





P&ID Color Coding Key for Piping Energy and Physical Separation Designation			
Physical Separation Division	Color	Energy Category	P&ID Designation
X (Non-Divisional)	Black	High PWA High NPWA * Moderate	
I	Yellow	High PWA High NPWA * Moderate	
II	Blue	High PWA High NPWA * Moderate	
III	Green	High PWA High NPWA * Moderate	

NOTES:

The drawings in Figure 3.6-1 should not be used for detailed information and are not updated unless a change affects divisional separation or high-energy lines. Detail information should be taken from P&IDs in the controlled drawing program.

“High PWA” – those lines which are considered to be high energy (refer to subsection 3.6.1.1.1.b) and therefore subject to pipe rupture analysis.

“High NPWA” – those lines which are considered to be moderate energy and not subject to pipe rupture analysis. Those lines fall under the definition in subsection 3.6.2.1.4. These lines operate within the pressure and temperature conditions specified for high energy for short operational periods, or they are high energy but exempted under the size criteria (less than or equal to 1” nominal pipe size).

“Moderate” – those lines which are considered to be moderate energy (refer to subsection 3.6.1.1.1.c).

\* There is no differentiation between moderate energy and low energy.

NOTE:

The drawings in Figure 3.6-1 should not be used for detailed information and are not updated unless a change affects divisional separation or high-energy lines. Detail information should be taken from P&IDs in the controlled drawing program.

## INDEX OF SYSTEMS

<u>Sheet Number(s)</u>	<u>System</u>
5 to 10	Main Steam
11 to 13	Extraction Steam
14	Reactor Feedwater
15	Condensate
16	Condensate Booster
17 to 21	Feedwater Heater Drains – Turbine Cycle
22 & 23	Feedwater Heater Miscellaneous Vents and Drains
24 to 27	Turbine-Generator Miscellaneous Vents and Drains
28 & 29	Turbine Gland Steam Seal System
30 to 33	Auxiliary Steam
34 to 38	Component Cooling Water
39 to 41	Containment Monitoring System
42 & 43	Diesel Generator Fuel Oil System
44 to 46	Fuel Pool Cooling and Cleanup
47 to 51	Shutdown Service Water
52	Combustible Gas Control System
53	Suppression Pool Makeup
54	MSIV Leakage Control System
55 & 56	Nuclear Boiler
57 to 59	Reactor Recirculation
60	Low Pressure Core Spray
61	High Pressure Core Spray
62 to 65	Residual Heat Removal
66 to 69	Reactor Water Cleanup

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT

Figure 3.6-1  
Sheet 2 of 111

DIVISIONAL SEPARATION AND  
HIGH ENERGY P&IDs  
INDEX OF SYSTEMS

NOTE:

The drawings in Figure 3.6-1 should not be used for detailed information and are not updated unless a change affects divisional separation or high-energy lines. Detail information should be taken from P&IDs in the controlled drawing program.

## INDEX OF SYSTEMS

<u>Sheet Number(s)</u>	<u>System</u>
70	Standby Liquid Control
71	Control Rod Drive
72 & 73	Reactor Core Isolation Cooling
74 to 76	Off Gas
77 & 78	Floor Drain Readwaste Process
79 to 81	Chemical Radwaste Reprocessing and Disposal Radwaste Evaporator
82 & 83	Radwaste Sludge Process Concentrate Tank
84 to 90	Control Room HVAC
90A	Laboratory HVAC System
91	Diesel Generator Room Ventilation
92	Fuel Building HVAC
93 & 94	Standby Gas Treatment System
95	Shutdown Service Water System
96 & 97	Drywell Cooling Chilled Water System
98	Drywell Purge
99	Containment Building HVAC
100 to 102	Essential Switchgear Heat Removal
103 & 104	ECCS Equipment Room Cooling
105 & 106	Refrigeration Piping Switchgear Heat Removal
107	Combustible Gas Control System
108 & 109	Radwaste Floor Drain Process
110 & 111	Control Rod Drive System

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT

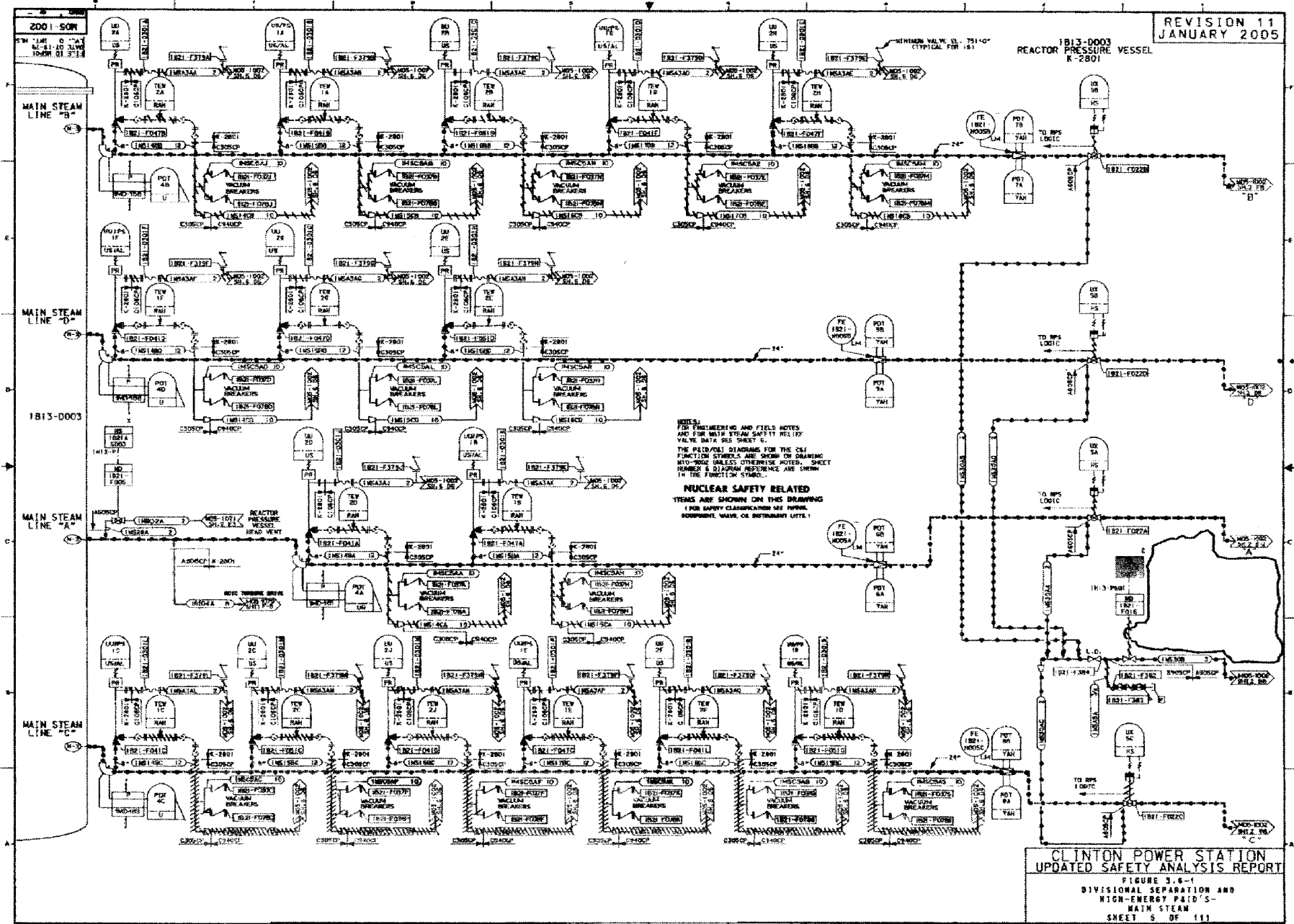
Figure 3.6-1  
Sheet 3 of 111

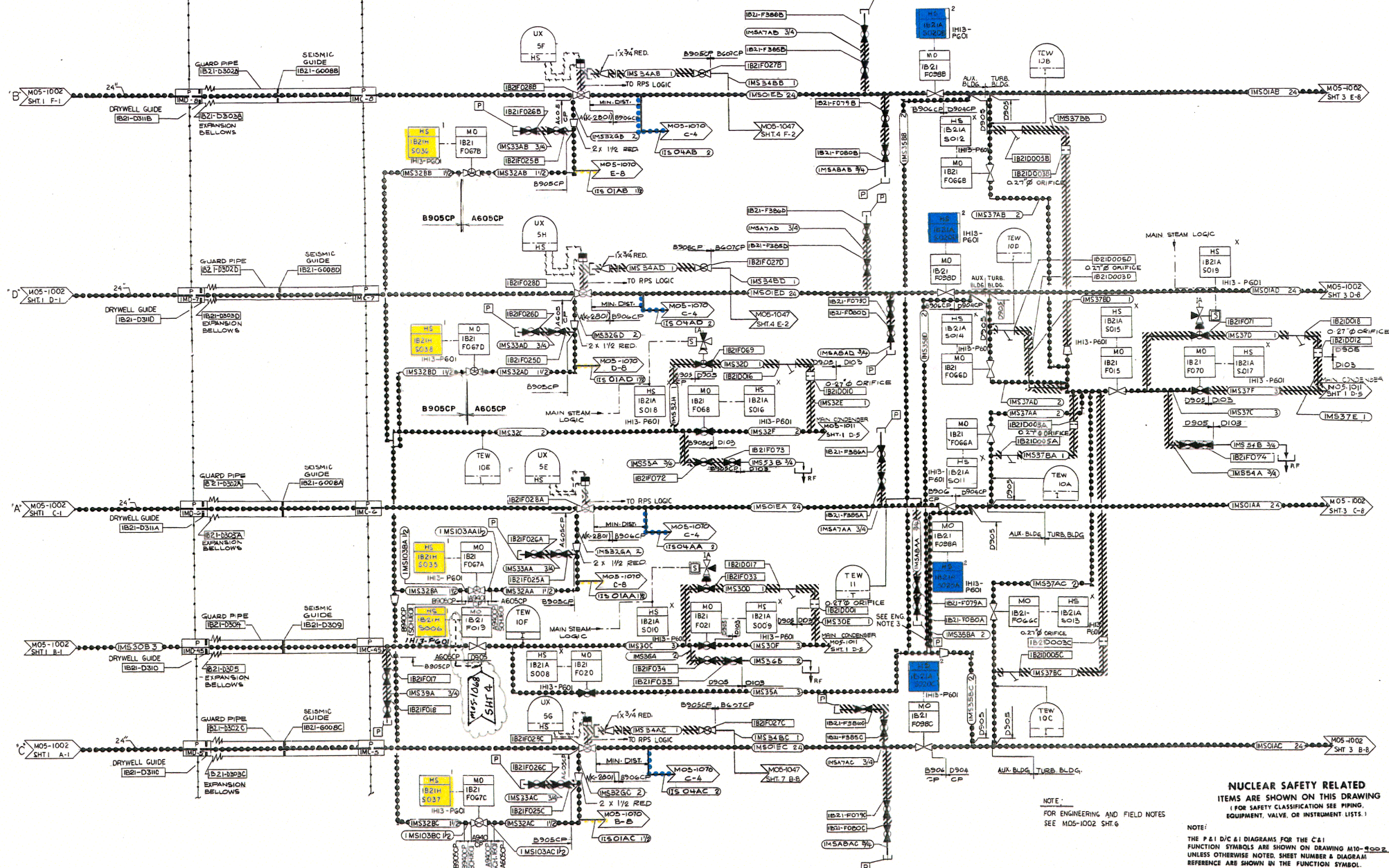
DIVISIONAL SEPARATION AND  
HIGH ENERGY P&IDs  
INDEX OF SYSTEMS

Figure 3.6-1 Sheet 4 of 111 has been deleted

REVISION 11  
JANUARY 2005

1B13-0003  
REACTOR PRESSURE  
VESSEL  
K-2801



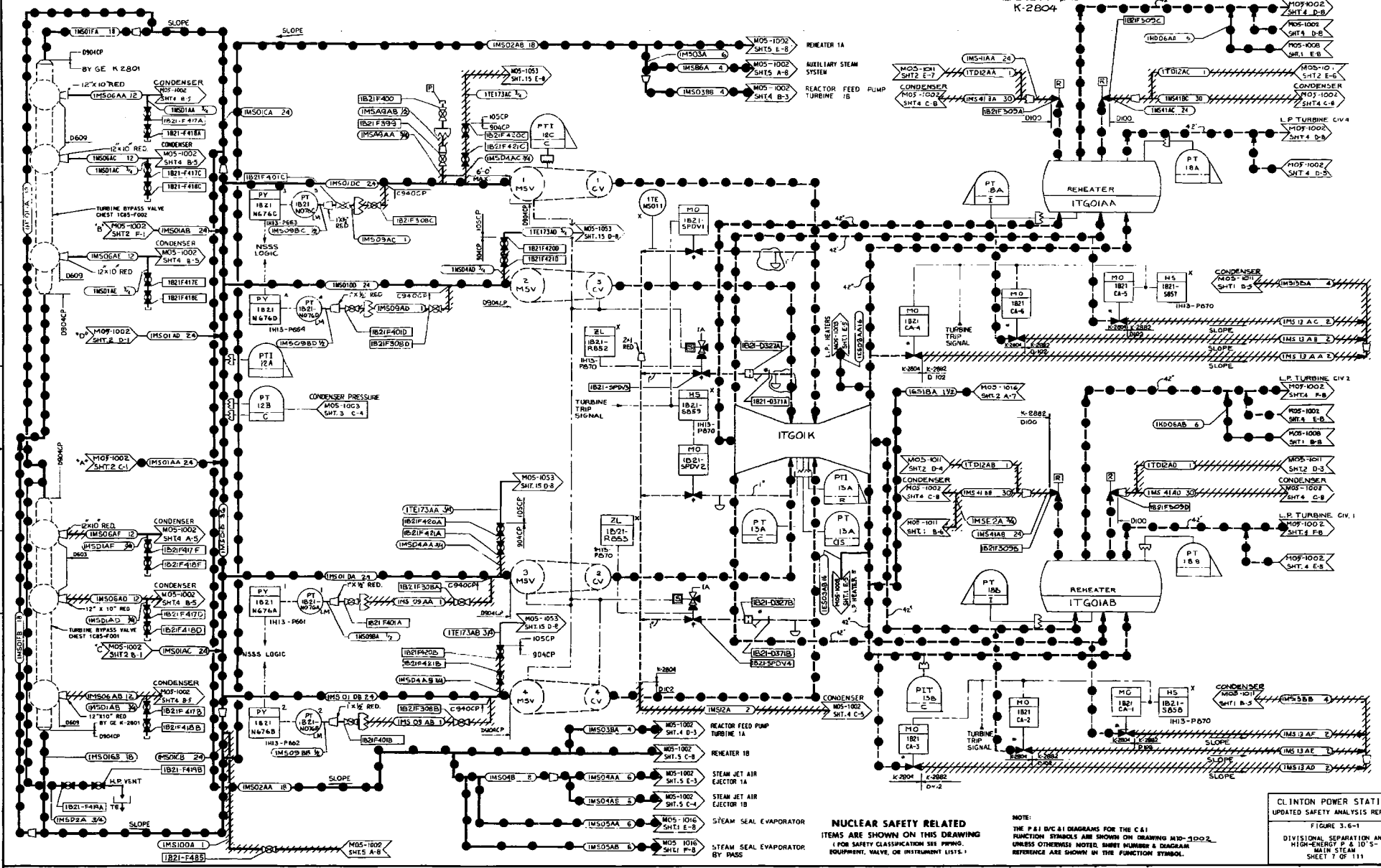


**NUCLEAR SAFETY RELATED  
ITEMS ARE SHOWN ON THIS DRAWING  
(FOR SAFETY CLASSIFICATION SEE P1000,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)**

NOTE:  
THE P&ID'S DIAGRAMS FOR THE C-1  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-1002-2  
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 -  
MAIN STEAM  
SHEET 6 OF 111



