

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:

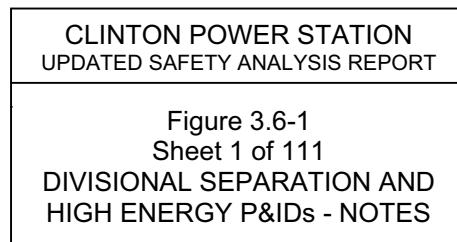
The drawings in Figure 3.6-1 should not be used for detailed information and are not updated unless a change affects divisional separation or high-energy lines. Detail information should be taken from P&IDs in the controlled drawing program.

“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.

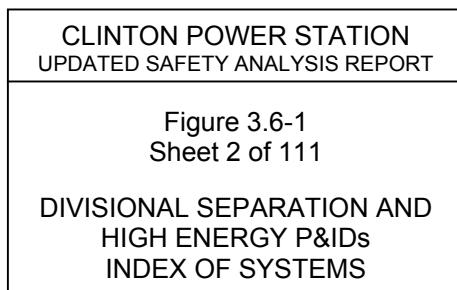


NOTE:

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



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

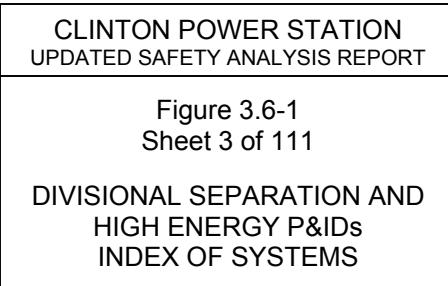
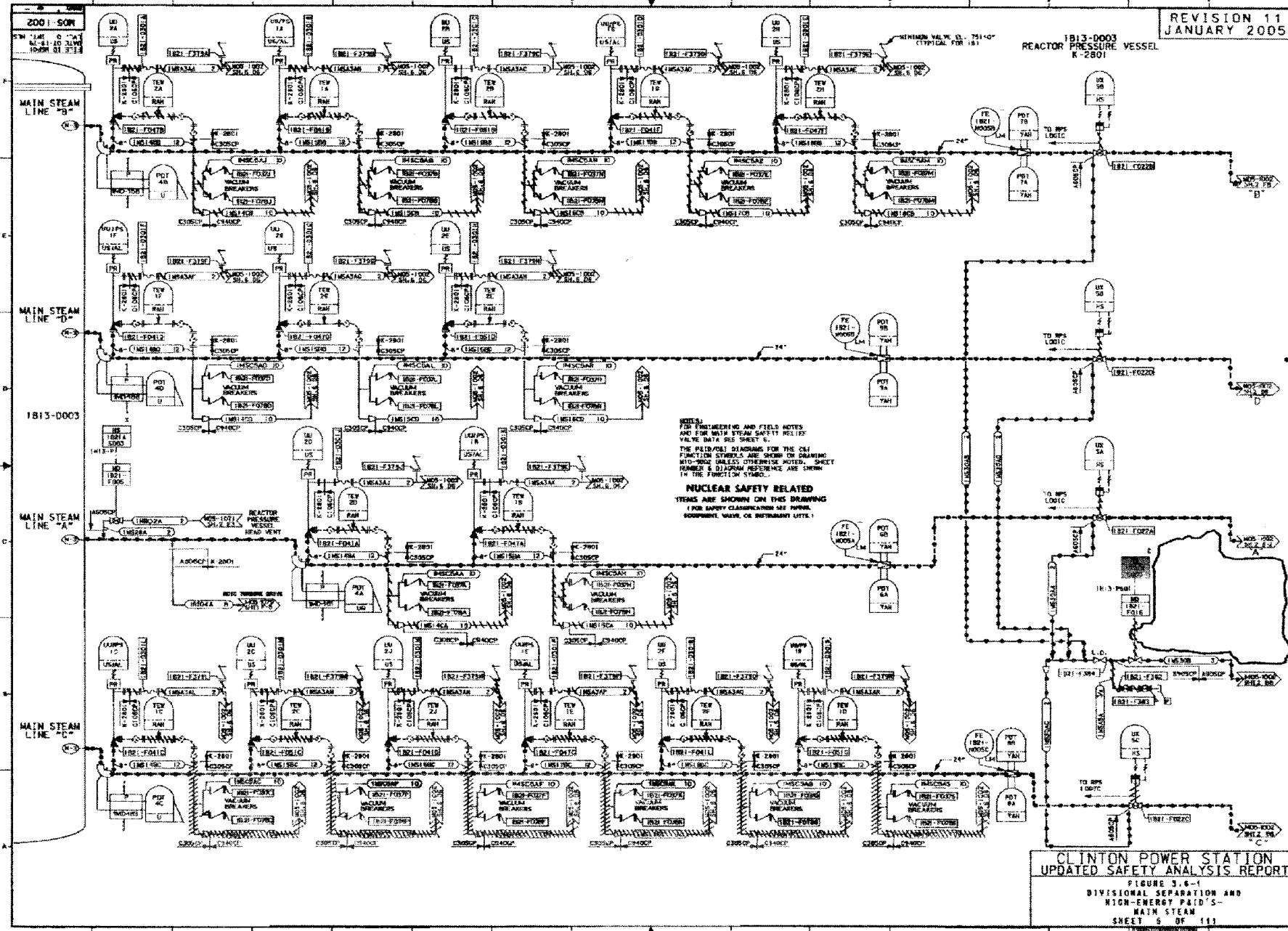
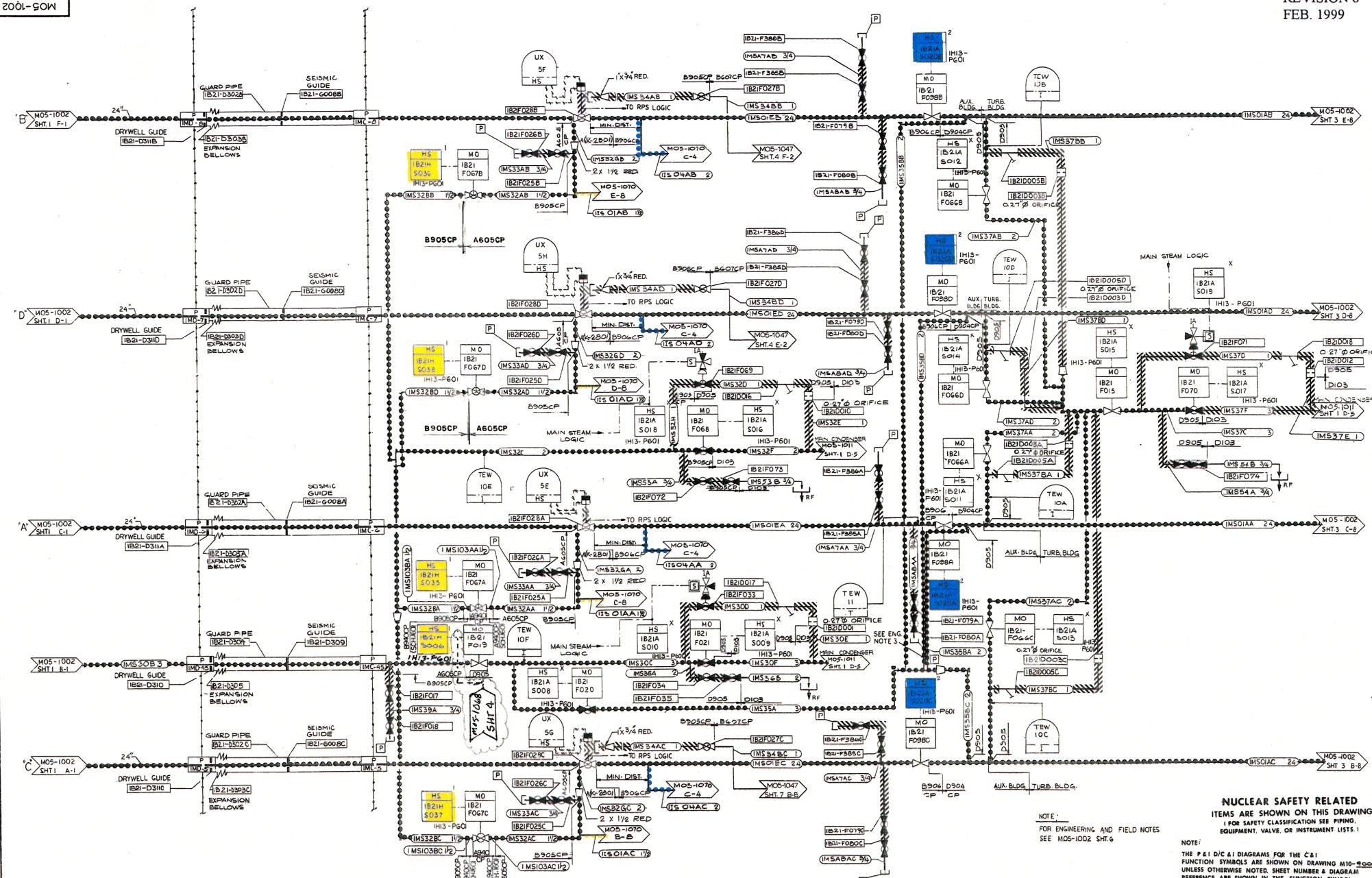


