

**CLINTON POWER STATION  
FINAL SAFETY ANALYSIS REPORT**

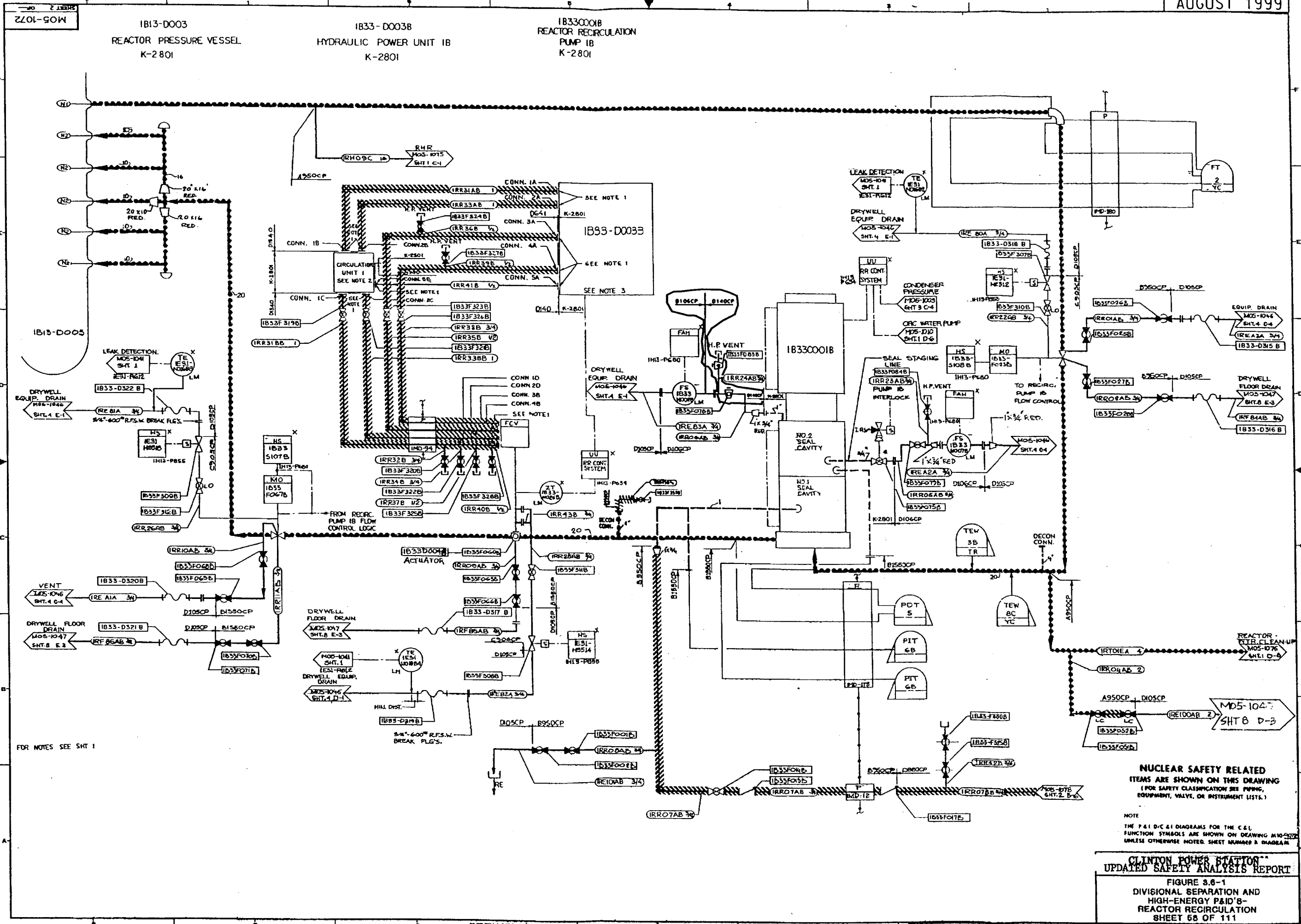
**FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
NUCLEAR BOILER  
SHEET 56 OF 111**



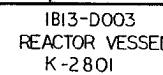
[illegible]

FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY PAID'S-  
REACTOR RECIRCULATION  
SHEET 57 OF 111









**NUCLEAR SAFETY RELATED  
ITEMS ARE SHOWN ON THIS DRAWING  
FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT VALVE OR INSTRUMENT LISTS**

NOTE:  
THE P & I D/C & I DIAGRAMS FOR THE C & I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING MIO-1072  
UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM

**CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT**



RELIEF VALVE DATA				
VALVE NUMBER	MAKE & TYPE	SIZE	VALVE SET PRESSURE	CAPACITY
IE21FD18	RESSER-1-1/2-1970-2(3-1-3-2)-XFA19-NC3007	1/2 x 2	554 PSIG	100 GPM
IE21FD31	RESSER-1-1-1970-2(3-1-1-2)-XFA31-NC3007	1 x 1/2	100 PSIG	>10 GPM

FIELD NOTES

1. BLIND SPECTACLE FLANGE TO BE IN PLACE EXCEPT DURING LPCS PUMP TEST DURING REACTOR SHUTDOWN LINE TO BE BLIND INSTALLED DURING NORMAL PLANT OPERATIONS.
2. VALVE I1E2F042 SHALL BE INSTALLED WITH THE PACKING CLAMP UPSTREAM OF THE DISC.
3. TEMPORARY INLINE STRAINER(CONICAL TYPE) & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP. & INITIAL START UP TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION & CAP & WELD GAUGE PRESSURE SENSING LINE AS SHOWN.
4. FOR LPCS LOGIC SEE 2W DWD #2 B0E51 & FOR ADS LOGIC SEE SG DNG #2 B0E151.
5. RESTRICTING ORIFICE SIZES INDICATED ARE FOR INITIAL SYSTEM START UP ONLY. ADJUST AS NECESSARY TO MEET HYDRAULIC REQUIREMENTS.

**ENGINEERING NOTES:**

1. CHECK VALVE E211-F203 SHOULD BE LOCATED BELOW SUPPRESSION POOL L.W.L. 730'-11"
2. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
3. ALL CHECK VALVES EXTERIOR TO THE CONTAINMENT WALL SHALL BE TESTABLE TO VERIFY FREE MOVEMENT OF THE VALVE DISC. VALVE LOCATION SHOULD EASILY ACCOMMODATE THIS MANUAL TESTING.
4. "MINIMAL DISTANCE" MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMAL AS PRACTICALLY POSSIBLE WITH CONSIDERATION FOR IS1 ACCESS.
5. EQUALIZING VALVE IS OPENED BY ENERGIZING THE AIR SOLENOID LOCALLY.
6. THE PIPING FROM AND INCLUDING GATE VALVE 1E21F371 TO CHECK VALVE 1E21F033 AND FROM AND INCLUDING GATE VALVE 1E21F372 TO CHECK VALVE 1E21F044 (AS 105-1075-001) SHALL BE PER PGT 1050 TO MEET ASME Nc-3612.4(a)(1).

NOTE: PDT 305CP TO MEET ASME NC-3612.4(g)(1).  
THE P & I D/C & I DETAILS FOR THE C & I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9075  
UNLESS OTHERWISE NOTED. SHEET NUMBER & DETAIL  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

**NUCLEAR SAFETY RELATED  
ITEMS ARE SHOWN ON THIS DRAWING  
(FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)**

# CLINTON POWER STATION UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
LOW-PRESSURE CORE SPRAY (LPCS)  
SHEET 60 OF 111



ENGINEERING NOTES:

1. CHECK VALVE IE22-F024 SHALL BE LOCATED AT AN ELEVATION BELOW THE SUPPRESSION POOL LOW WATER LEVEL (730'-11");
2. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
3. ALL CHECK VALVES EXTERIOR TO THE CONTAINMENT SHALL BE TESTABLE TO VERIFY FREE MOVEMENT OF THE VALVE DISC. VALVE LOCATION SHOULD EASILY ACCOMMODATE THIS MANUAL TESTING.
4. \*MINIMAL DISTANCE\* MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMAL AS PRACTICALLY POSSIBLE, WITH CONSIDERATION FOR ISI ACCESS.
5. IE22- R002 IS ABANDONED IN PLACE SEE FDDP LHI-4162-1 FOR DETAILS.
6. EQUALIZING VALVE IS OPENED BY ENERGIZING THE AIR SOLENOID LOCALLY.

## FIELD NOTES :

1. VALVE IE22F023 SHALL BE INSTALLED WITH THE PACKING GLAND ON THE UPSTREAM SIDE OF THE VALVE DISC.
2. TEMPORARY INLINE STRAINER (CONICAL TYPE) & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP & INITIAL START UP TESTING ONLY.(SEE S&L STD. MF-270.91) REMOVE FOR NORMAL PLANT OPERATION & CAP & WELD GAUGE PRESSURE SENSING LINES AS SHOWN.
3. FOR HPCS LOGIC SEE GE DWG. 8286314.
4. SPOOL PIECE FOR TEMPORARY IN LINE STRAINER FOR PRE-OP & INITIAL START UP TESTING ONLY. REMOVE STRAINER FOR NORMAL PLANT OPERATION.
5. RESTRICTING ORIFICE SIZES INDICATED ARE FOR INITIAL SYSTEM START UP ONLY. ADJUST AS NECESSARY TO MEET HYDRAULIC REQUIREMENTS.
6. BLIND FLANGE FOR HYDROSTATIC PRESSURE TEST ONLY. REMOVE FOR NORMAL PLANT OPERATION.