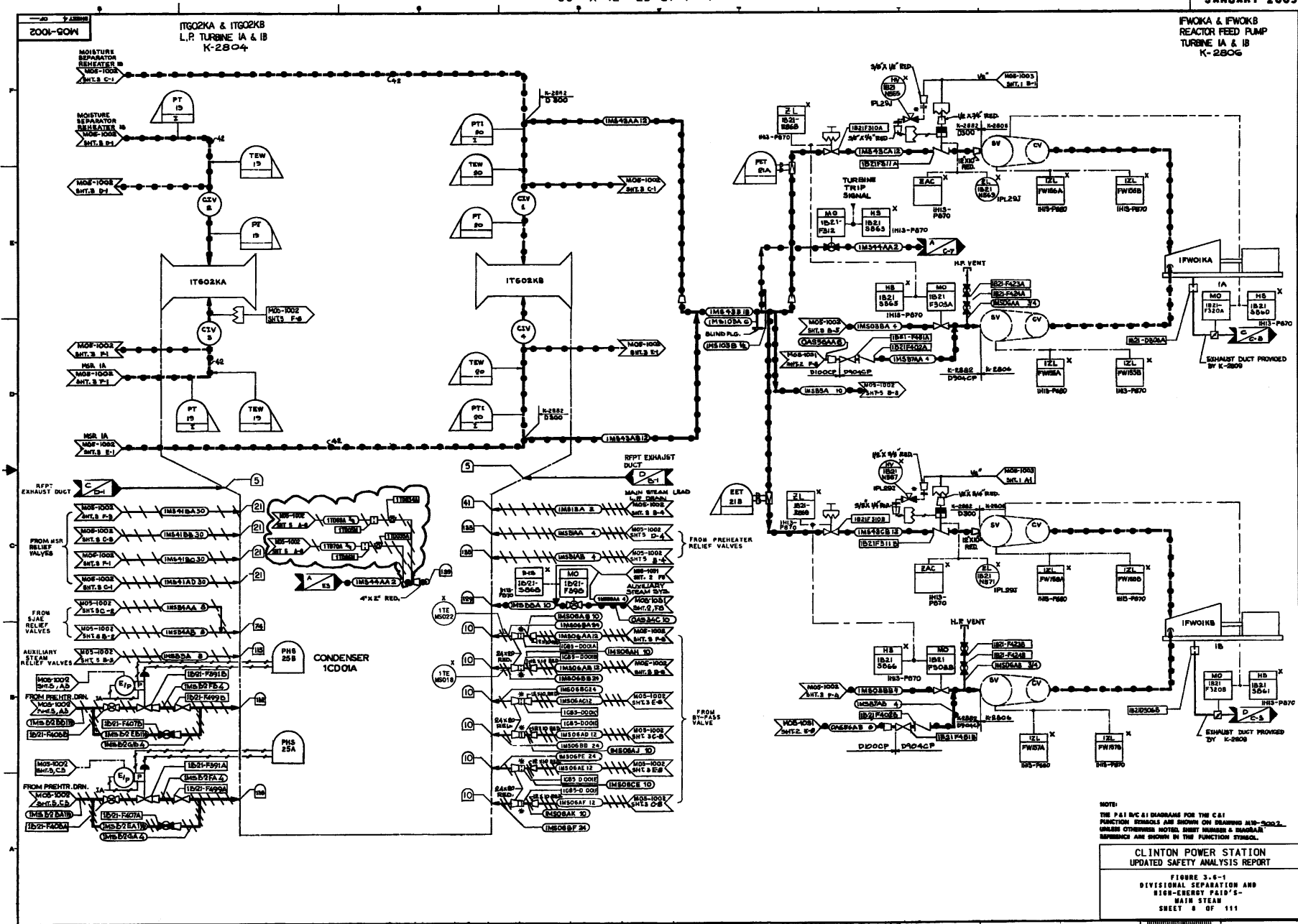
**NUCLEAR SAFETY RELATED**  
ITEMS ARE SHOWN ON THIS DRAWING  
FOR SAFETY CLASSIFICATION SEE Piping  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.

NOTE:  
THE P&ID/C&I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING MIO-1002  
UNLESS OTHERWISE NOTED, SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

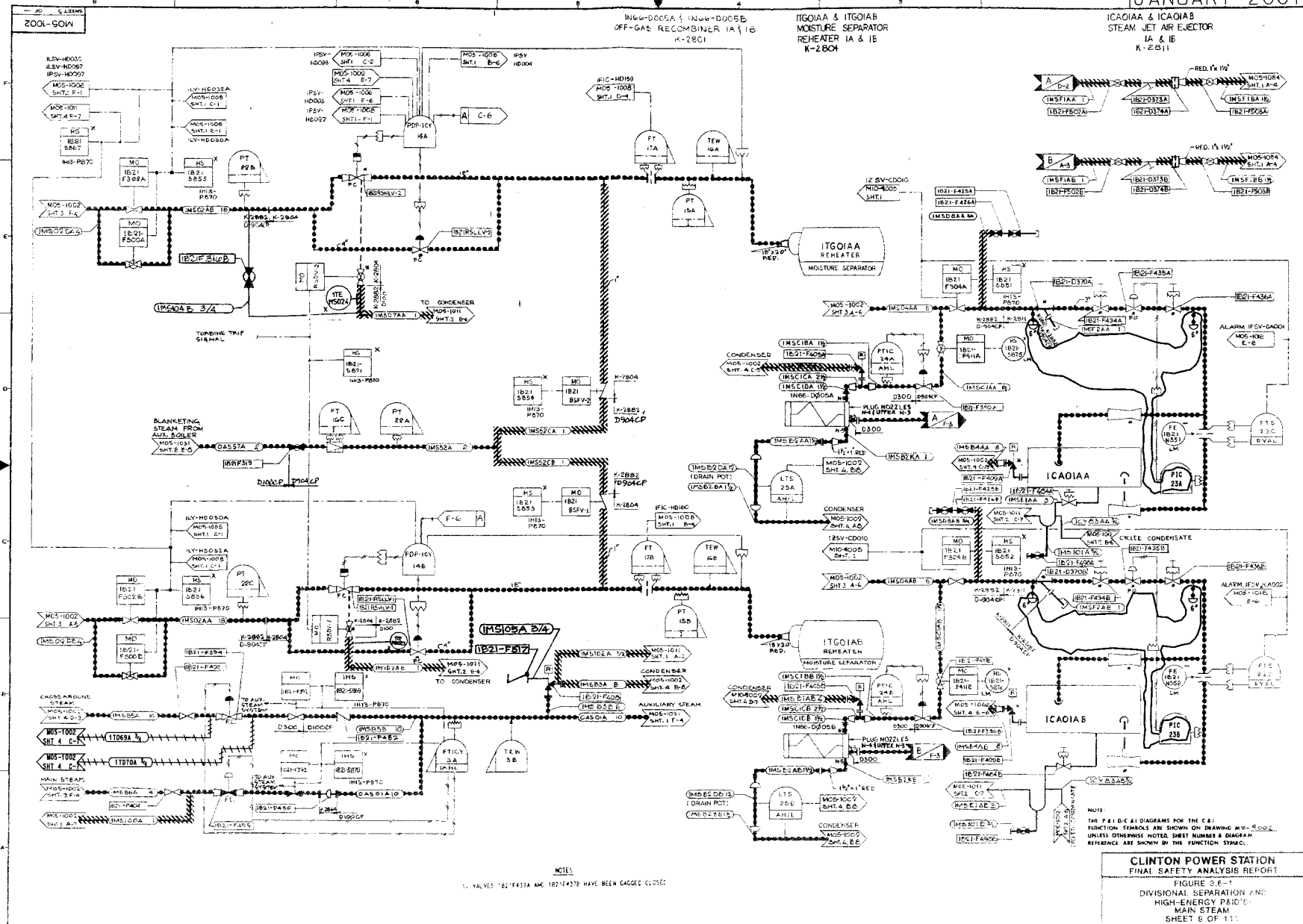
CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P & I  
SHEET 7 OF 111