Figure 3.6-1 Sheet 4 of 111 has been deleted

REVISION 11  
JANUARY 2005

IB13-0003  
REACTOR PRESSURE VESSEL  
R-2801



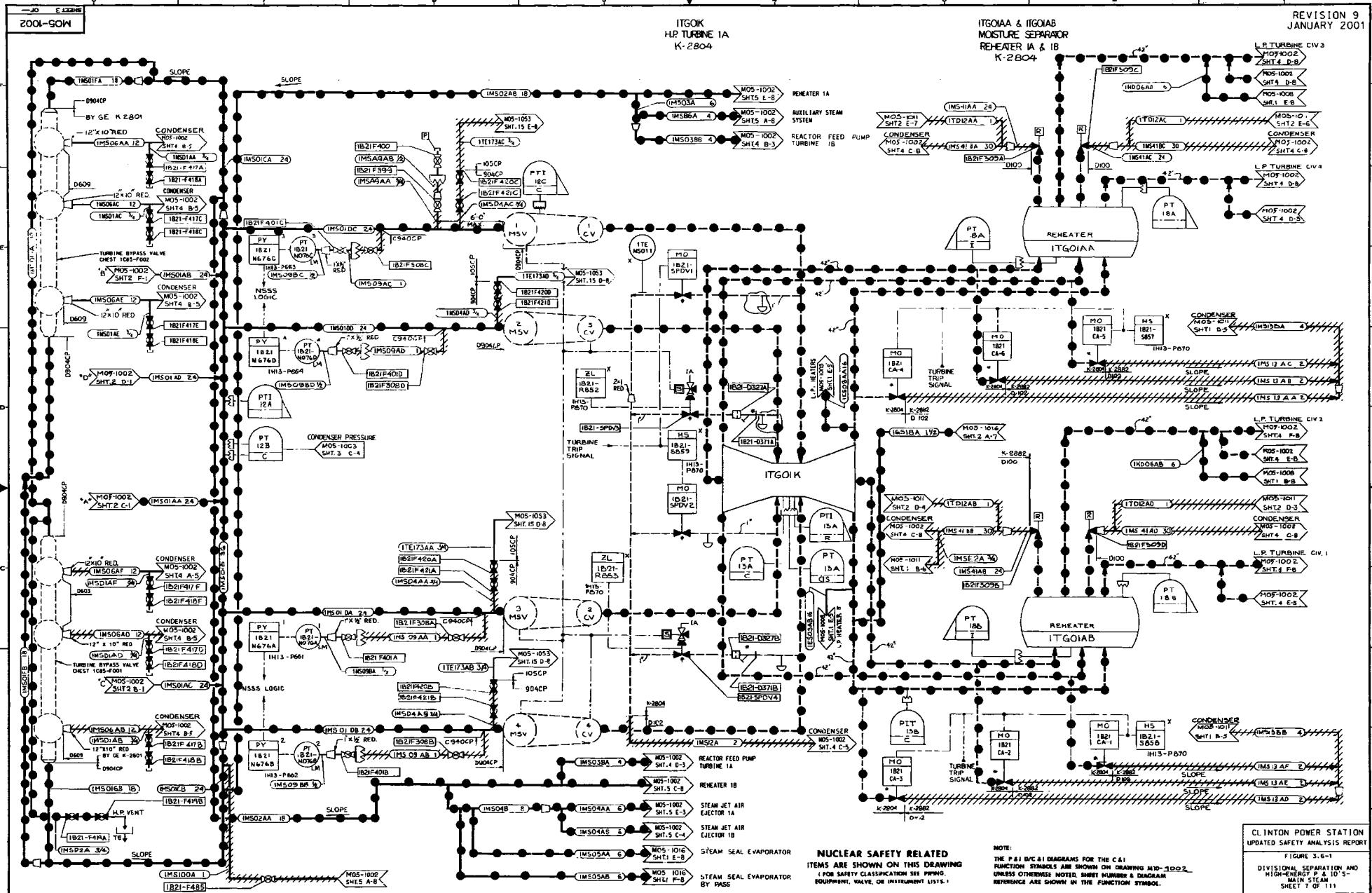


NOTE:  
FOR ENGINEERING AND FIELD NOTES  
SEE M05-1002 SHT. 6

NOTE:  
THE P & C & I DIAGRAMS FOR THE C & I EQUIPMENT, VALVE, OR INSTRUMENT LISTS.

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



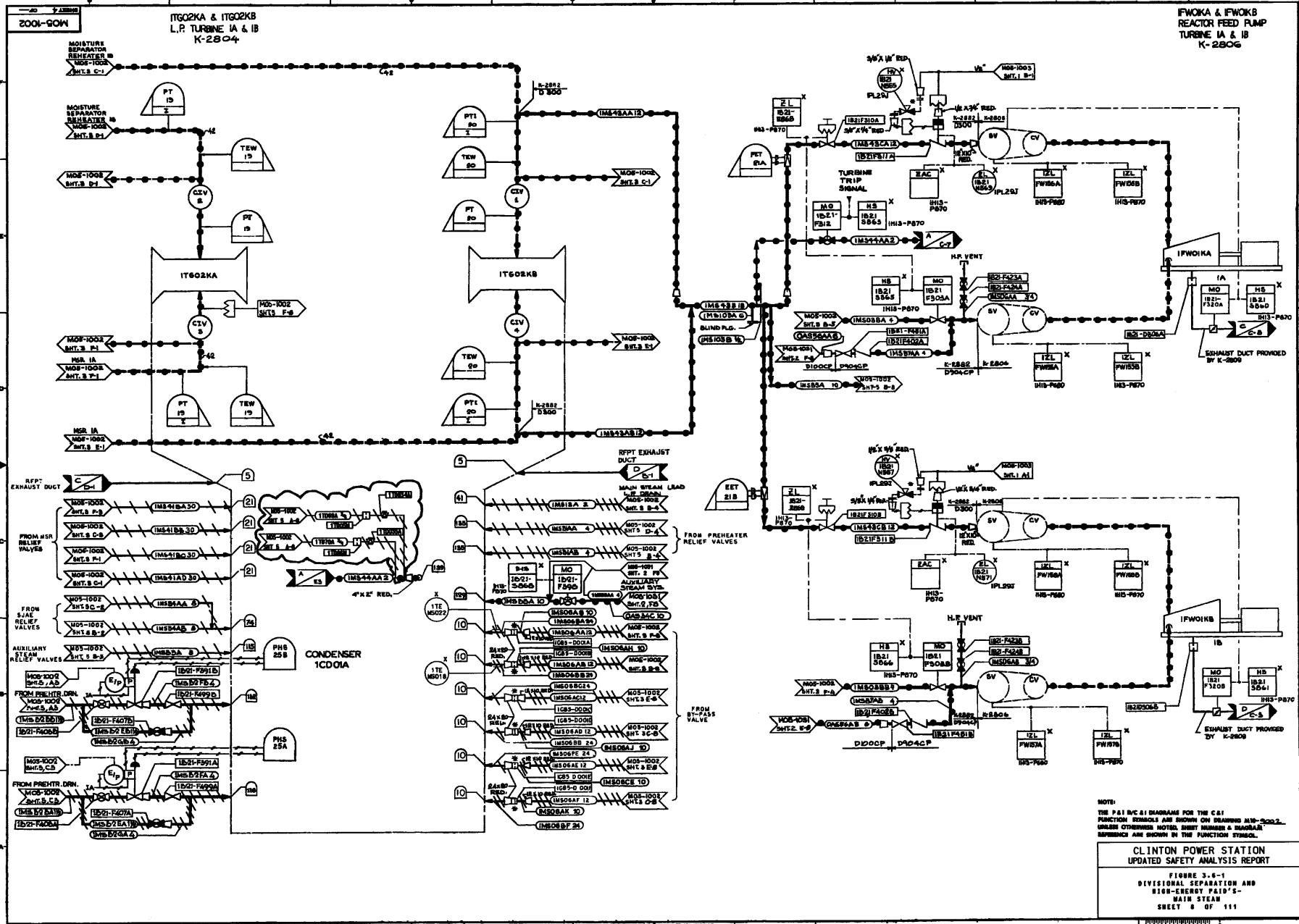
NUCLEAR SAFETY RELATED  
ITEMS ARE SHOWN ON THIS DRAWING  
(FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE:  
THE PA1 DPC & I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-1D02.  
UNLESS OTHERWISE NOTED, SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.6-1  
DIVISION SEPARATION AND  
HIGH ENERGY P & 10'S  
SHEET 7 OF 111