**NUCLEAR SAFETY RELATED**

ITEMS ARE SHOWN ON THIS DRAWING  
1 FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS. 1

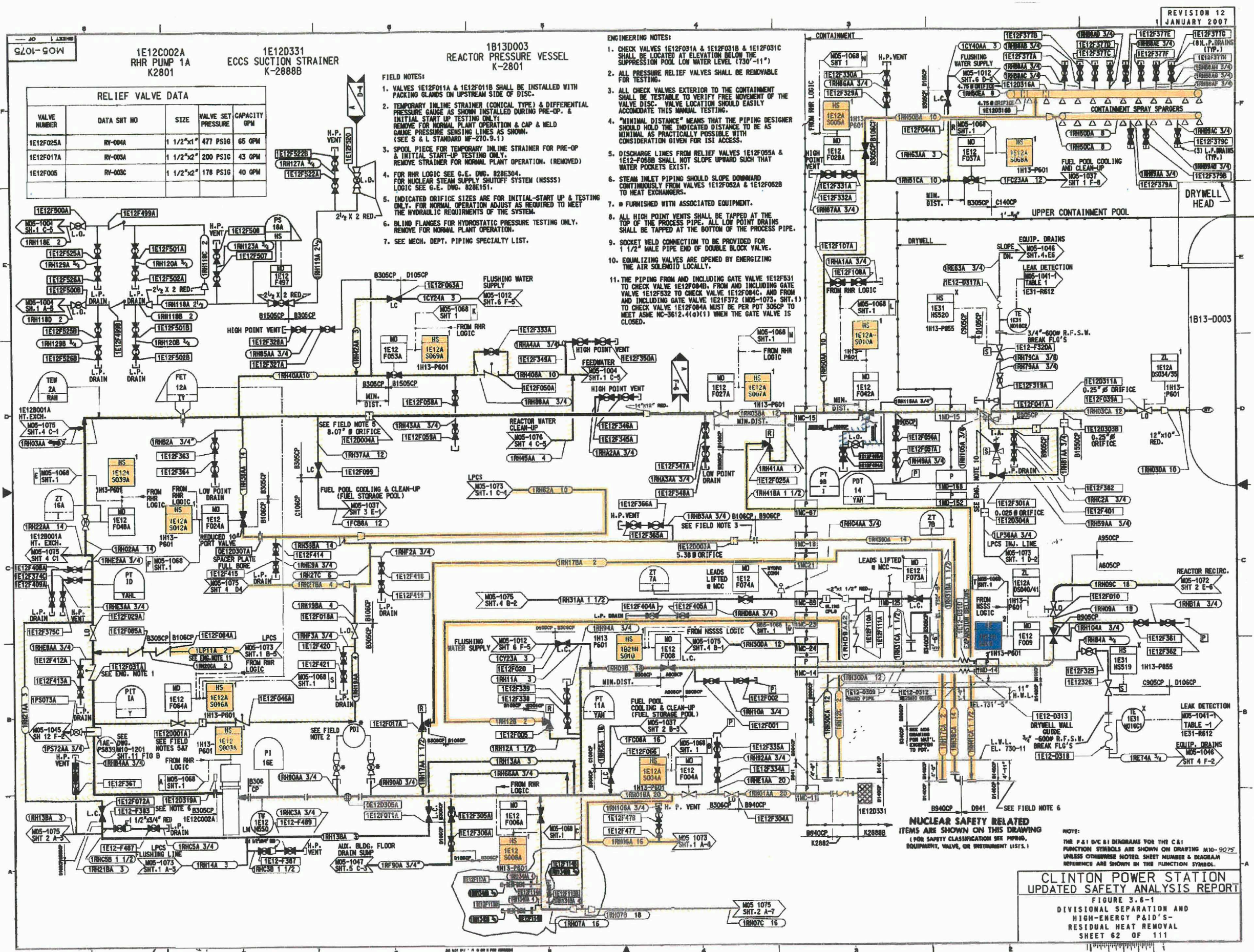
**NOTE**

THE P&ID/C&I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING MID-9074  
UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL

# CLINTON POWER STATION UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
HIGH-PRESSURE CORE SPRAY  
SHEET 61 of 111