**REVISION 11**  
**JANUARY 2005**

IFWOKA & IFWOKB  
REACTOR FEED PUMP  
TURBINE 1A & 1B  
K-2806

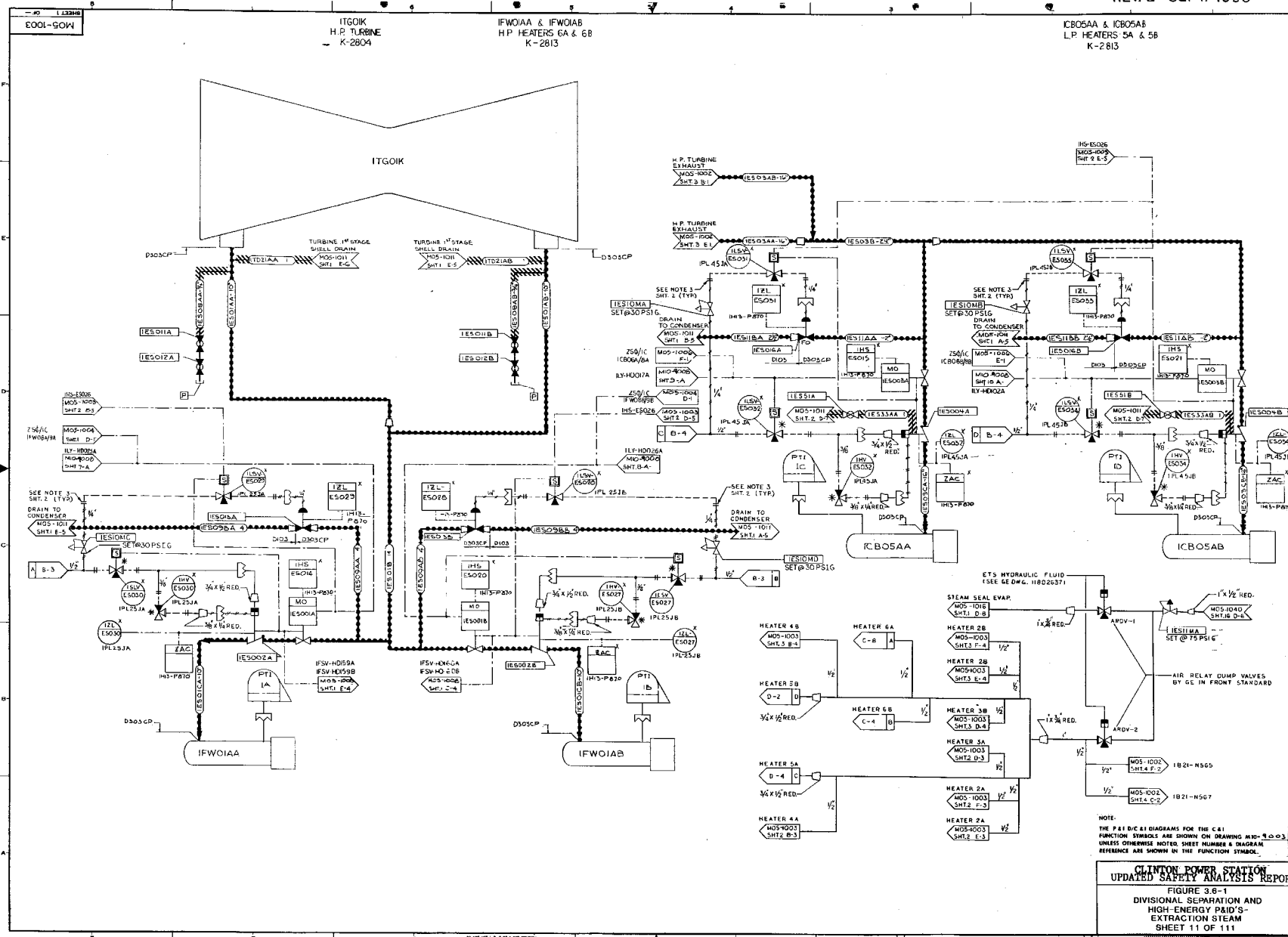


REVISION 12  
JANUARY 2007

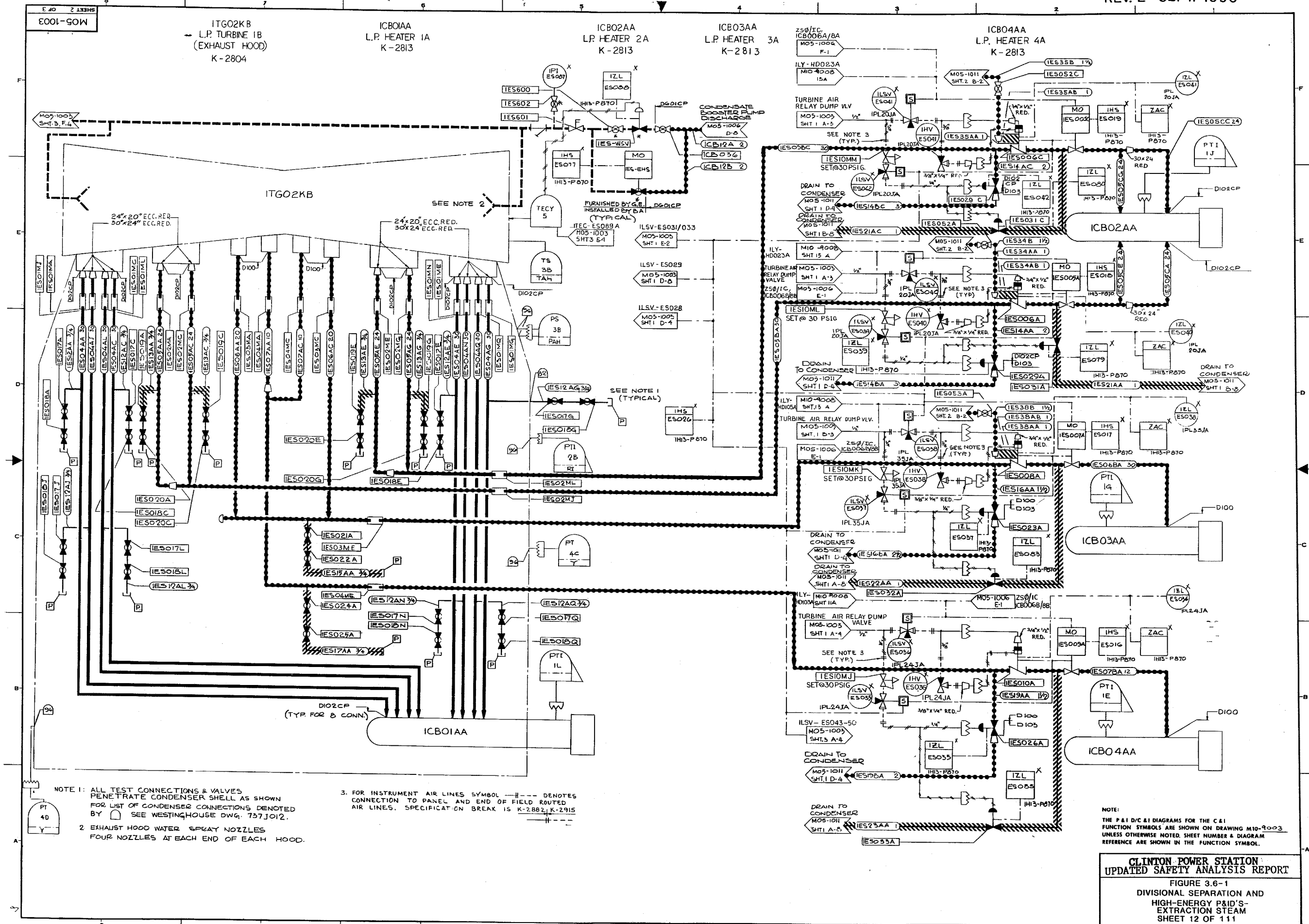


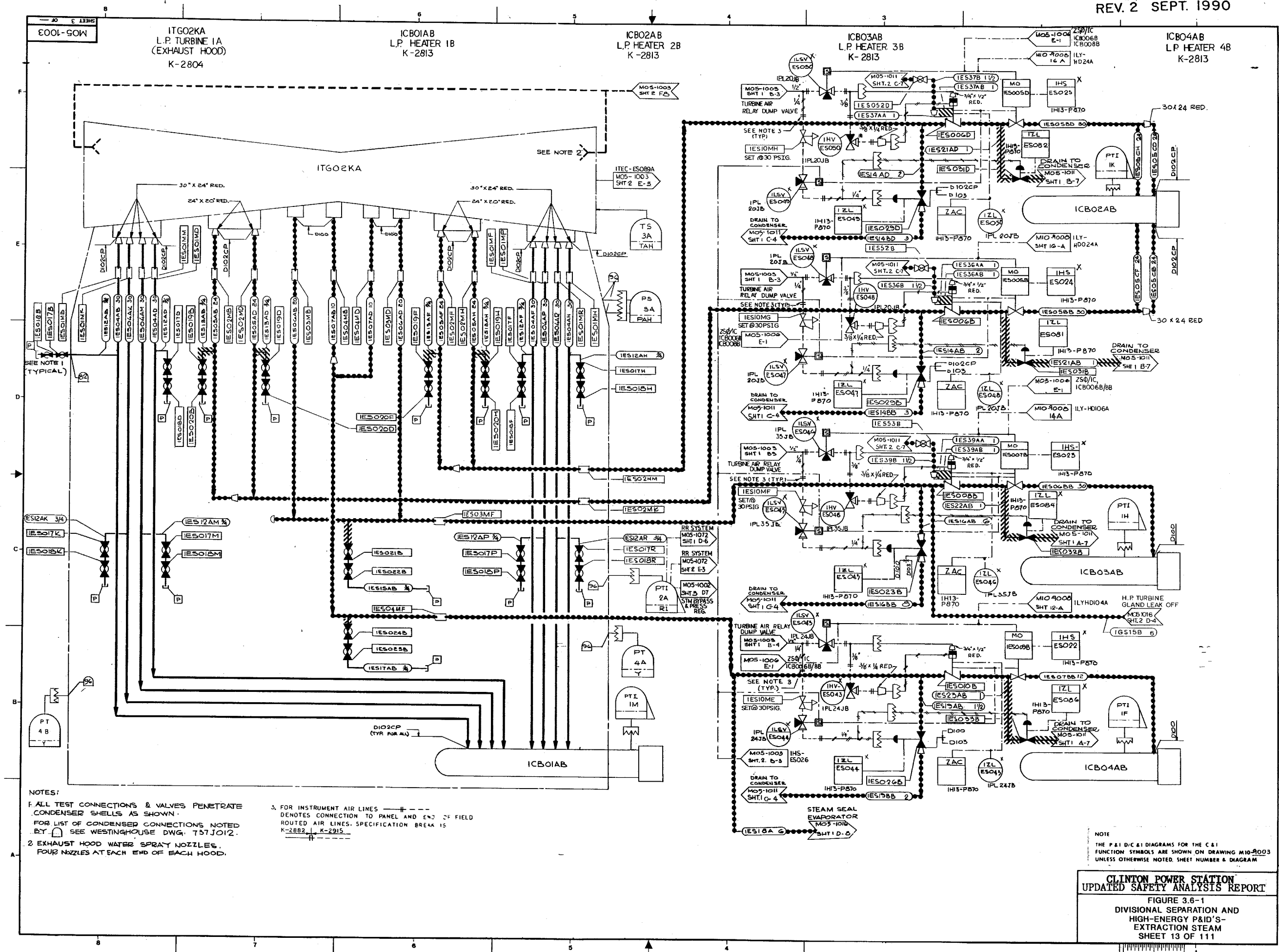


REV. 2 SEPT. 1990



CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.8-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
EXTRACTION STEAM  
SHEET 11 OF 111





IFWOIPA & IFWOIPB  
REACTOR FEED PUMP IA & IB  
TURBINE DRIVEN  
K-2820

IB13-D003  
REACTOR PRESSURE  
VESSEL  
K-2801

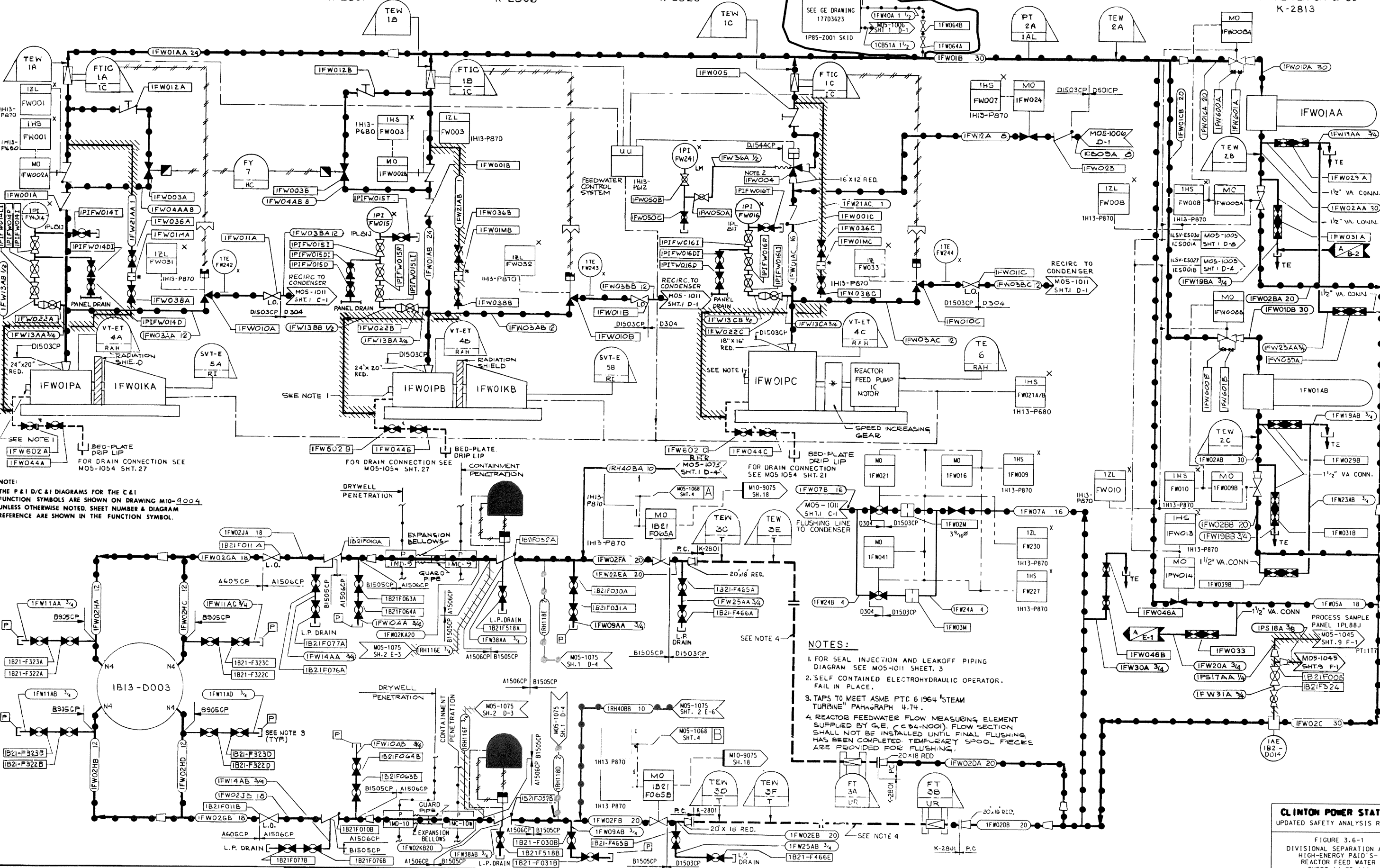
IFWOIKA & KB  
REACTOR FEED PUMPS IA & IB  
TURBINE DRIVES  
K-2806

IFWOIPC  
REACTOR FEED PUMP IC  
MOTOR DRIVEN  
K-2820

REACTOR FEED PUMP IC  
MOTOR  
K-2970

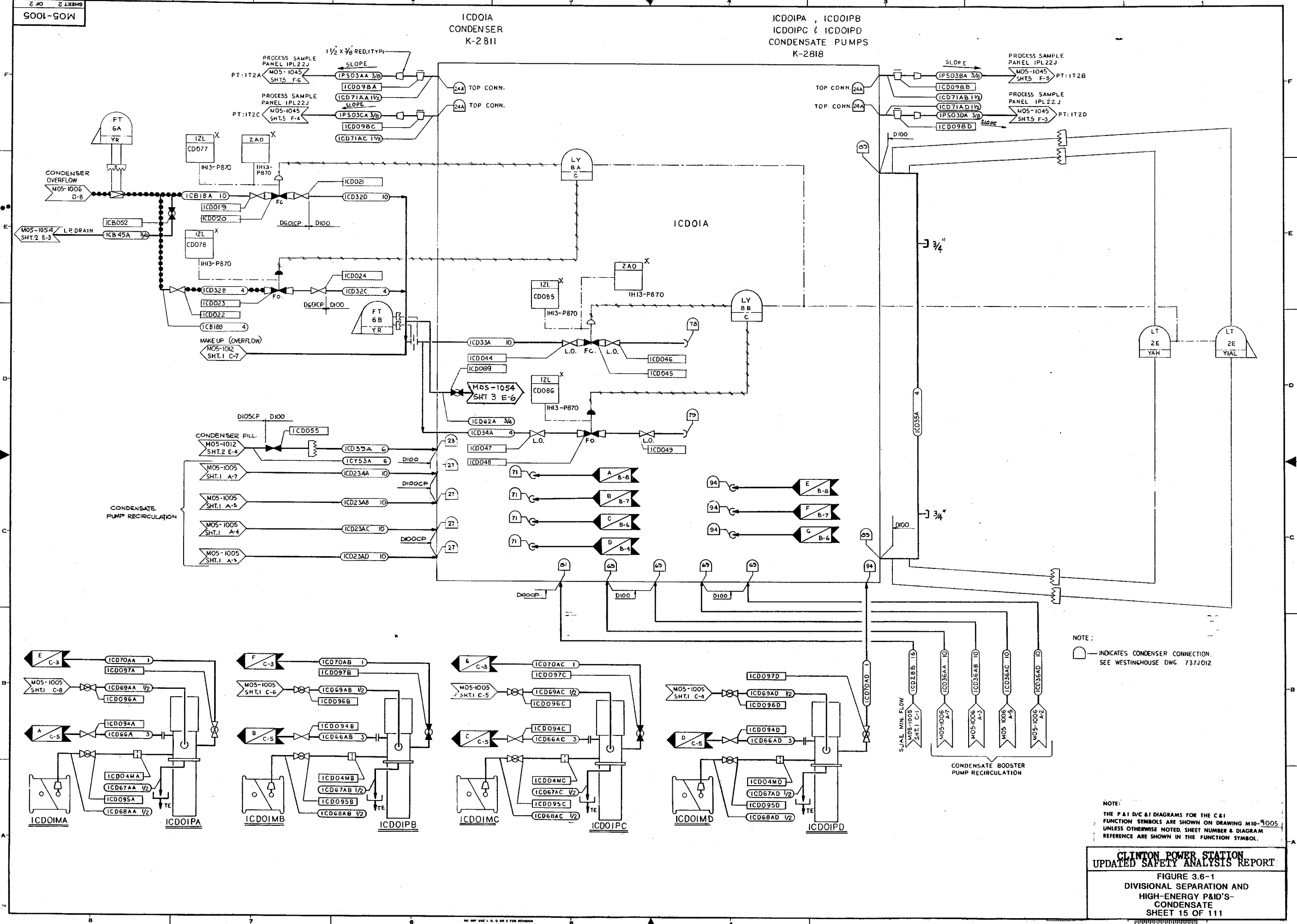
REVISION 9  
JANUARY 2001

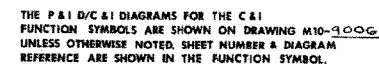
IFWOIAA & IFWOIAB  
H.P. HEATER 6A & 6B  
K-2813



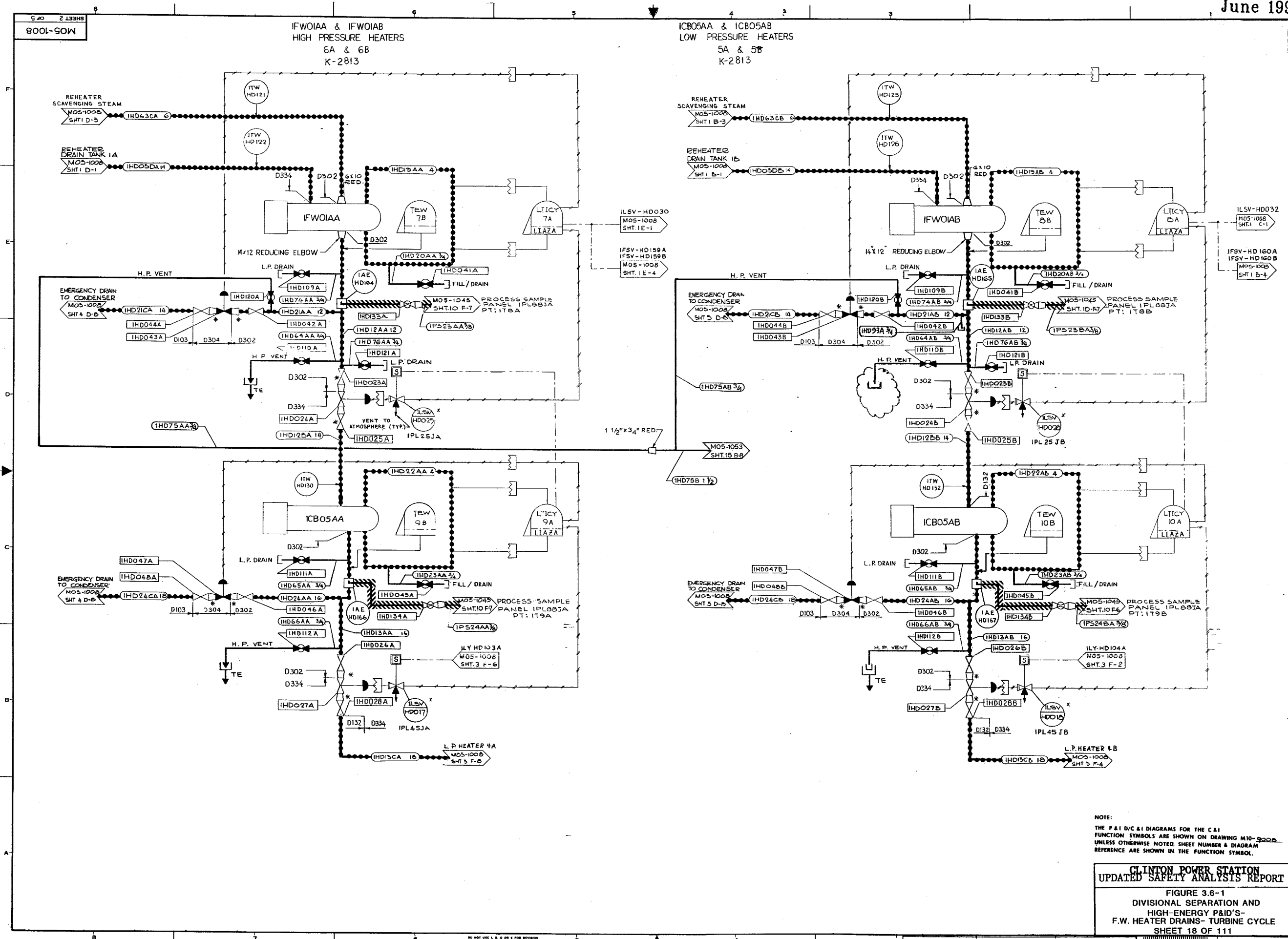
CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
REACTOR FEED WATER  
SHEET 14 OF 111