30" x 42" 2D at 1"=1"

REVISION 11  
JANUARY 2005



REVISION 12  
JANUARY 2007

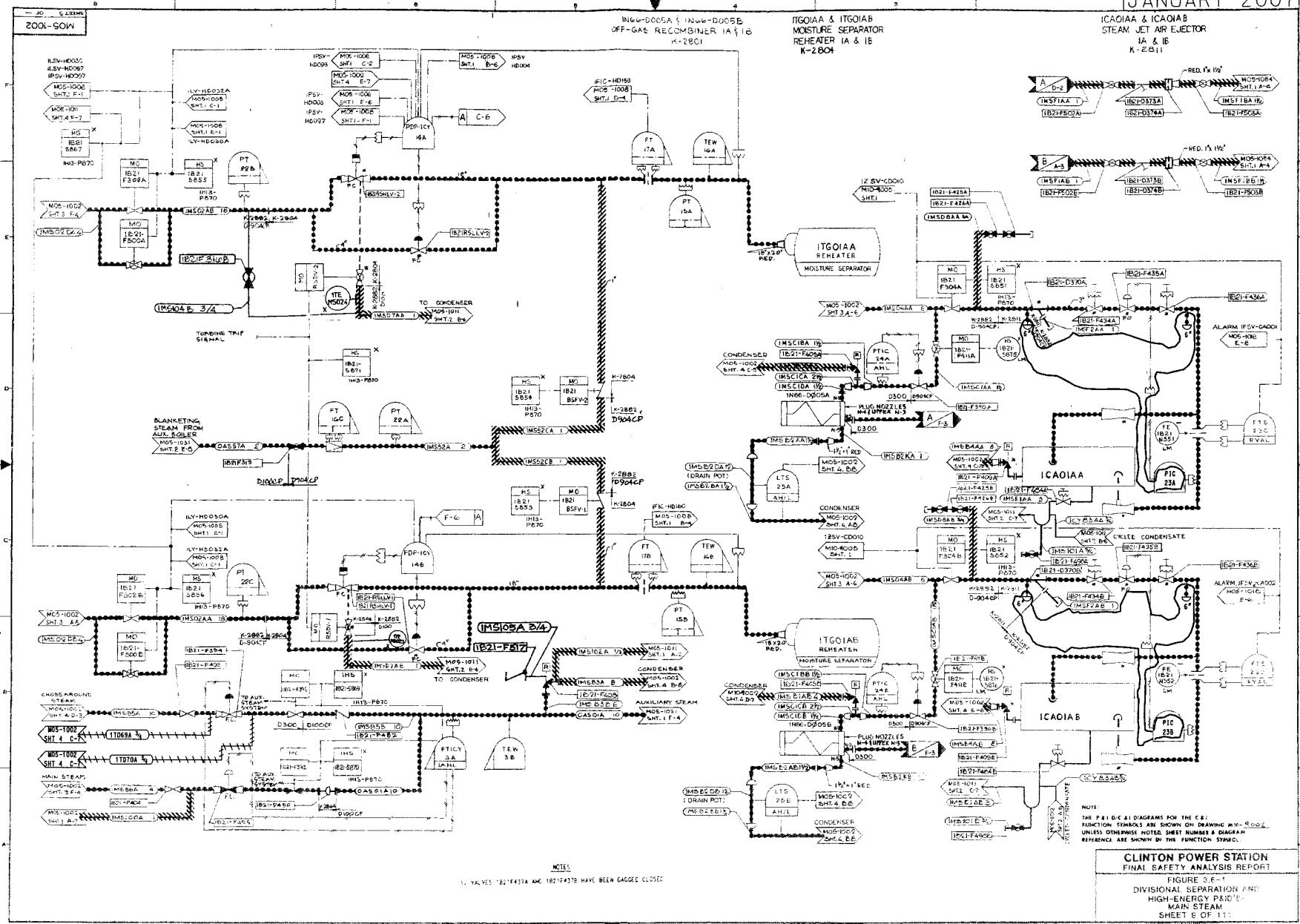
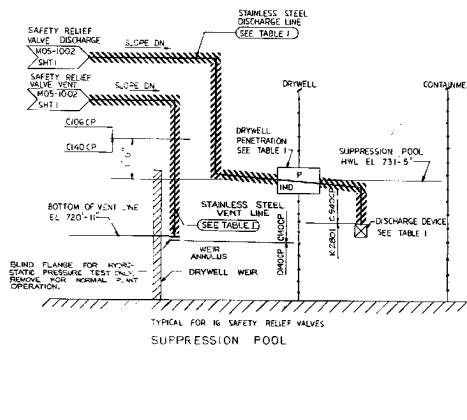


TABLE I (SEE ENGINEERING NOTE 4)



**FIELD N°**

1. FOR NUCLEAR BOILER SYSTEM (NB) LOGIC SEE G.F.  
DRAWING 828E151
  2. FOR REACTOR PROTECTION SYSTEM (RPS) LOGIC SEE  
G.E. DRAWING 828E317

ENGINEERING NOTES

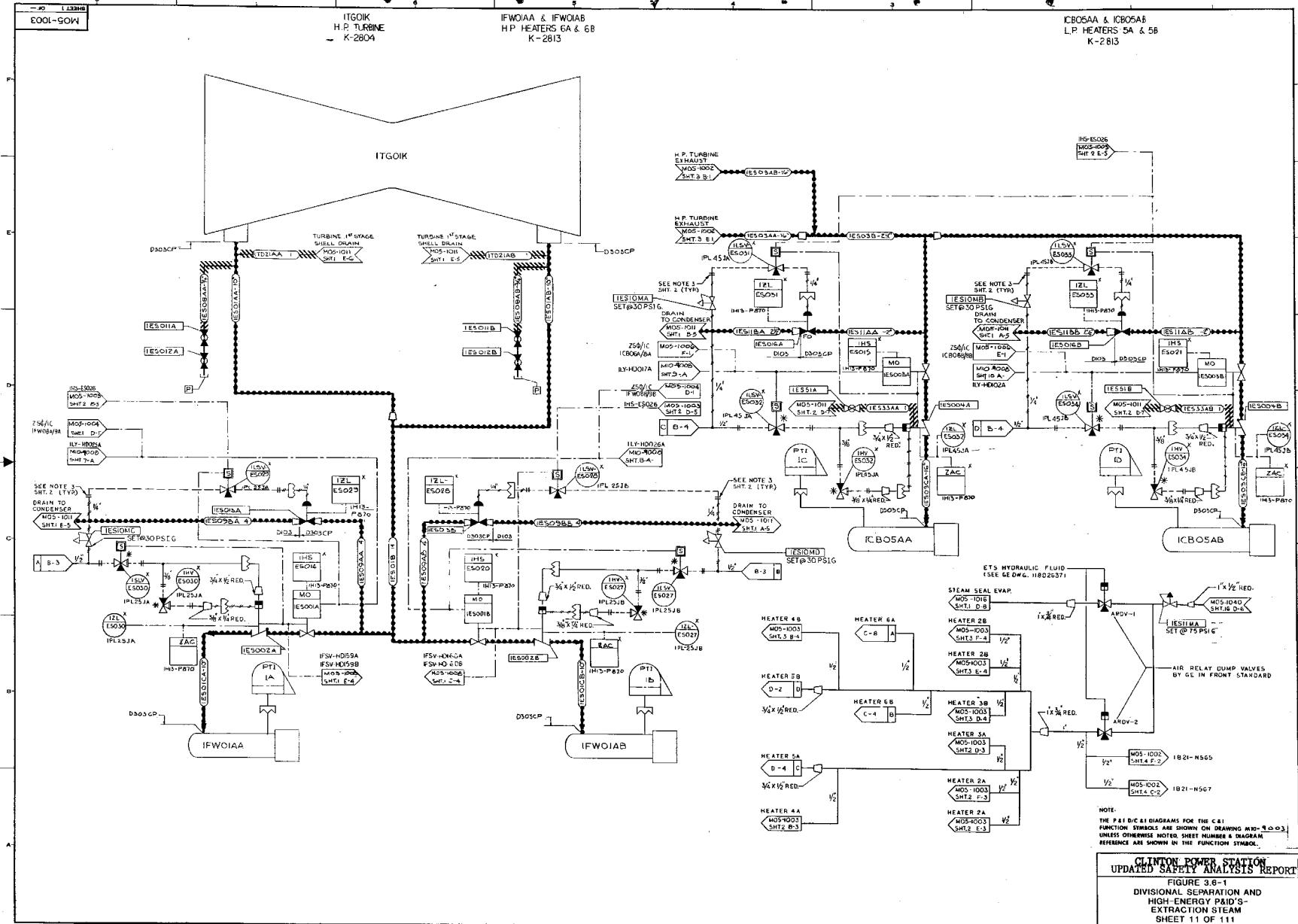
1. ALL MAIN STEAM DRAIN LINES AND SAFETY RELIEF VALVES DISCHARGE AND VENT LINES SHALL SLOPE IN DIRECTION OF FLOW 1/8 INCH PER FT MINIMUM.
  2. BY-PASS LINES: IM3358A, IM3358B, IM3358C AND IM3358D SHALL BE CONNECTED TO THE TOPS OF THE MAIN STEAM LINES.
  3. VALVES: 160IF23M, 160IF23H, 160IF202, AND 160IF202D SHALL BE LOCATED OUTSIDE OF SHIELDED WALLS AND BE ACCESSIBLE DURING NORMAL PLANT OPERATION.
  4. ALL MAIN STEAM SAFETY RELIEF VALVES ARE MANUFACTURED BY DIKERS AND FURNISHED UNDER SPECIFICATION K-2801 SIZE 8 X 10" WITH GATED DISCHARGE OF 325000 LBS PER HOUR AT 1000 PSIG PRESSURE, 12.103 PSCFM, OR 10.05 INCHES CDS.