9201-SOW

1E12C002A  
RHR PUMP 1A  
K2801

1E12D0331  
ECCS SUCTION STRAINER  
K-2888B

1B13D003  
REACTOR PRESSURE VESSEL  
K-2801

RELIEF VALVE DATA

VALVE NUMBER	DATA SHT NO	SIZE	VALVE SET PRESSURE	CAPACITY GPM
1E12F005A	RY-004A	1 1/2"x1"	477 PSIG	65 GPM
1E12F005B	RY-003A	1 1/2"x2"	200 PSIG	43 GPM
1E12F005C	RY-003C	1 1/2"x2"	178 PSIG	40 GPM

- FIELD NOTES:
1. VALVES 1E12F005A & 1E12F005B SHALL BE INSTALLED WITH PACKING GLANDS ON UPSTREAM SIDE OF DISC.
  2. TEMPORARY IN-LINE STRAINER (CONICAL TYPE) & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP. & INITIAL START-UP TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION & CAP & WELD GAUGE PRESSURE SENSING LINES AS SHOWN. (SEE S & L STANDARD NF-270.9.1)
  3. SPOOL PIECE FOR TEMPORARY IN-LINE STRAINER FOR PRE-OP & INITIAL START-UP TESTING ONLY. REMOVE STRAINER FOR NORMAL PLANT OPERATION. (REMOVED)
  4. FOR RHR LOGIC SEE G.E. DWG. 828E304. FOR NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM (NSSSS) LOGIC SEE G.E. DWG. 828E151.
  5. INDICATED ORIFICE SIZES ARE FOR INITIAL-START UP & TESTING ONLY. FOR NORMAL OPERATION ADJUST AS REQUIRED TO MEET THE HYDRAULIC REQUIREMENTS OF THE SYSTEM.
  6. BLIND FLANGES FOR HYDROSTATIC PRESSURE TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION.
  7. SEE MECH. DEPT. PIPING SPECIALTY LIST.

- ENGINEERING NOTES:
1. CHECK VALVES 1E12F031A & 1E12F031B & 1E12F031C SHALL BE LOCATED AT ELEVATION BELOW THE SUPPRESSION POOL LOW WATER LEVEL (730'-11").
  2. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
  3. ALL CHECK VALVES EXTERIOR TO THE CONTAINMENT SHALL BE TESTABLE TO VERIFY FREE MOVEMENT OF THE VALVE DISC. VALVE LOCATION SHOULD EASILY ACCOMMODATE THIS MANUAL TESTING.
  4. "MINIMAL DISTANCE" MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMAL AS PRACTICALLY POSSIBLE WITH CONSIDERATION GIVEN FOR 1ST ACCESS.
  5. DISCHARGE LINES FROM RELIEF VALVES 1E12F005A & 1E12F005B SHALL NOT SLOPE UPWARD SUCH THAT WATER POCKETS EXIST.
  6. STEAM INLET PIPING SHOULD SLOPE DOWNWARD CONTINUOUSLY FROM VALVES 1E12F005A & 1E12F005B TO HEAT EXCHANGERS.
  7. FURNISHED WITH ASSOCIATED EQUIPMENT.
  8. ALL HIGH POINT VENTS SHALL BE TAPPED AT THE TOP OF THE PROCESS PIPE. ALL LOW POINT DRAINS SHALL BE TAPPED AT THE BOTTOM OF THE PROCESS PIPE.
  9. SOCKET WELD CONNECTION TO BE PROVIDED FOR 1 1/2" MALE PIPE END OF DOUBLE BLOCK VALVE.
  10. EQUALIZING VALVES ARE OPENED BY ENERGIZING THE AIR SOLENOID LOCALLY.
  11. THE PIPING FROM AND INCLUDING GATE VALVE 1E12F531 TO CHECK VALVE 1E12F040B, FROM AND INCLUDING GATE VALVE 1E12F532 TO CHECK VALVE 1E12F040C, AND FROM AND INCLUDING GATE VALVE 1E12F532 (MOS-1073, SHT.1) TO CHECK VALVE 1E12F040A MUST BE PER POT 306CP TO MEET ASME NC-3612.4(c)(1) WHEN THE GATE VALVE IS CLOSED.

REVISION 12  
JANUARY 2007

NUCLEAR SAFETY RELATED  
ITEMS ARE SHOWN ON THIS DRAWING  
(FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY PAID'S-  
RESIDUAL HEAT REMOVAL  
SHEET 62 OF 111

10/03/2006 09:22:32 AM  
VUSA/rev 12/1/03 6-1-62.dgn