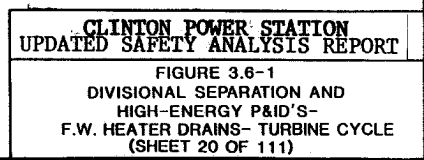


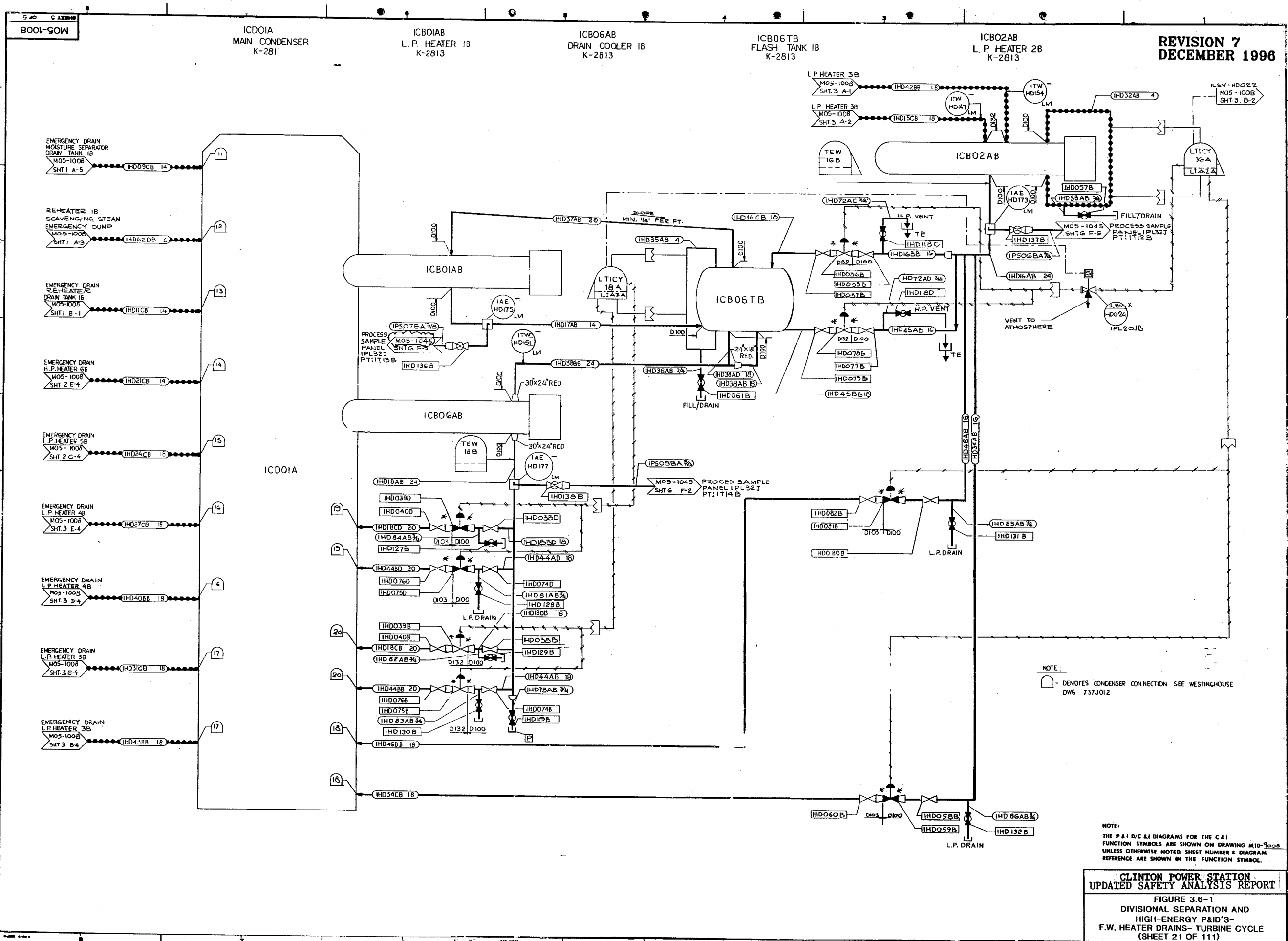




NOTE:  
THE P&ID/C&I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9000  
UNLESS OTHERWISE NOTED, SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.





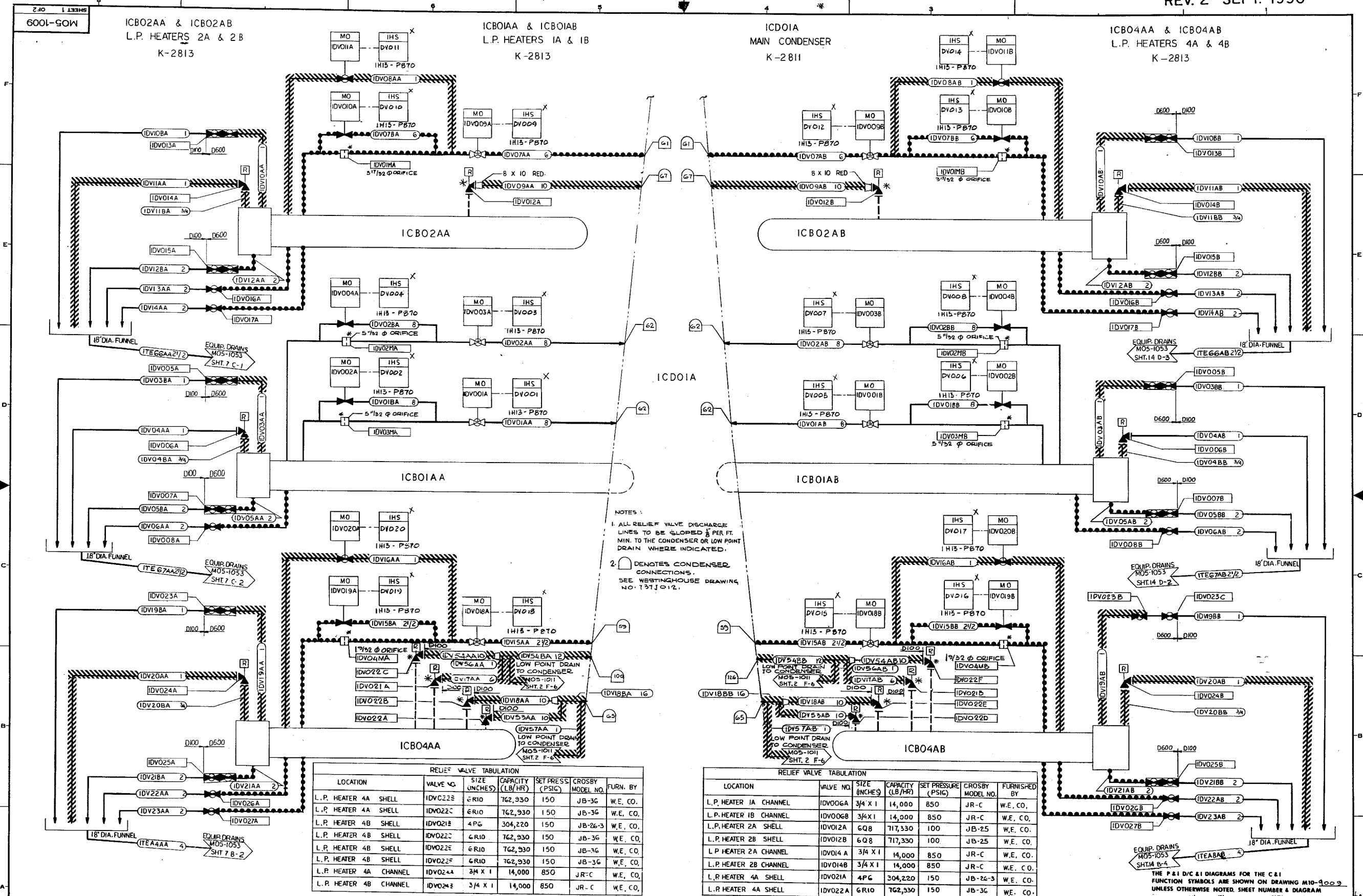


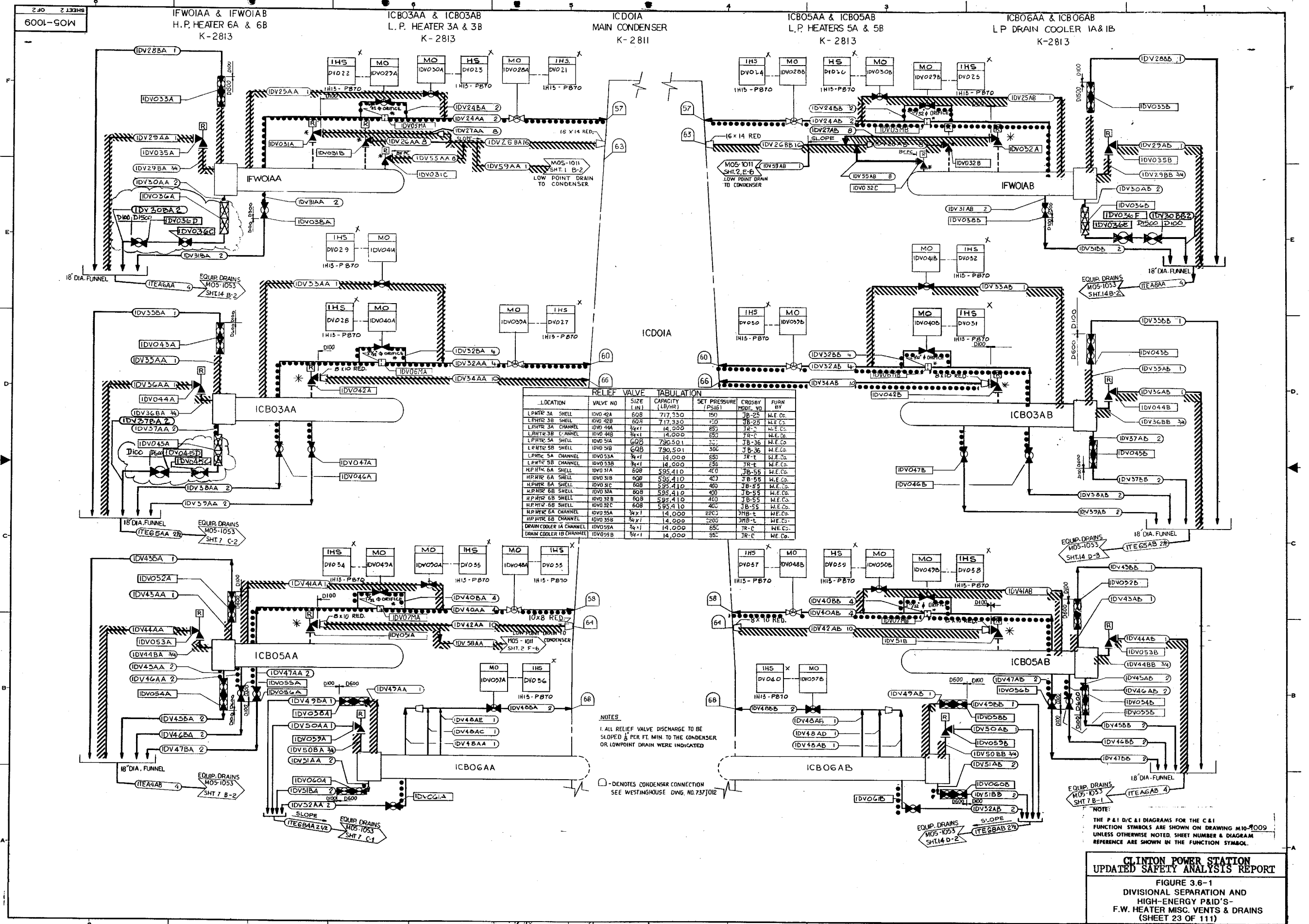
REVISION 7  
DECEMBER 1996

NOTE:  
THE P&ID/C&I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-1008.  
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 -  
F.W. HEATER DRAINS - TURBINE CYCLE  
(SHEET 21 OF 111)

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORTFIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
F.W. HEATER MISC. VENTS & DRAINS  
(SHEET 22 OF 111)



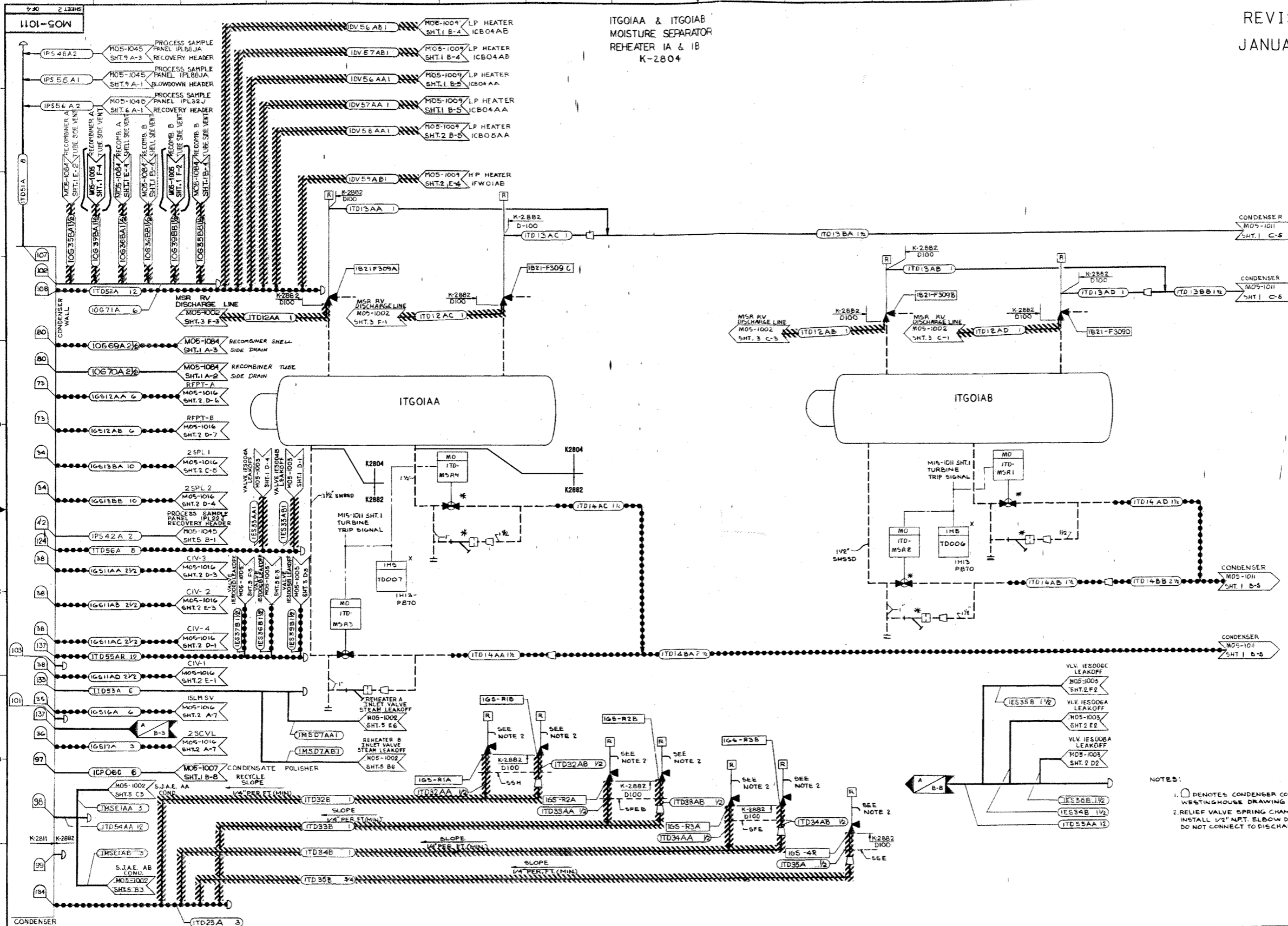
**CLINTON POWER STATION**  
**UPDATED SAFETY ANALYSIS REPORT**