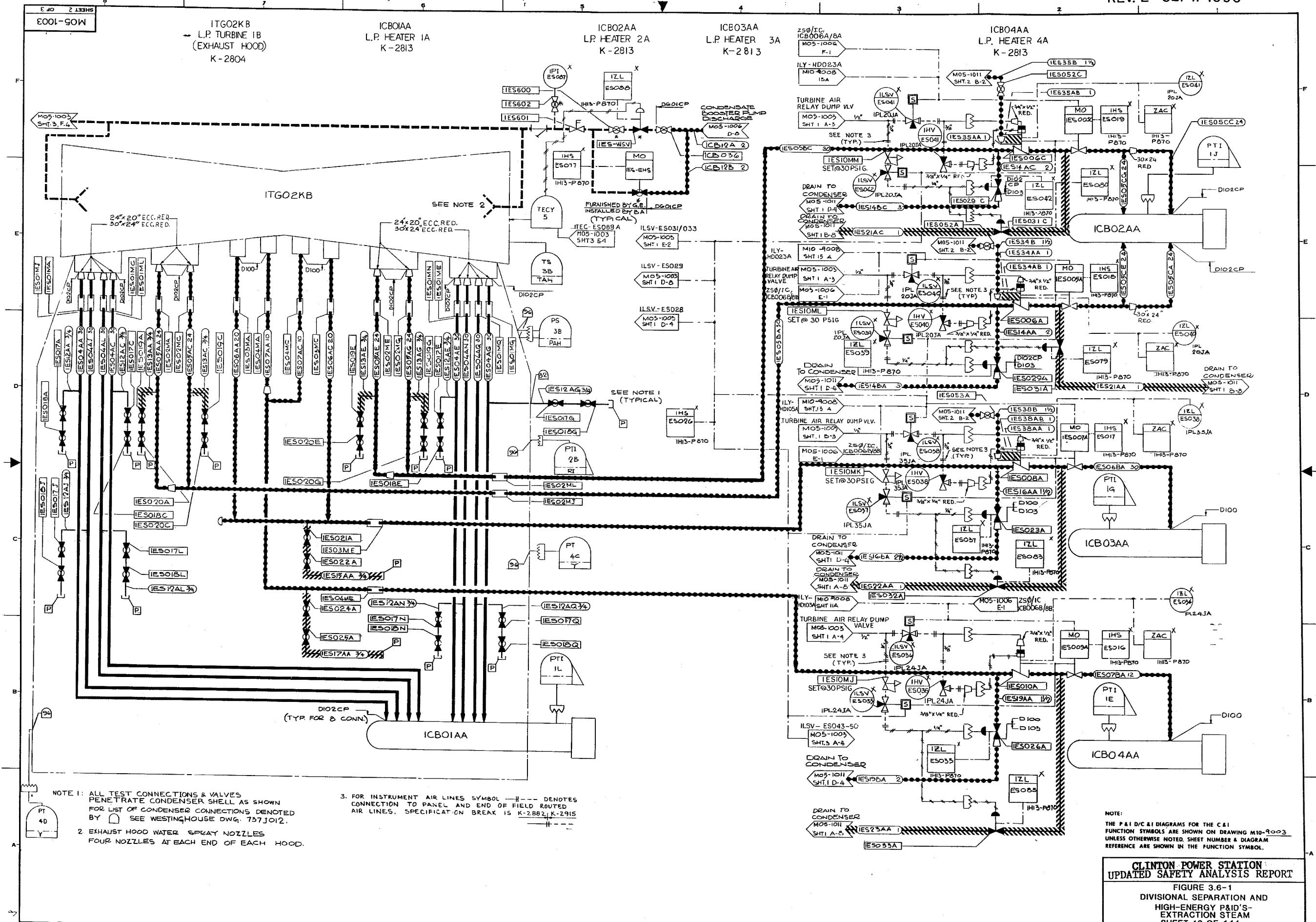
MISC. RELIEF VALVE TABULAT

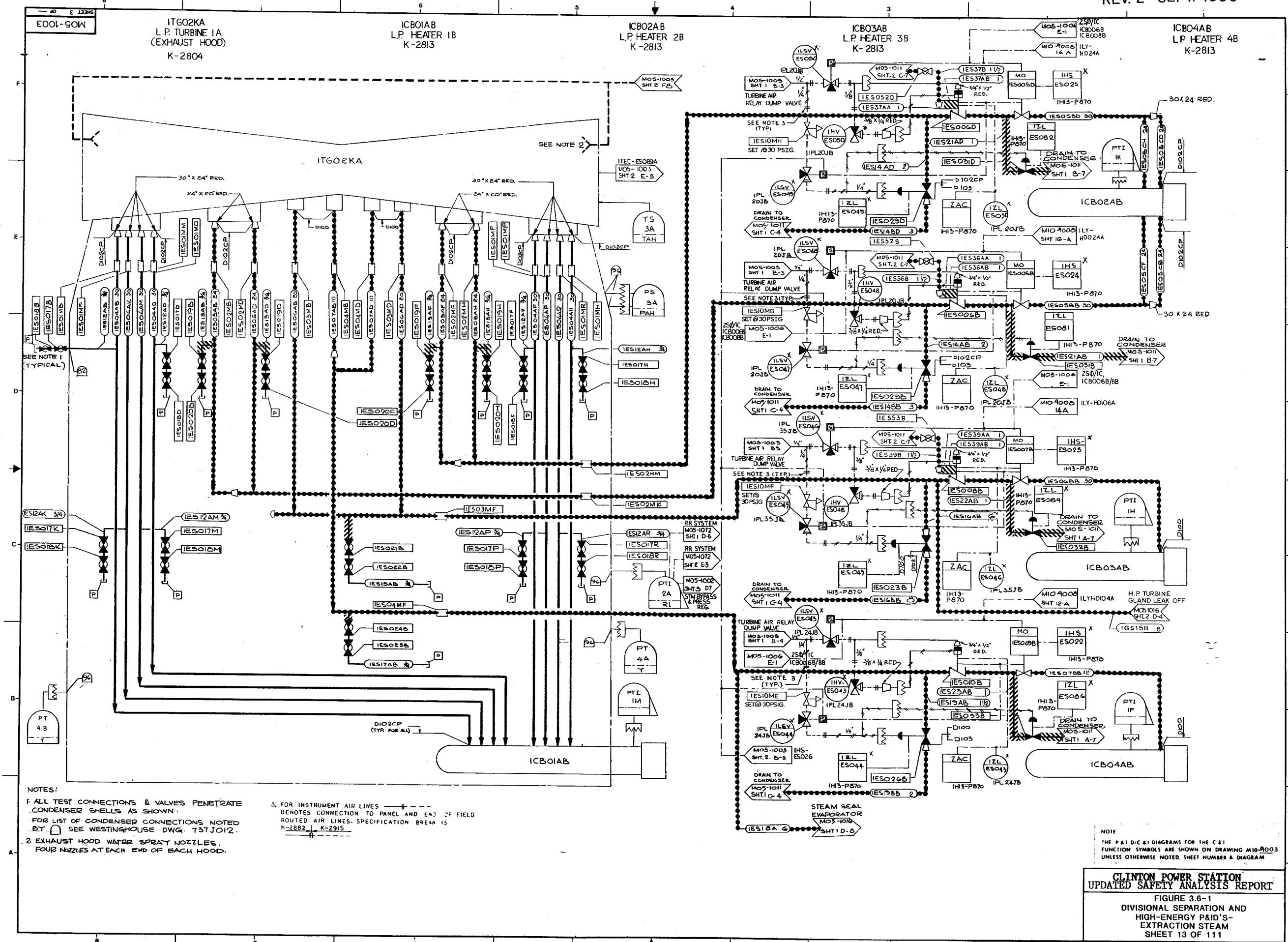
**NUCLEAR SAFETY RELATED  
ITEMS ARE SHOWN ON THIS DRAWING**  
*(FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)*

