SPACERS IN ACCORDANCE WITH THE LATEST REVISION OF 9645-MS-03 GENERAL NOTE 17.
15. EXHAUST FLOW FROM MOVING DRIVES IS DISPERSED VIA THE HCUS OF ALL OTHER, NON-MOVING DRIVES TO REACTOR VESSEL.
16. PROVIDE VENT VALVES WITH CAP ON DISCHARGE SIDE AT ALL SYSTEM HIGH POINTS.
17. VACUUM BREAKER VALVES F427A&B AND F428A&B AND VENT VALVES F010A AND F108 ARE TO BE ON THE HIGH POINT OF THE VENT LINE.
18. THE DESIGN OF THE VENT AND DRAIN SYSTEM PIPING ASSOCIATED WITH THE SCRAM DISCHARGE VOLUME MUST CONSIDER THE TRANSIENT LOADINGS THAT MAY RESULT FROM VARIOUS SCRAM CONDITION.
19. ALL VENT AND DRAIN LINES COMING FROM THE SCRAM DISCHARGE VOLUME SHALL HAVE A CONTINUOUS DOWNWARD PITCH AWAY FROM THE SCRAM DISCHARGE VOLUME.
20. THE BYPASS VALVE (F164B) NORMALLY REMAINS CLOSED DURING REACTOR OPERATION AND ARI SCRAM INITIATION, THE VALVE IS ACTUATED (OPENED) ONLY DURING THE TESTING OF THREE-WAY VALVE (F163B) TO PROVIDE SUPPLY AIR INTO THE AIR HEADER.
21. THIS A THREADED TEST CONNECTION. DO NOT USE THREAD SEALING COMPOUNDS AT THIS CONNECTION. TEFLON TAPE MAY BE USED DURING TESTING.

COMPONENTS SUBJECT TO AMR

- NON-SAFETY RELATED SYSTEMS & COMPONENTS AFFECTING SAFETY RELATED SYSTEMS AMM20
- CONTROL ROD DRIVE SYSTEM AMM25

NO.	REVISIONS	DWN	REV	RES ENG	CHKD	APPR	DATE
038	AS-BUILT PER DRN 8338	WE	N/A	N/A	DH	HDB	4-9-03
037	AS-BUILT PER ER 96/0882-00-00, CN 99/0014	WE	N/A	N/A	JAB	JAB	12-7-99

GRAND GULF NUCLEAR STATION
UNIT 1
NUCLEAR PLANT ENGINEERING

UPDATED FINAL SAFETY ANALYSIS REPORT
FIGURE NUMBER -4.6-007

P & I DIAGRAM
CONTROL ROD DRIVE HYDRAULIC SYSTEM

MPL No. 1C11 1015M	SCALE: NONE	DRAWING No. M-1081A	REV. 038

DFN: m1081a.dgn

NO.	DATE	DESCRIPTION	BY	ENG	CHK	APP
0	10-13-2011	-	-	-	-	-

REVISIONS

LRA-M-1081A

CAD FILE m1081a.DGN

RASTER FILE

D020