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**FIGURE 3.6-1**  
**DIVISIONAL SEPARATION AND**  
**HIGH-ENERGY P&ID'S-**  
**TURBINE GEN. MISC. VENTS & DRAINS**  
**(SHEET 24 OF 111)**

REVISION 12  
JANUARY 2007

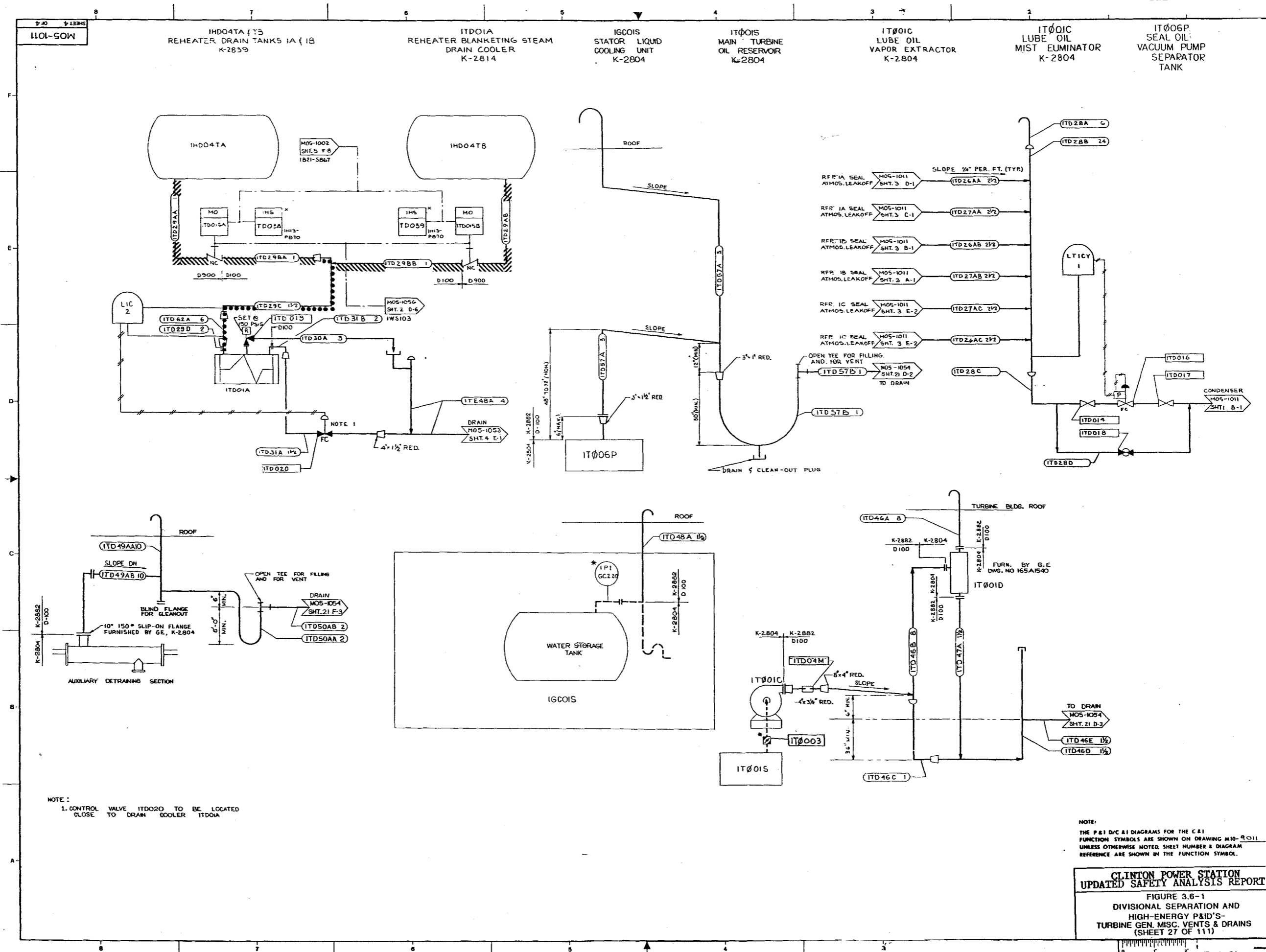
ITGOIAA & ITGOIAB  
MOISTURE SEPARATOR  
REHEATER 1A & 1B  
K-2804



- NOTES:
1. □ DENOTES CONDENSER CONNECTIONS SEE WESTINGHOUSE DRAWING 7373012
  2. RELIEF VALVE SPRING CHAMBER VENT CONNECTION. INSTALL 1/2" NPT. ELBOW DIRECTED DOWNWARD. DO NOT CONNECT TO DISCHARGE LINE OR CONDENSER.

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
TURBINE GEN. MISC. VENTS & DRAINS  
(SHEET 25 OF 111)

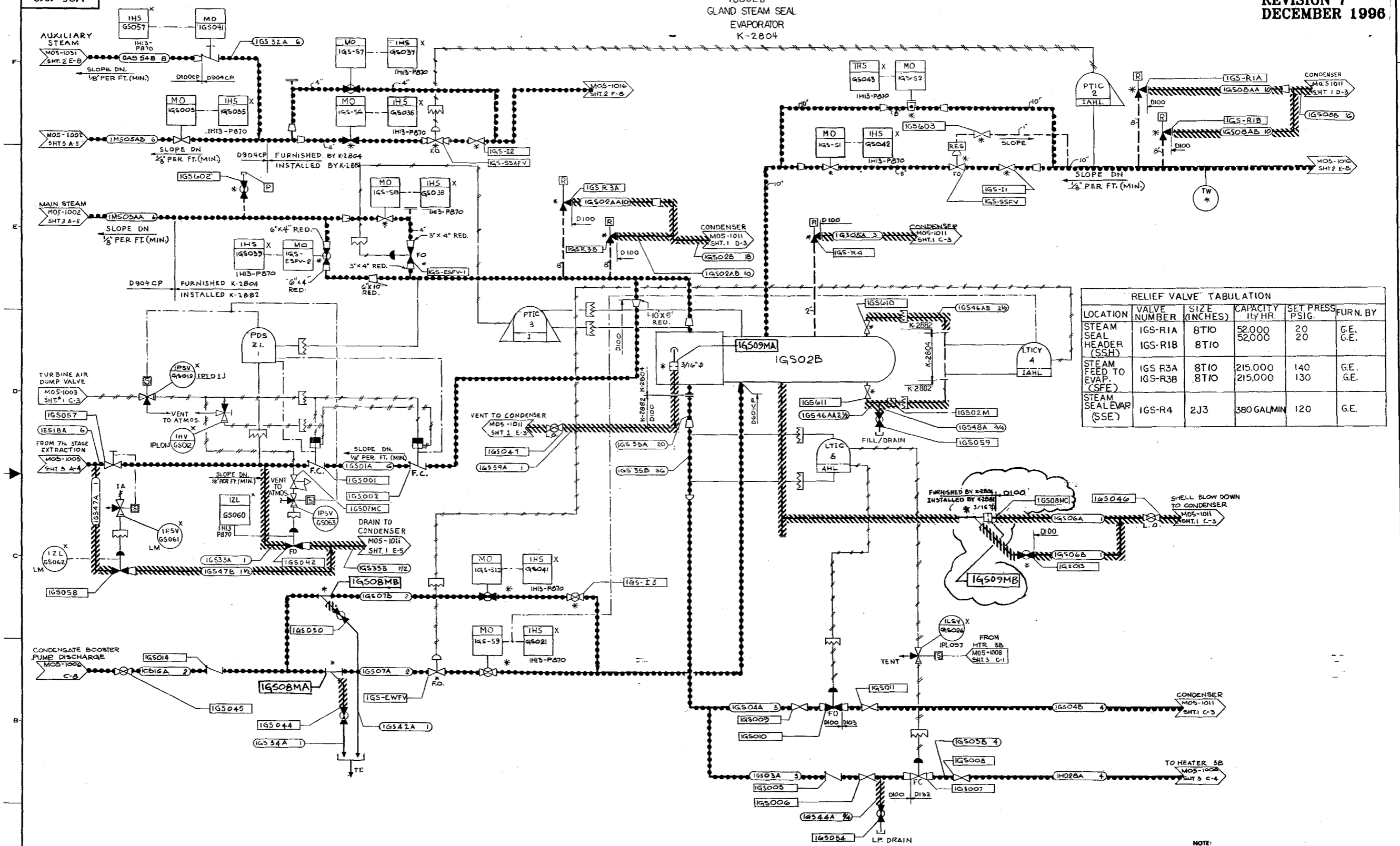




9101-GOW

IGS02B  
GLAND STEAM SEAL  
EVAPORATOR  
K-2804

REVISION 7  
DECEMBER 1996



\* INDICATES COMPONENT FURNISHED BY K-2804  
REFERENCE DWG. 842E 420 REV. 4

NOTE:  
THE P&ID/C&I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9016  
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-  
TURBINE GLAND STEAM SEAL SYSTEM  
SHEET 28 OF 111

9101-SOW  
MOS-1016

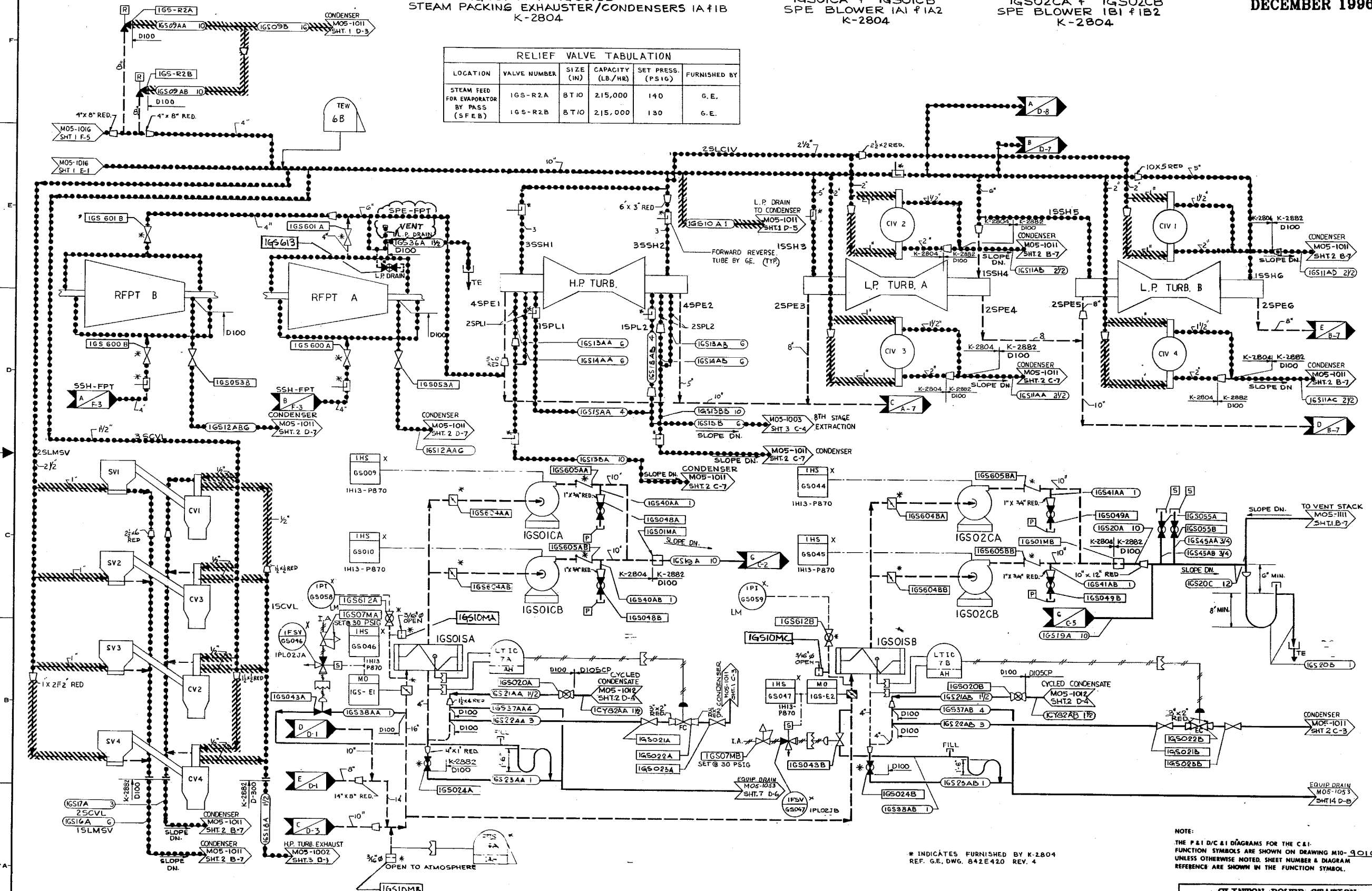
IGSOISA & IGSOISB  
STEAM PACKING EXHAUSTER/CONDENSERS 1A & 1B  
K-2804

IGSOICA & IGSOICB  
SPE BLOWER 1A1 & 1A2  
K-2804

IGSO2CA & IGSO2CB  
SPE BLOWER 1B1 & 1B2  
K-2804

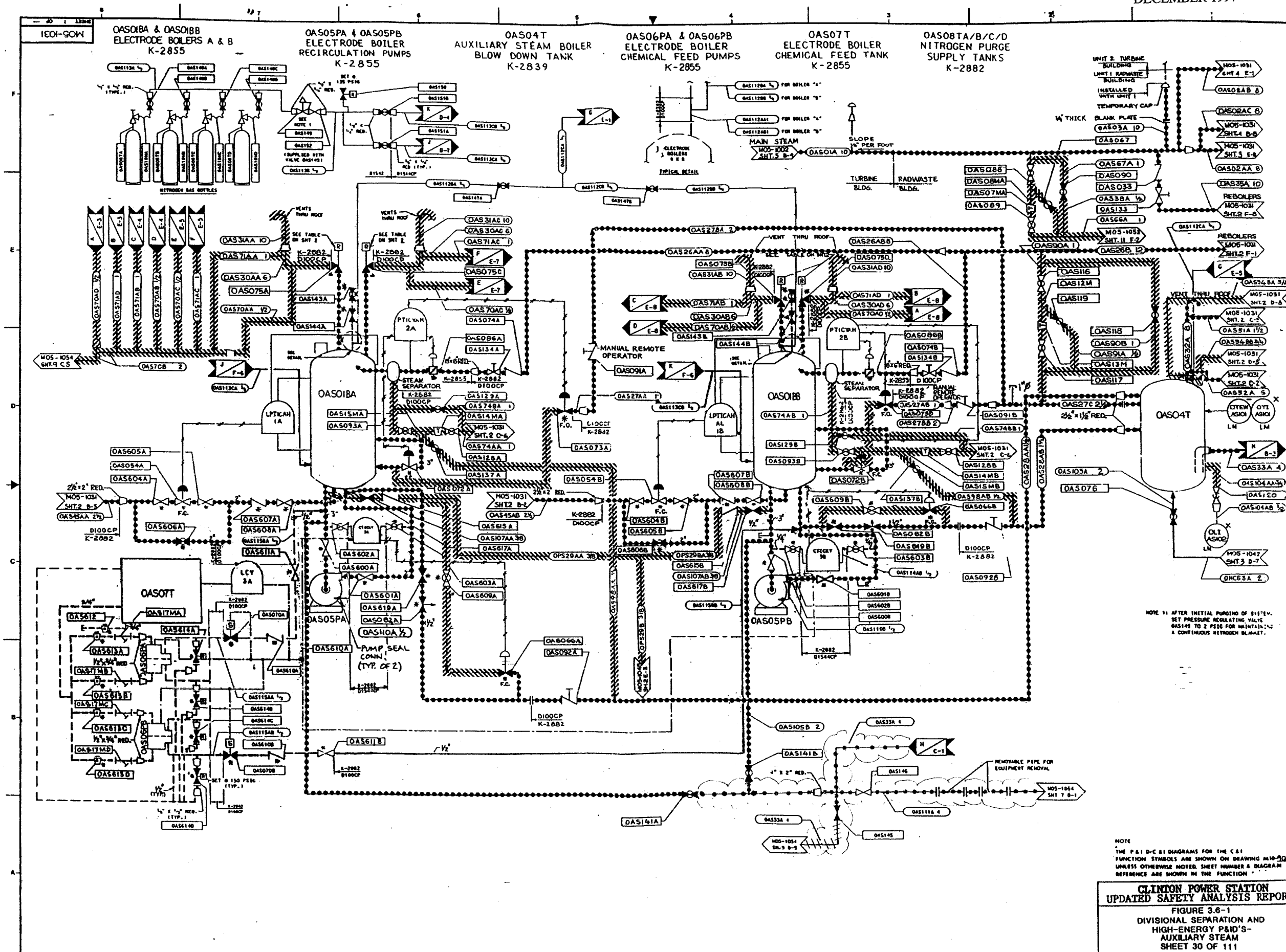
REVISION 7  
DECEMBER 1996

RELIEF VALVE TABULATION					
LOCATION	VALVE NUMBER	SIZE (IN)	CAPACITY (LB./HR)	SET PRESS. (PSIG)	FURNISHED BY
STEAM FEED FOR EVAPORATOR BY PASS (S.F.E.B.)	IGS-R2A	8T/10	215,000	140	G.E.
	IGS-R2B	8T/10	215,000	130	G.E.