NOTE: THE P&I D/C & I/D DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9002 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM

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UPDATED SAFETY ANALYSIS REPORT**







M05-1004

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

IB13-D003  
REACTOR PRESSURE  
VESSEL  
K-2801

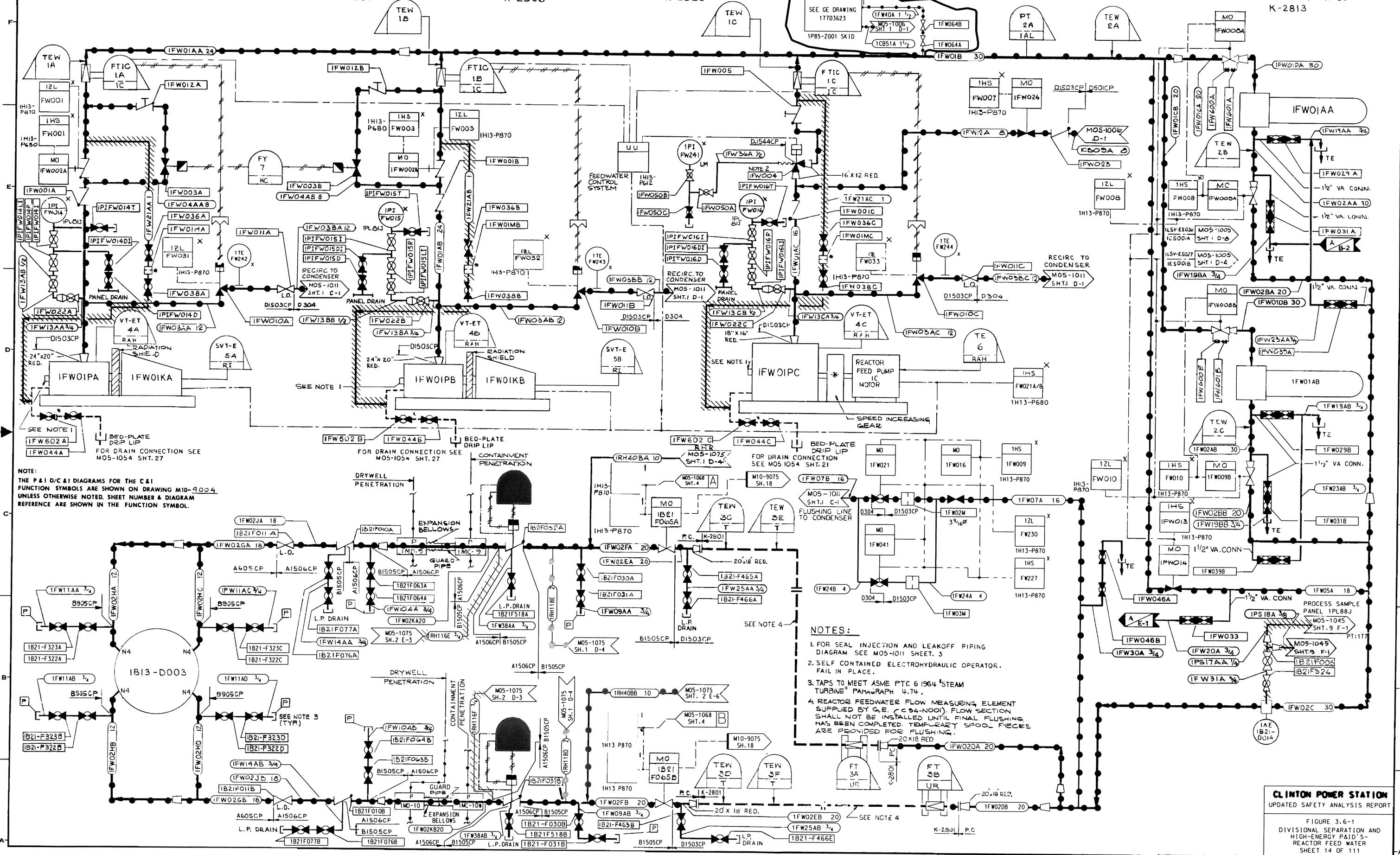
IFWOIKA & KB  
REACTOR FEED PUMPS IA &  
TURBINE DRIVES  
K-2806

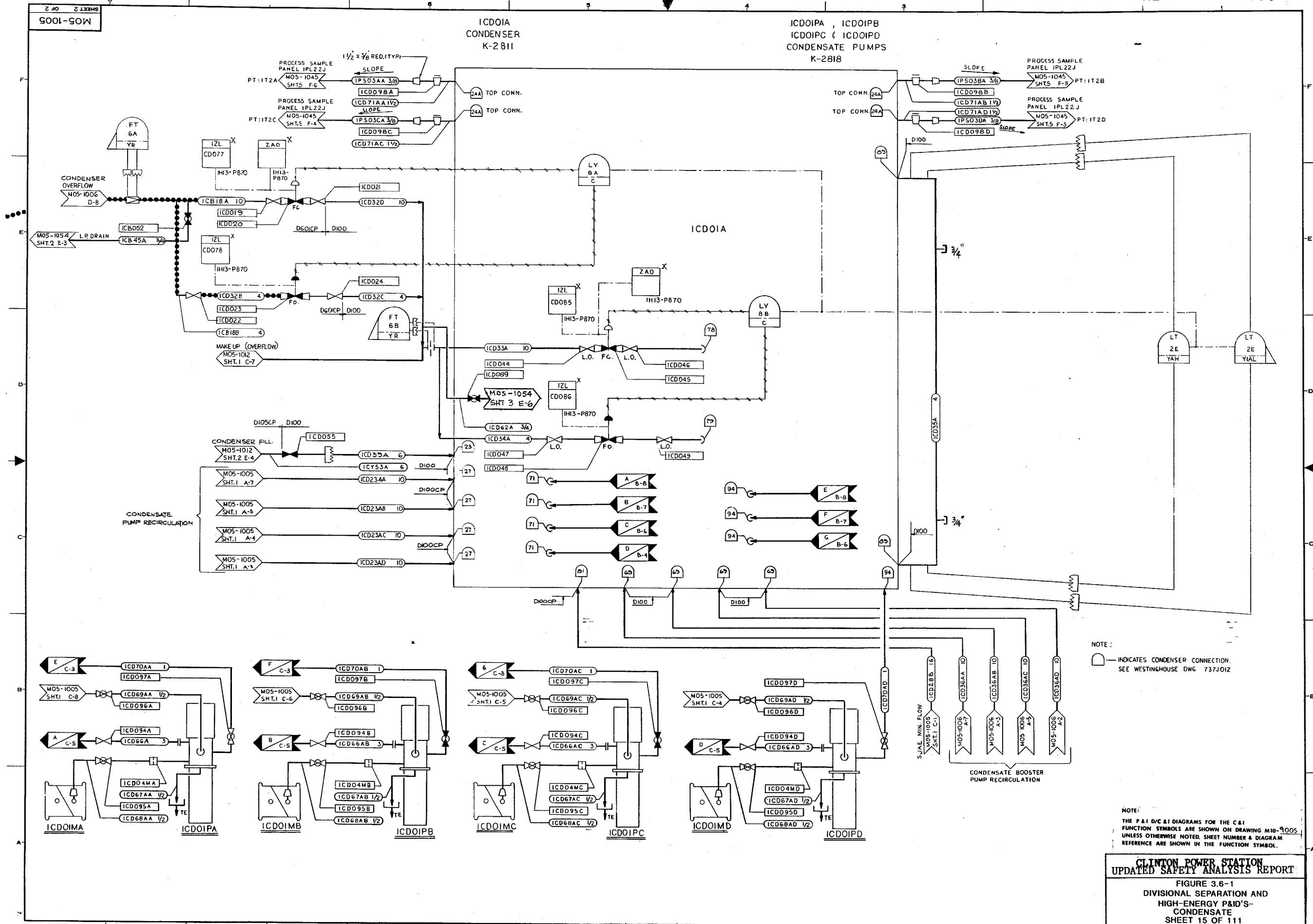
IFWOIPC  
REACTOR FEED PUMP IC  
MOTOR DRIVEN  
K-2820

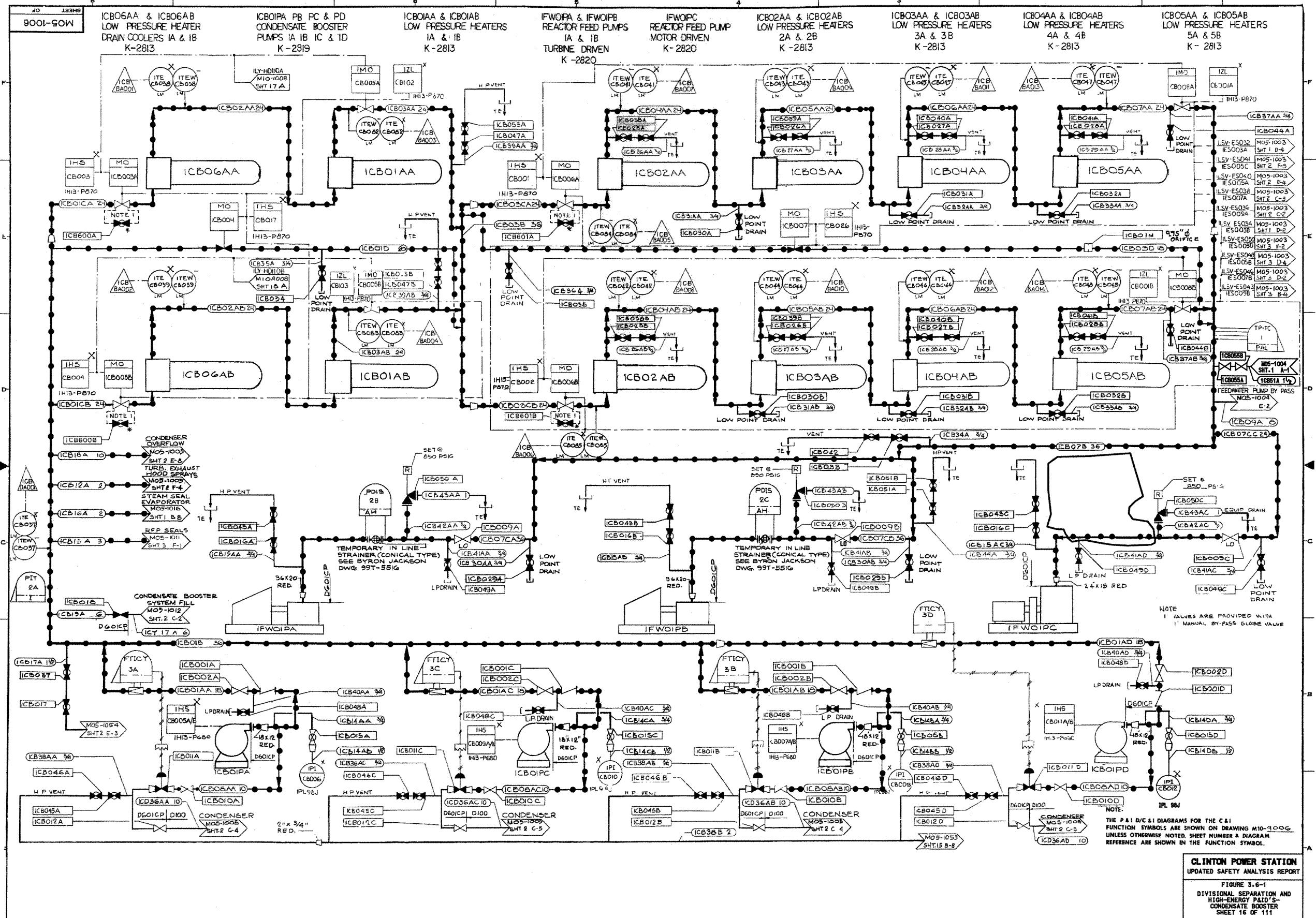
REACTOR FEED PUMP  
MOTOR  
K-2882 K-2970