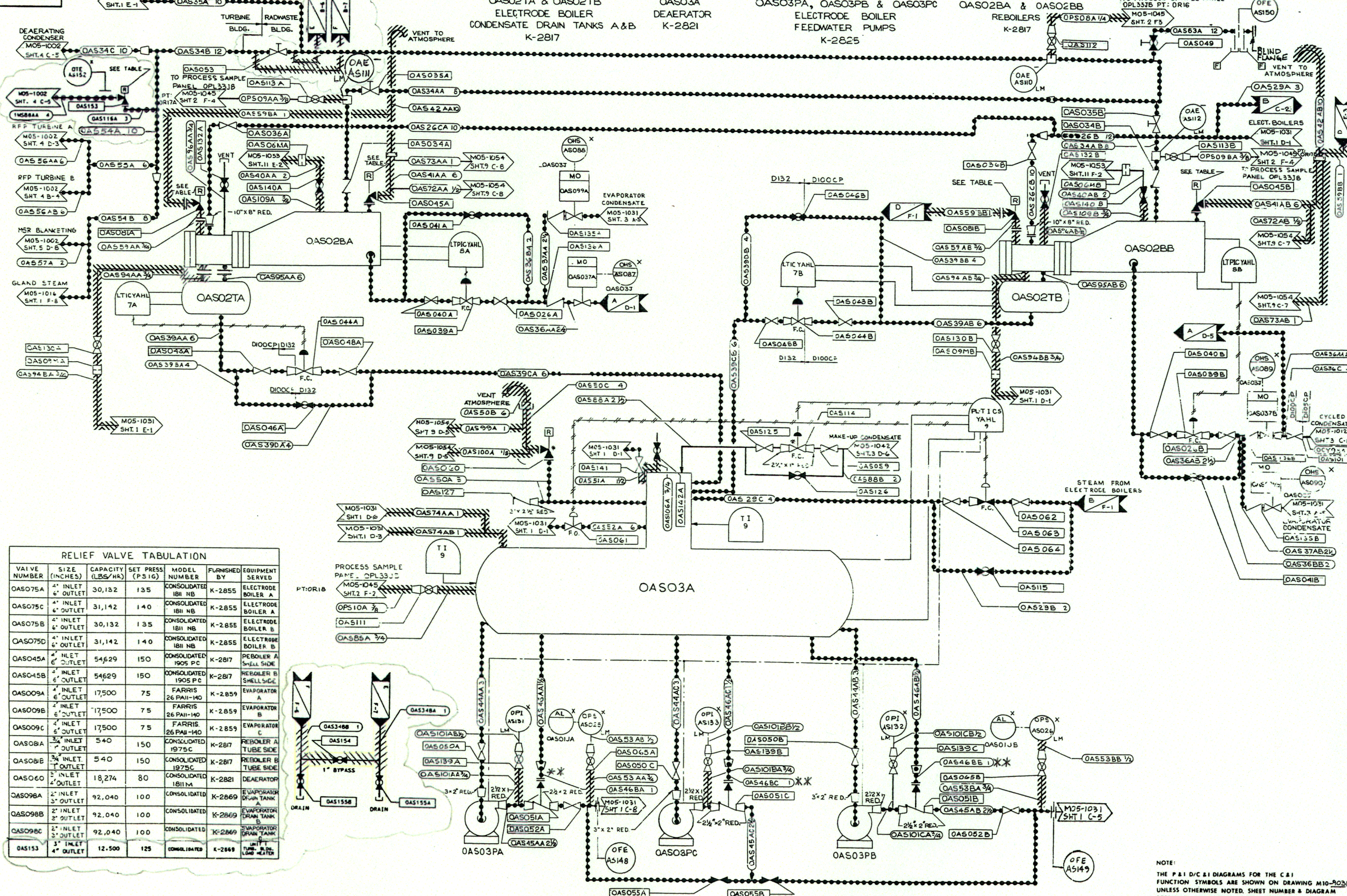


NOTE:  
THE P&ID'S ARE FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9016  
UNLESS OTHERWISE NOTED, SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
TURBINE GLAND STEAM SEAL SYSTEM  
SHEET 29 OF 111



1501-90W

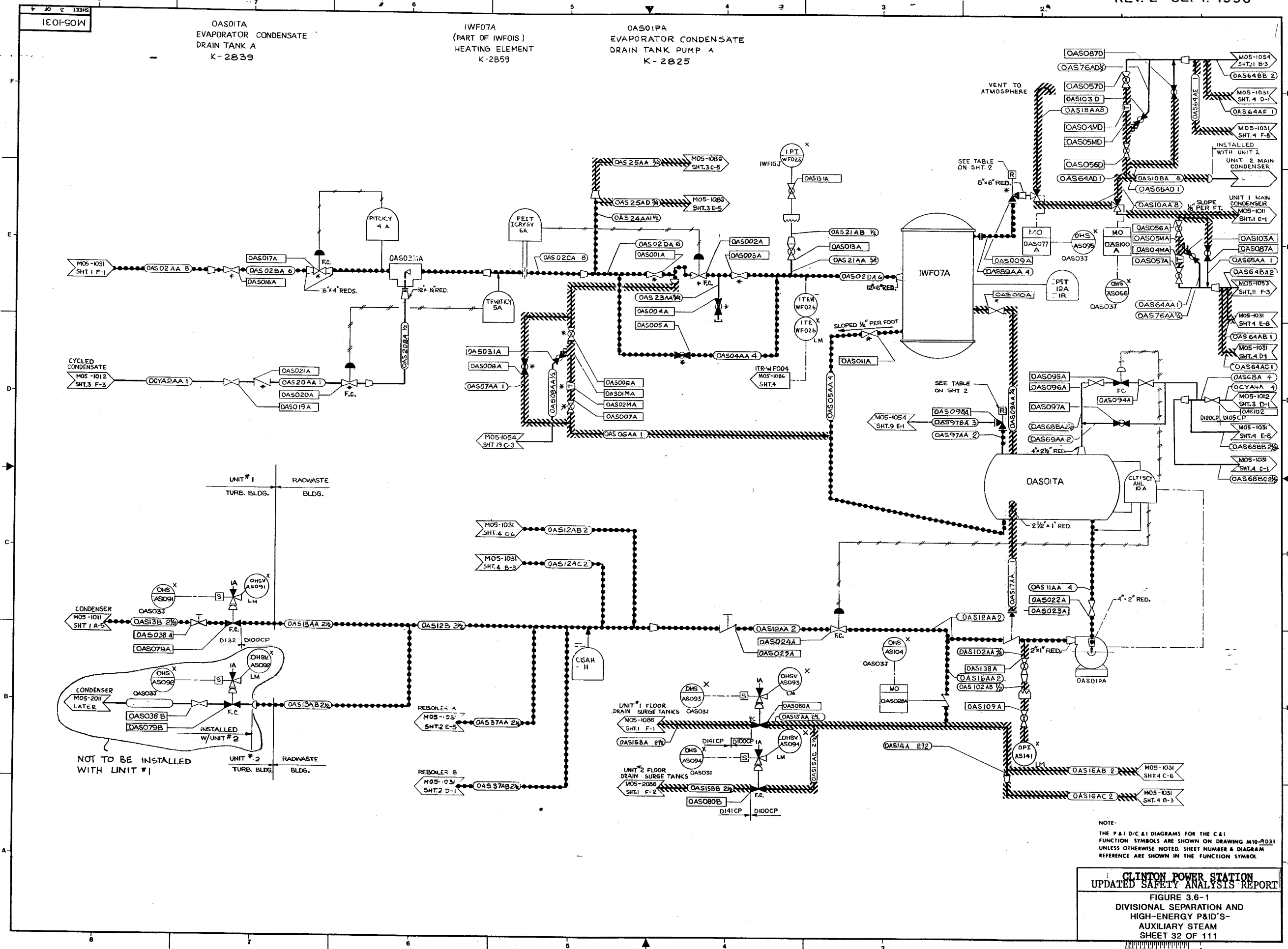


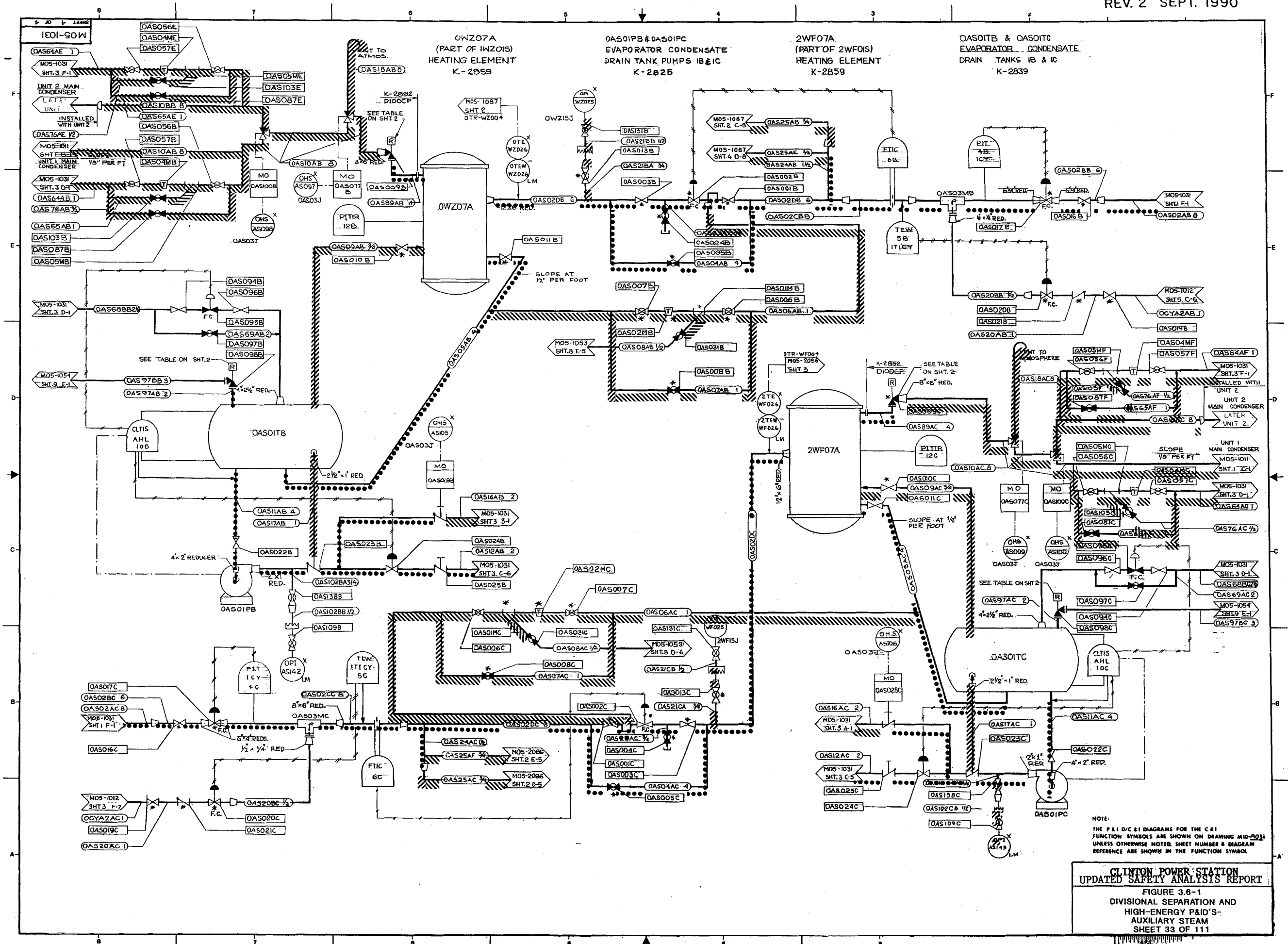
VALVE NUMBER	SIZE (INCHES)	CAPACITY (LBS/HR)	SET PRESS (PSIG)	MODEL NUMBER	FURNISHED BY	EQUIPMENT SERVED
OAS075A	2" INLET 6" OUTLET	30,132	135	CONSOLIDATED 1811 NB	K-2855	ELECTRODE BOILER A
OAS075C	2" INLET 6" OUTLET	31,142	140	CONSOLIDATED 1811 NB	K-2855	ELECTRODE BOILER A
OAS075B	2" INLET 6" OUTLET	30,132	135	CONSOLIDATED 1811 NB	K-2855	ELECTRODE BOILER B
OAS075D	2" INLET 6" OUTLET	31,142	140	CONSOLIDATED 1811 NB	K-2855	ELECTRODE BOILER B
OAS045A	2" INLET 6" OUTLET	54,629	150	CONSOLIDATED 1905 PC	K-2817	REBOILER A SHELL SIDE
OAS045B	2" INLET 6" OUTLET	54,629	150	CONSOLIDATED 1905 PC	K-2817	REBOILER B SHELL SIDE
OAS009A	2" INLET 6" OUTLET	17,500	75	FARRIS 26 PAI-140	K-2859	EVAPORATOR A
OAS009B	2" INLET 6" OUTLET	17,500	75	FARRIS 26 PAI-140	K-2859	EVAPORATOR B
OAS009C	2" INLET 6" OUTLET	17,500	75	FARRIS 26 PAI-140	K-2859	EVAPORATOR C
OAS081A	3/4" INLET 1" OUTLET	540	150	CONSOLIDATED 1975C	K-2817	REBOILER A TUBE SIDE
OAS081B	3/4" INLET 1" OUTLET	540	150	CONSOLIDATED 1975C	K-2817	REBOILER B TUBE SIDE
OAS060	2" INLET 4" OUTLET	18,274	80	CONSOLIDATED 1811 M	K-2821	DEAERATOR
OAS098A	2" INLET 3" OUTLET	92,040	100	CONSOLIDATED	K-2869	EVAPORATOR DRAIN TANK
OAS098B	2" INLET 3" OUTLET	92,040	100	CONSOLIDATED	K-2869	EVAPORATOR DRAIN TANK
OAS098C	2" INLET 3" OUTLET	92,040	100	CONSOLIDATED	K-2869	EVAPORATOR DRAIN TANK
OAS153	3" INLET 4" OUTLET	12,500	125	CONSOLIDATED	K-2869	TURBINE BLDG. LOW PRESS