IFWOIAA & IFWOIAB  
HP HEATER 6A & 6B  
K-2813

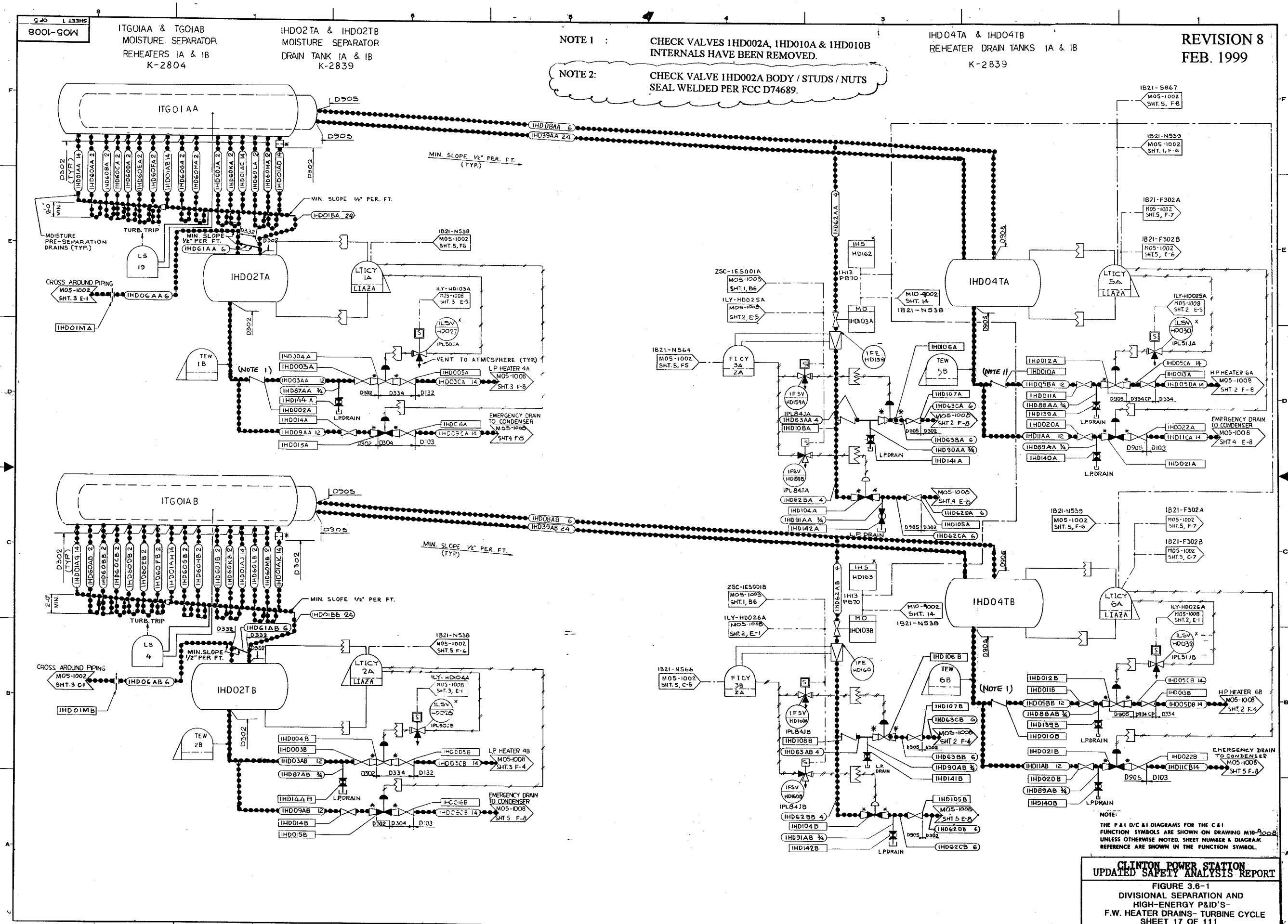
REVISION 9  
JANUARY 2001

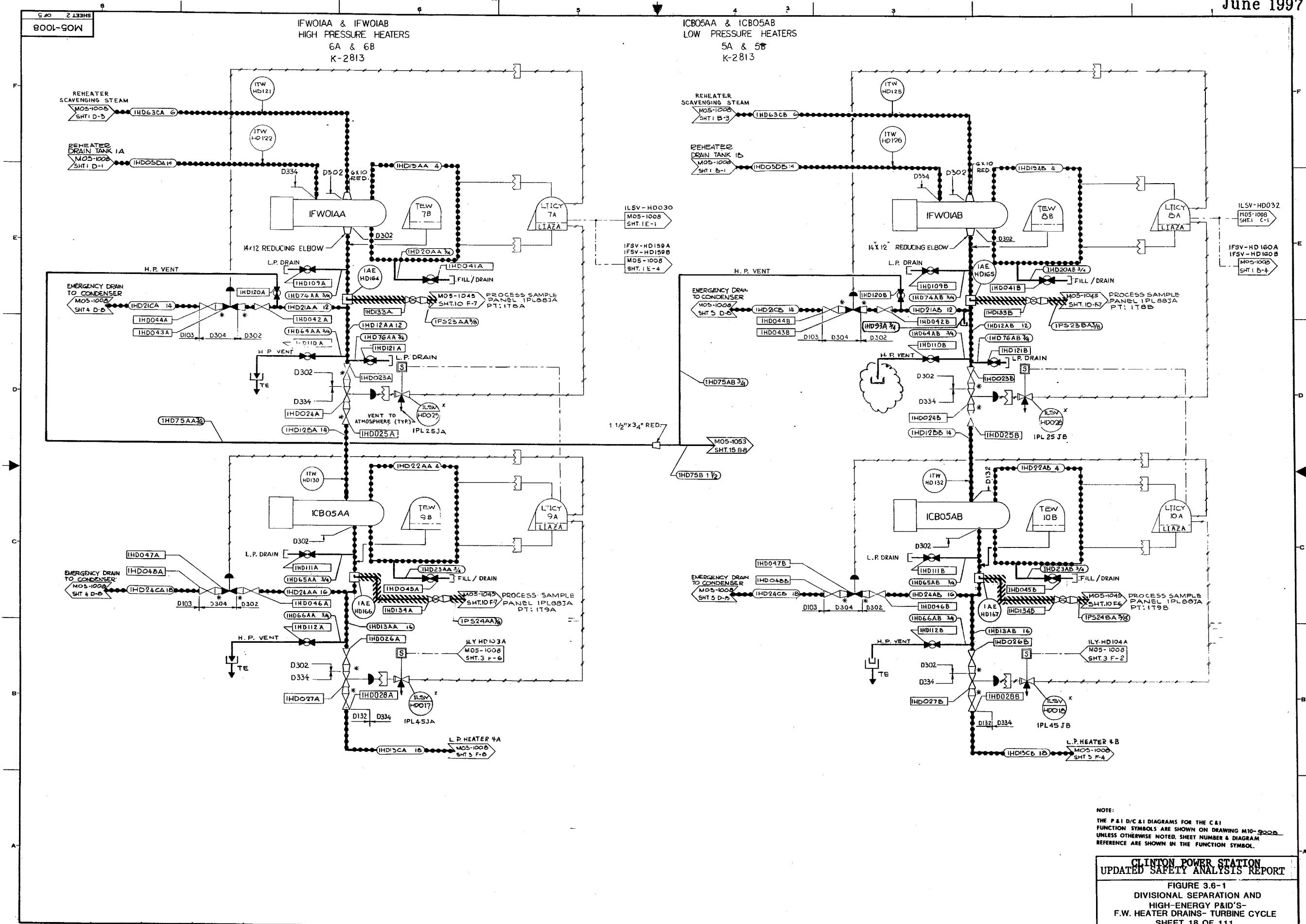




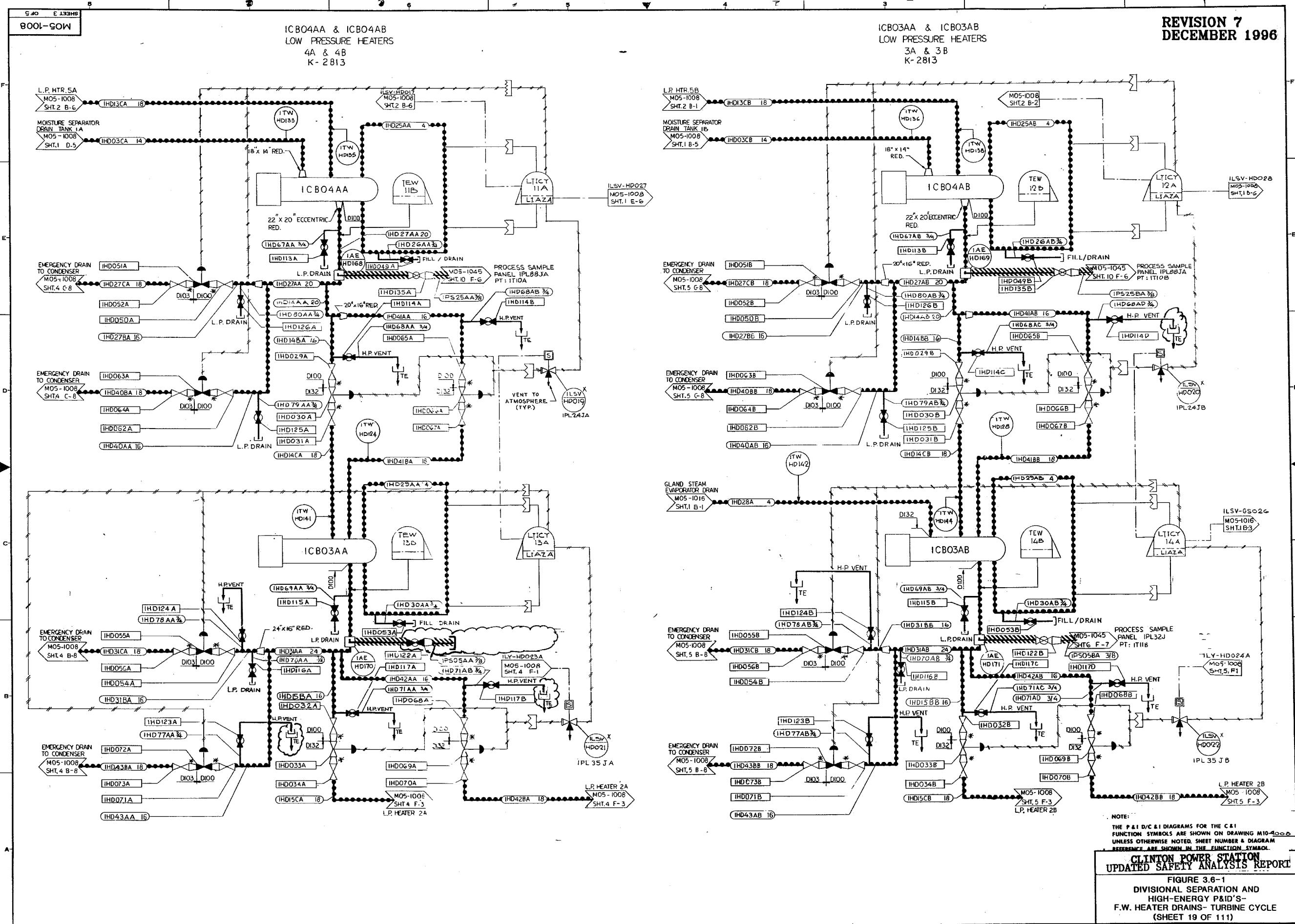