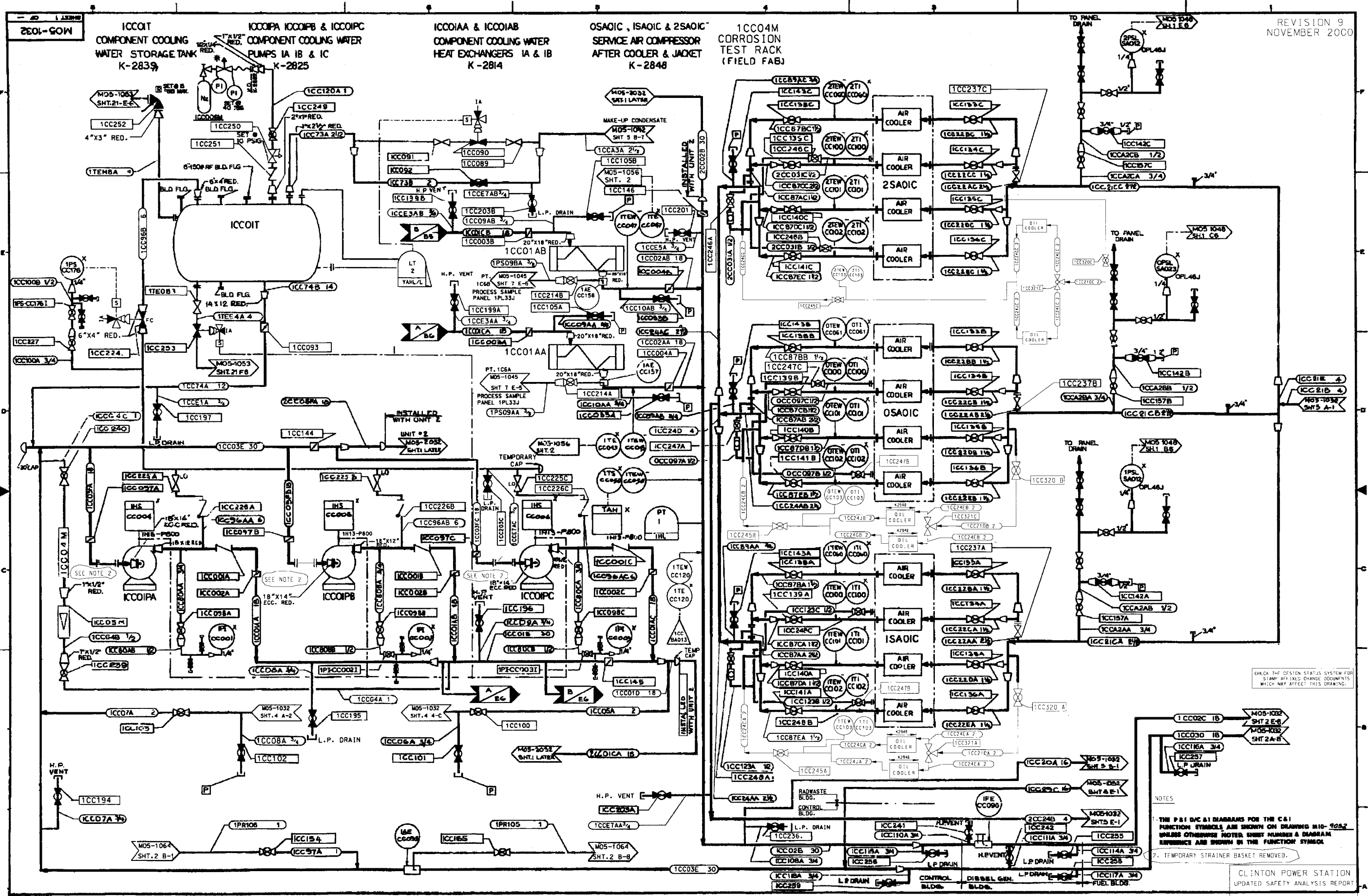
\*\* Note: If optional ARC valve is used in lieu of LARC for OAS051A/B/C, 1" line (OAS46BA/B/C) is not required.

NOTE:  
THE P&ID/C&I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-2031. 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-  
AUXILIARY STEAM  
SHEET 31 OF 111







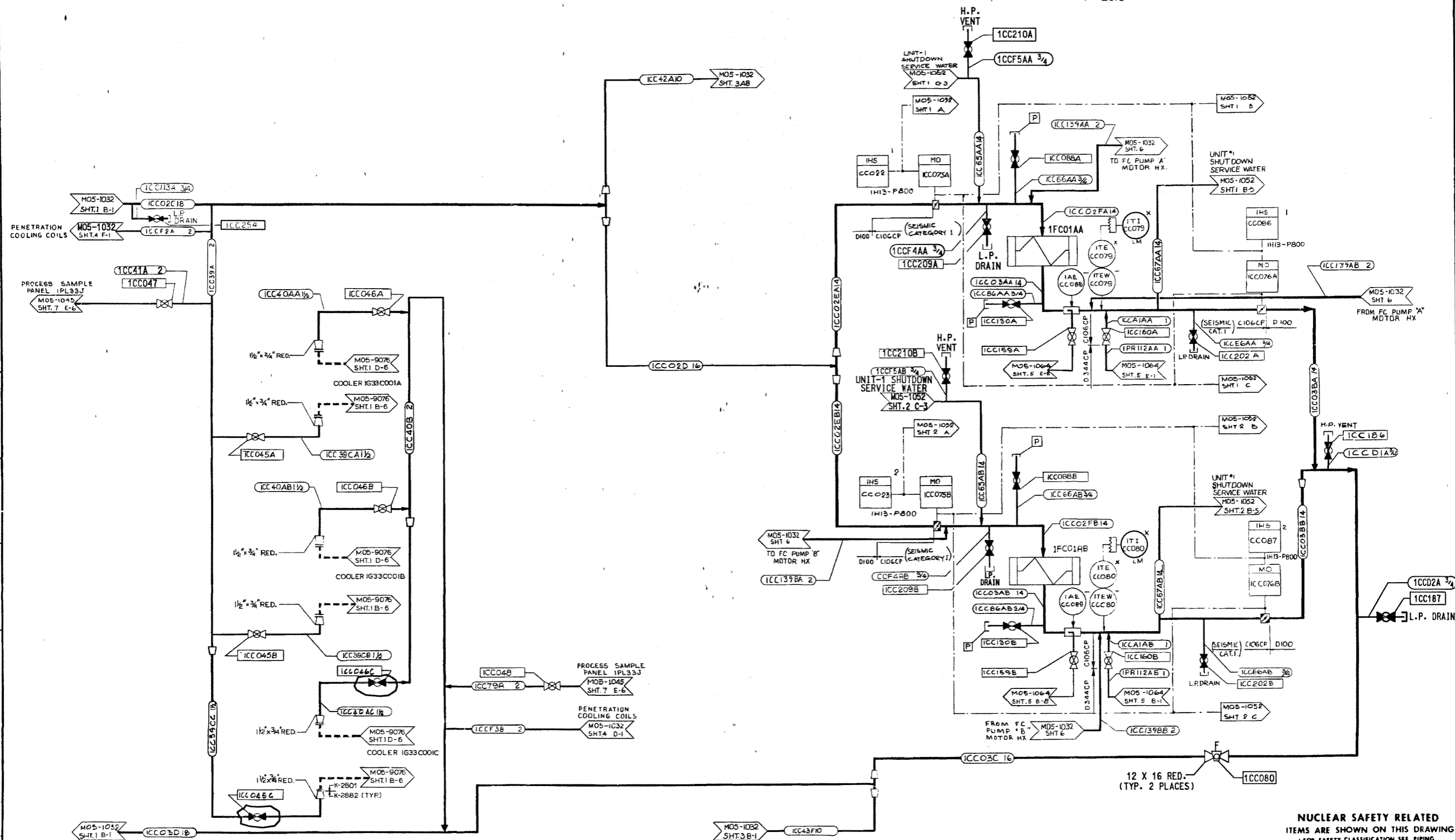
REVISION 9  
NOVEMBER 2000

CHECK THE DESIGN STATUS SYSTEM FOR  
STAMP AFFIXED CHANGE DOCUMENTS  
WHICH MAY AFFECT THIS DRAWING.

NOTES  
1. THE P&ID DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING MIO-1022  
UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.  
2. TEMPORARY STRAINER BASKET REMOVED.

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S -  
COMPONENT COOLING WATER  
SHEET 34 OF 111

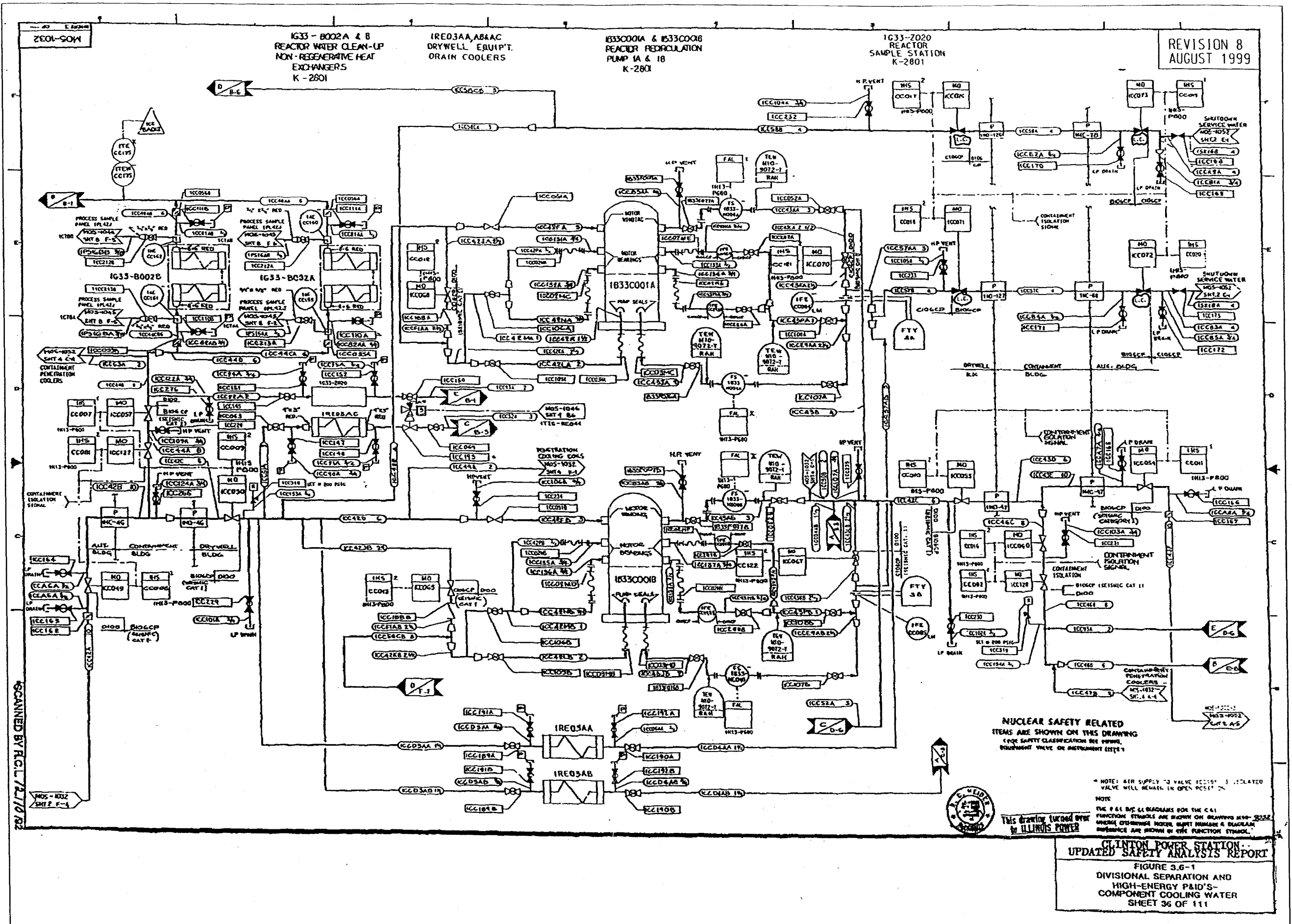


**NUCLEAR SAFETY RELATED**  
**ITEMS ARE SHOWN ON THIS DRAWING**  
1 FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.

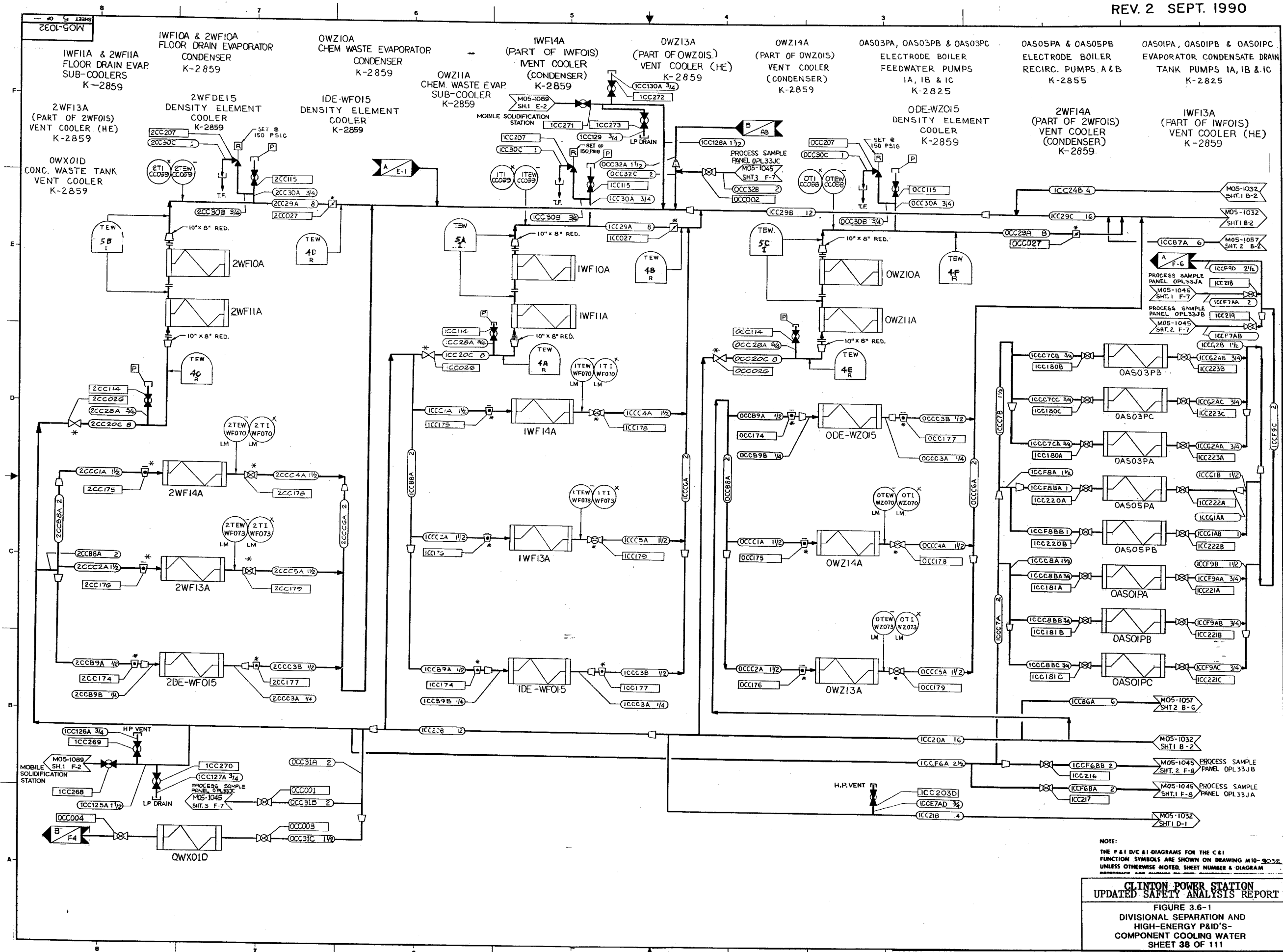
**NOTE:**  
THE P&ID/C&I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING MTD-4032  
UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT

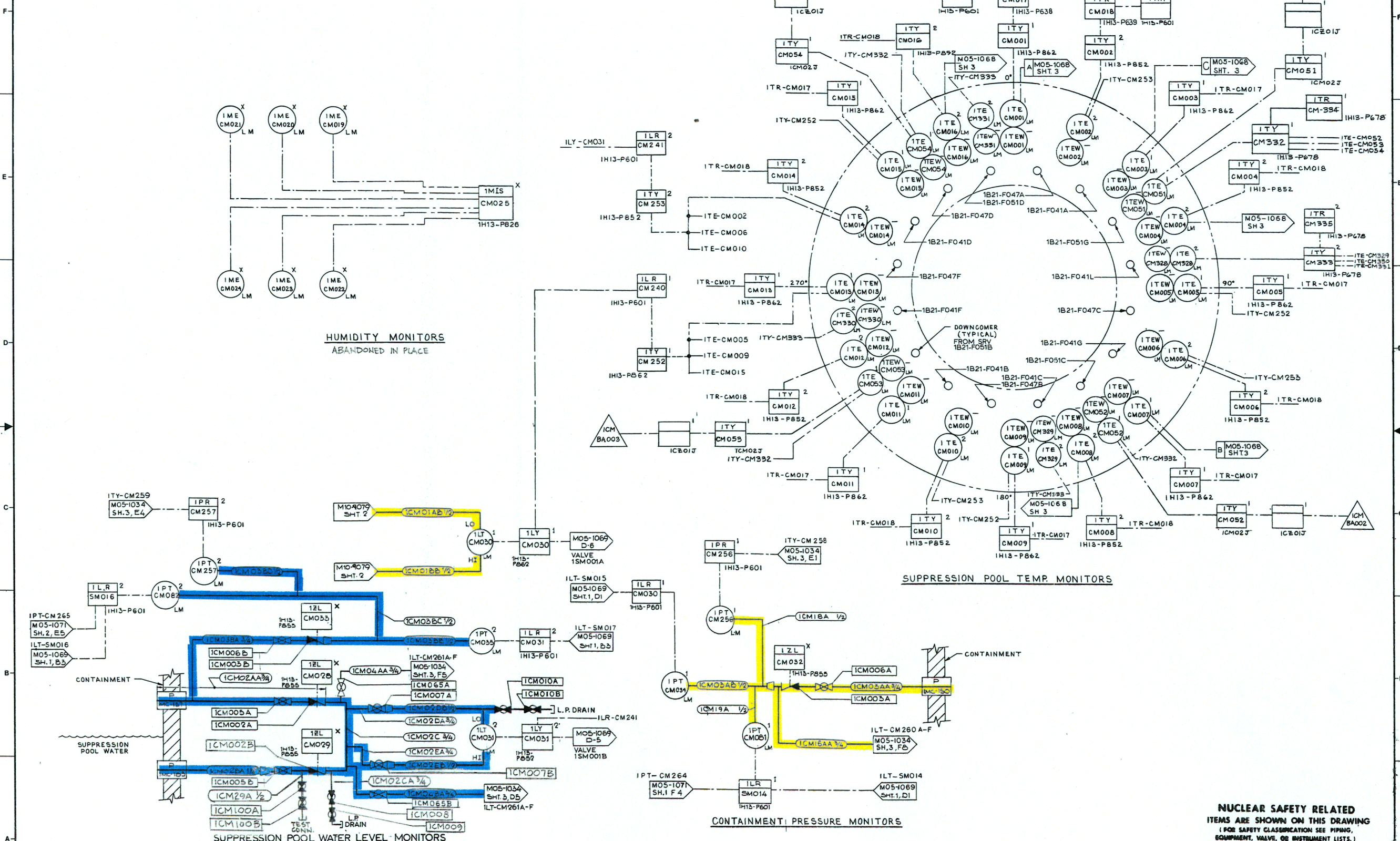
FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
COMPONENT COOLING WATER  
SHEET 35 OF 111







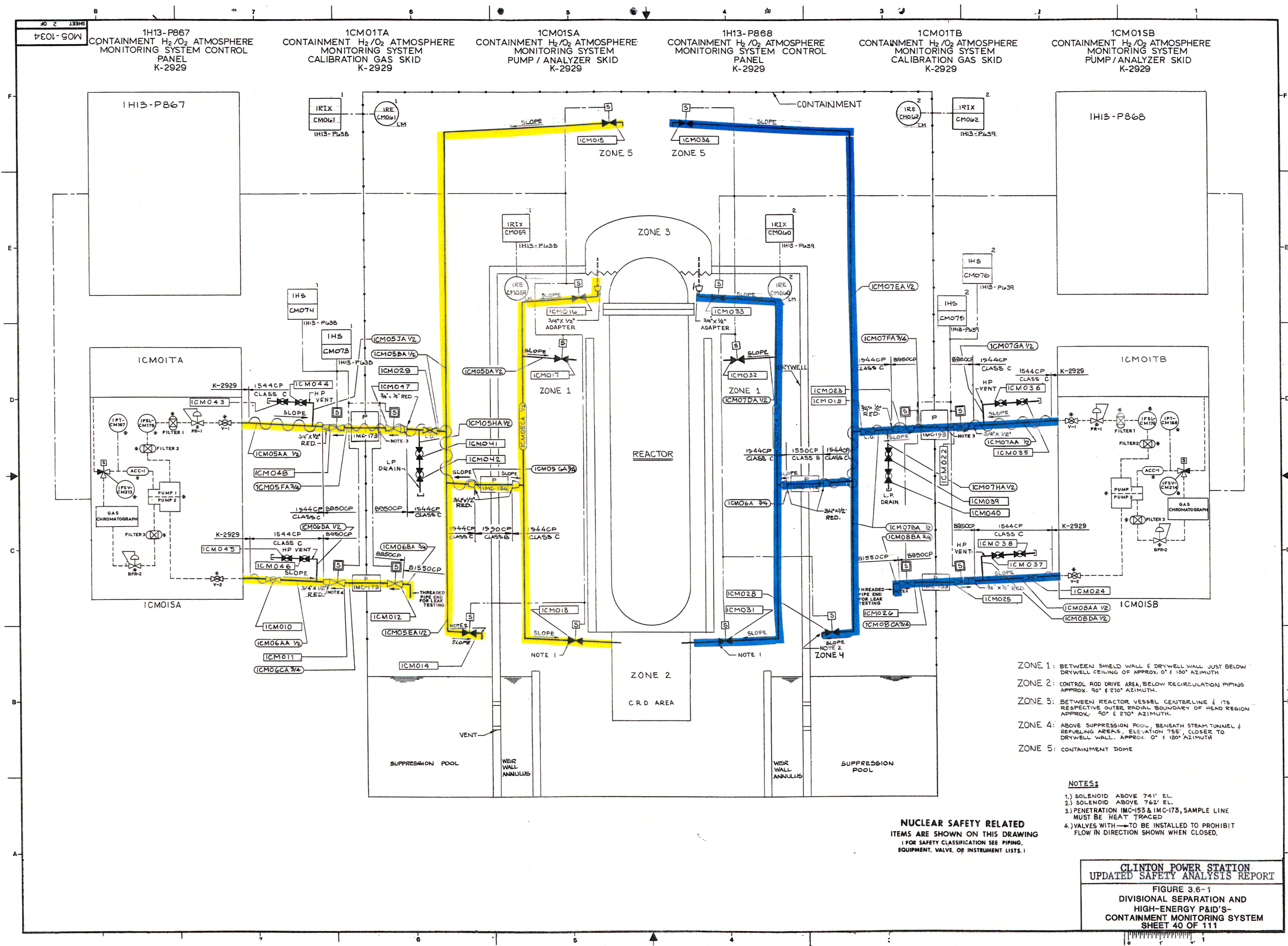
MOS-1034

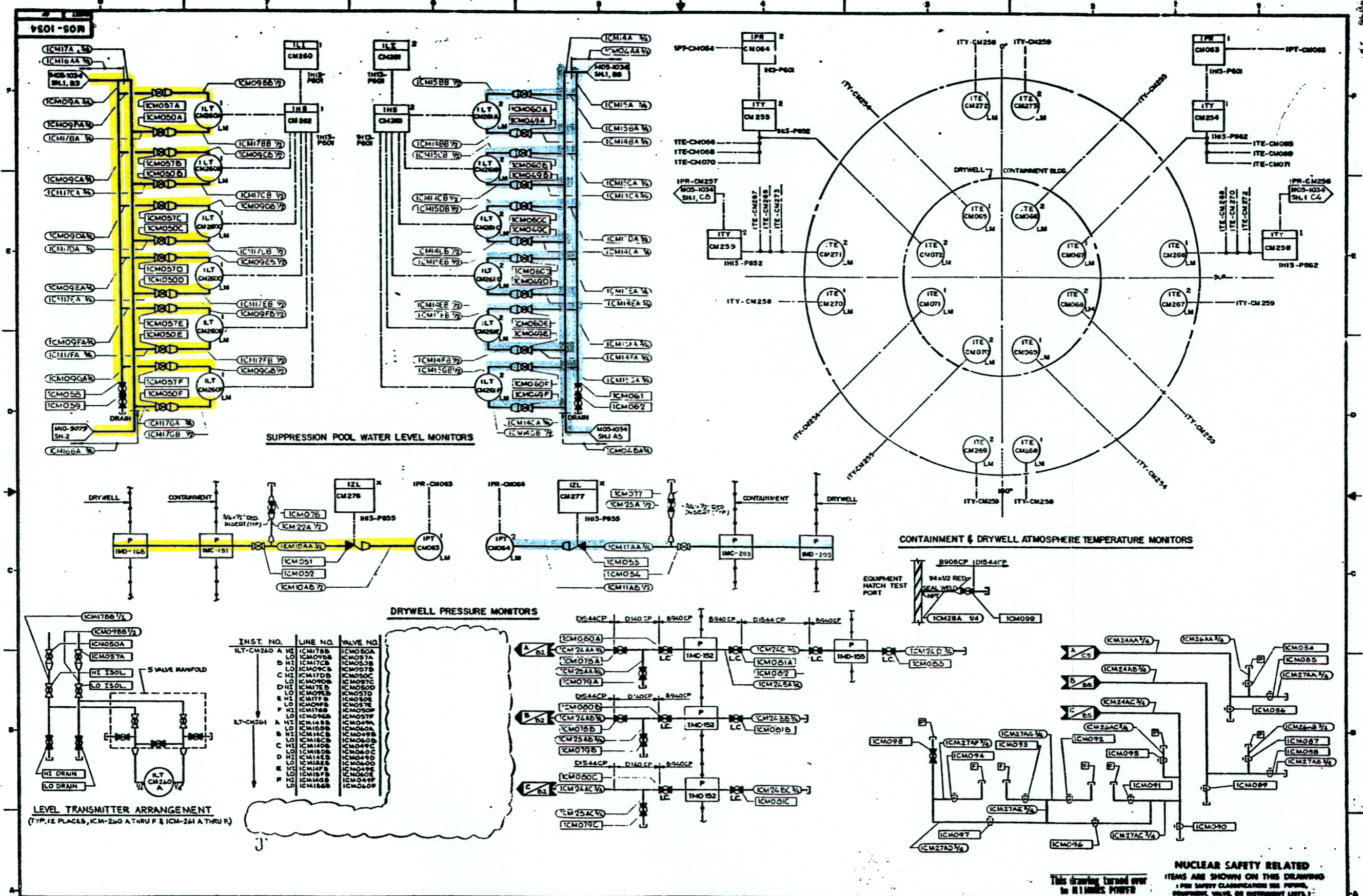


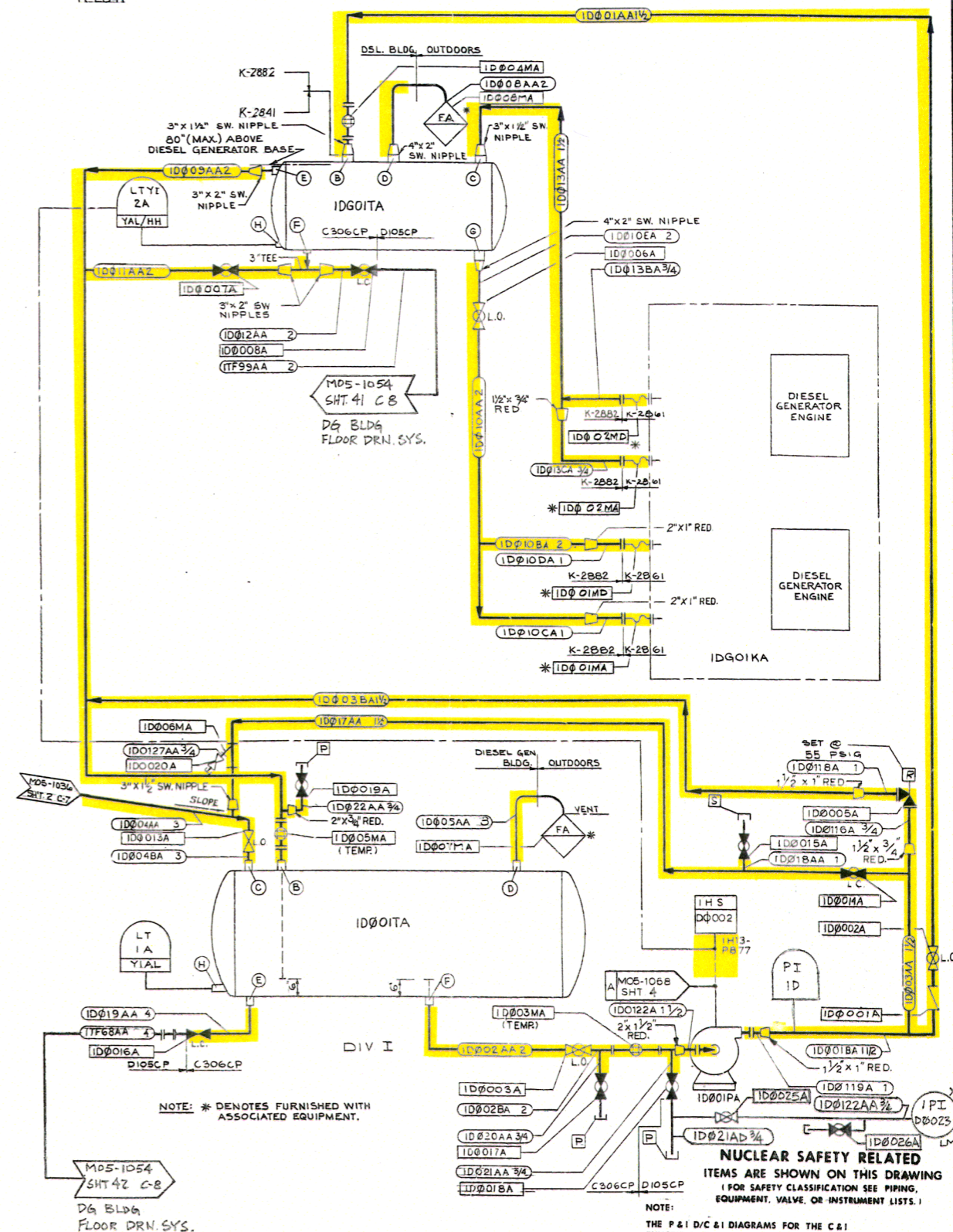
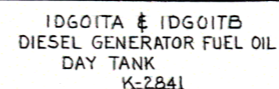
**NUCLEAR SAFETY RELATED**  
 ITEMS ARE SHOWN ON THIS DRAWING  
 (FOR SAFETY CLASSIFICATION SEE PIPING,  
 EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

CLINTON POWER STATION  
 UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1  
 DIVISIONAL SEPARATION AND  
 HIGH-ENERGY MONITORING SYSTEM  
 SHEET 39 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 M10-9036 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

# CLINTON POWER STATION FINAL SAFETY ANALYSIS REPORT

FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
DIESEL GENERATOR FUEL OIL SYSTEM  
SHEET 42 OF 111