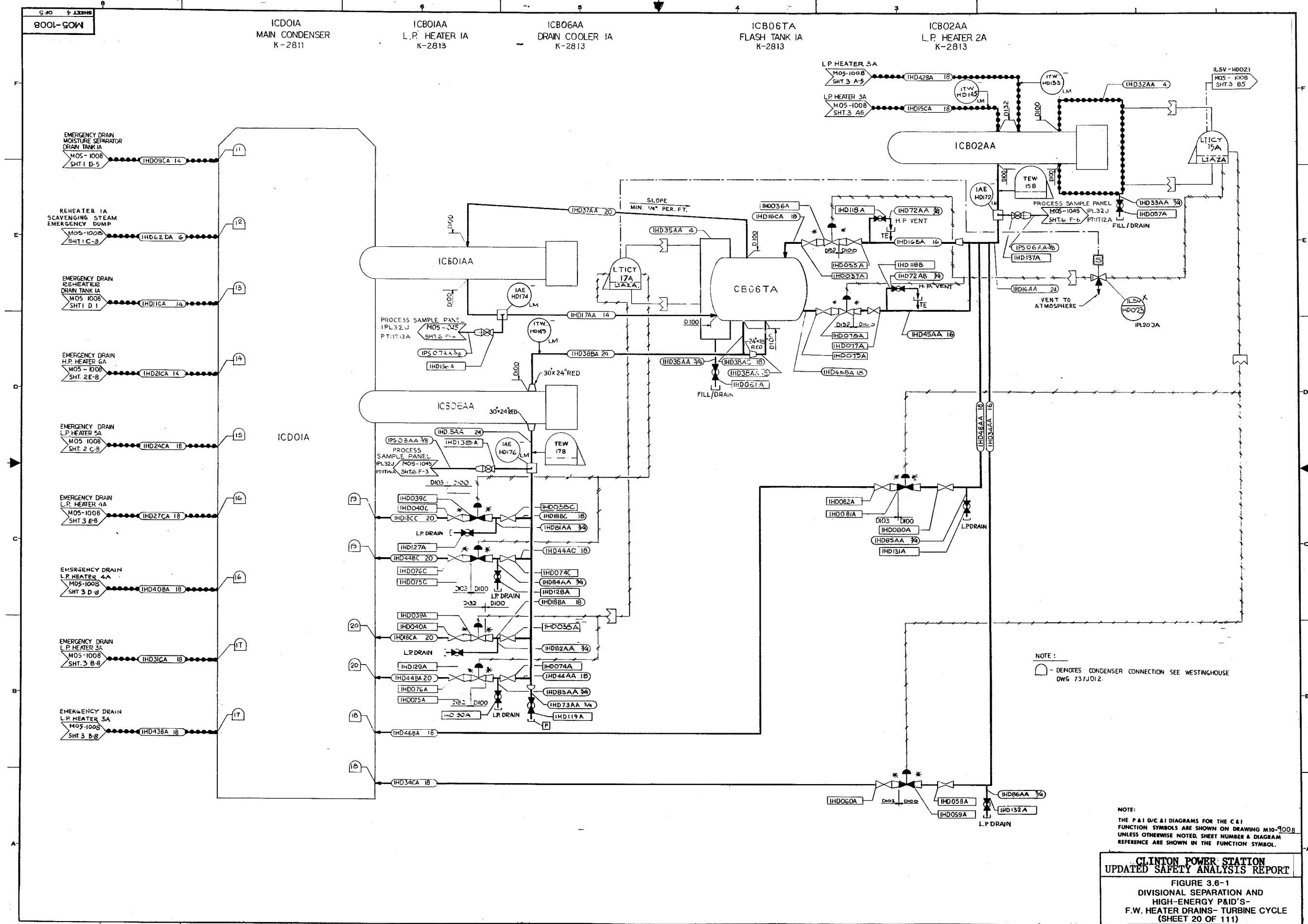
REVISION 8  
FEB. 1999



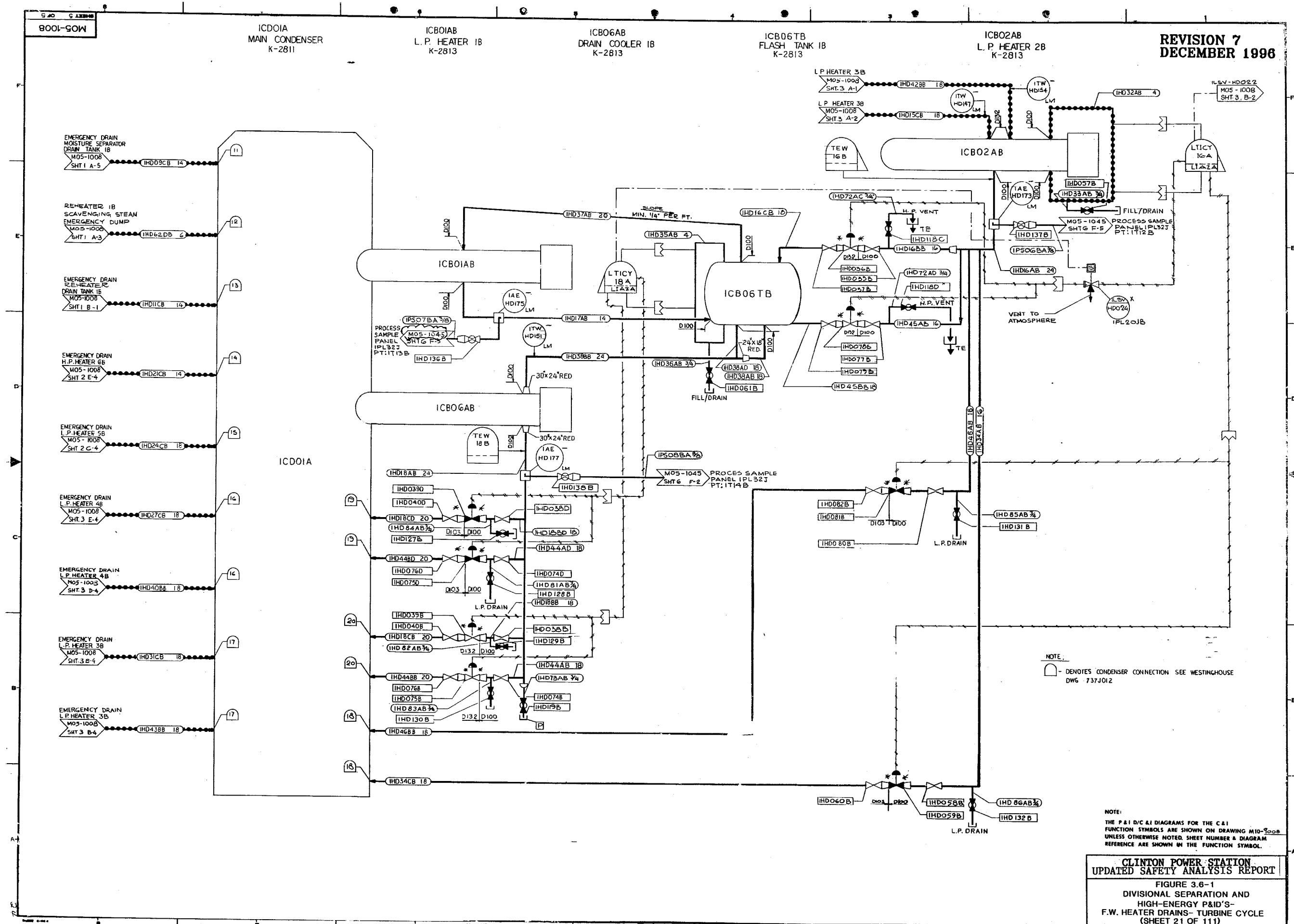


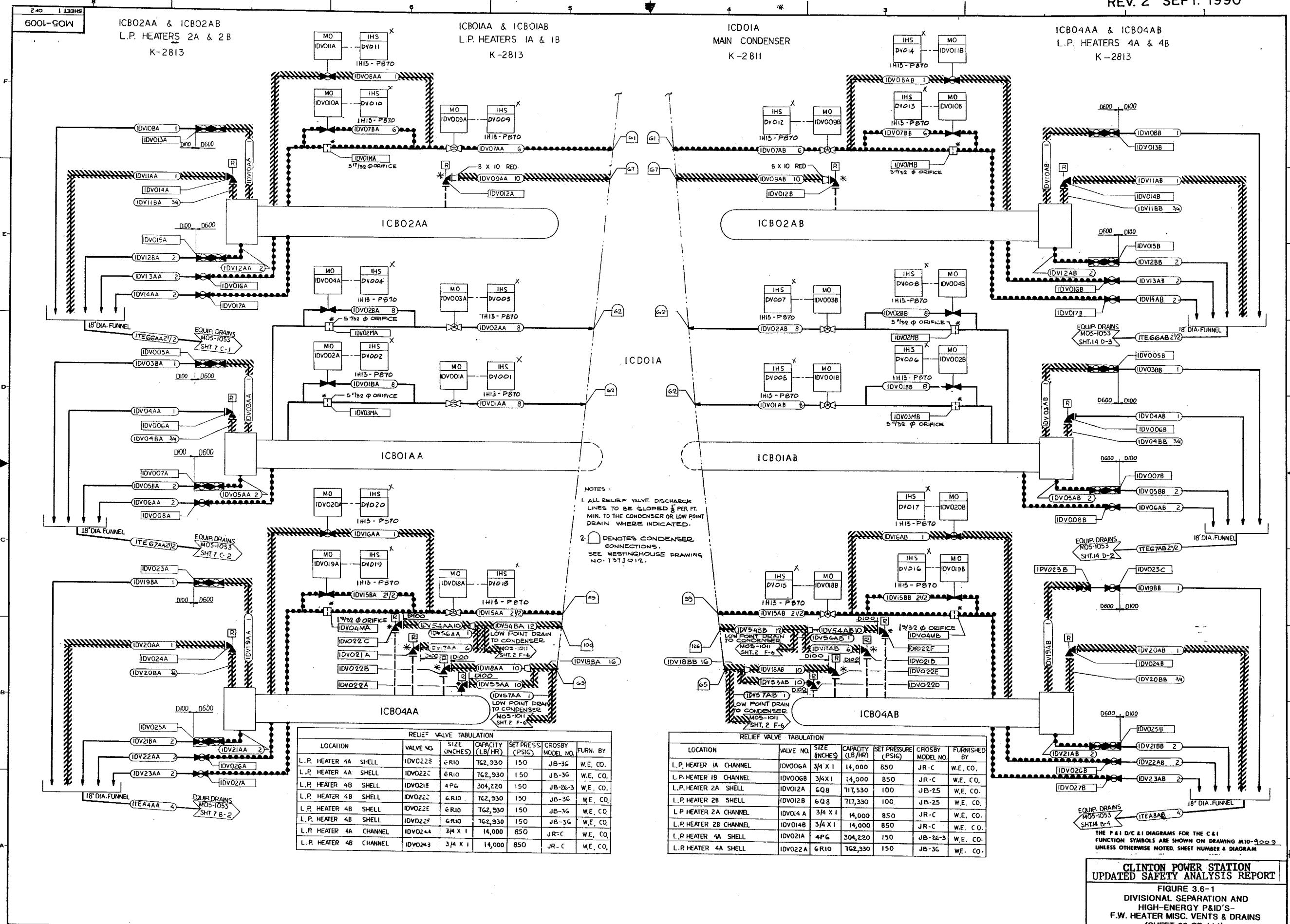
REVISION 7  
DECEMBER 1996

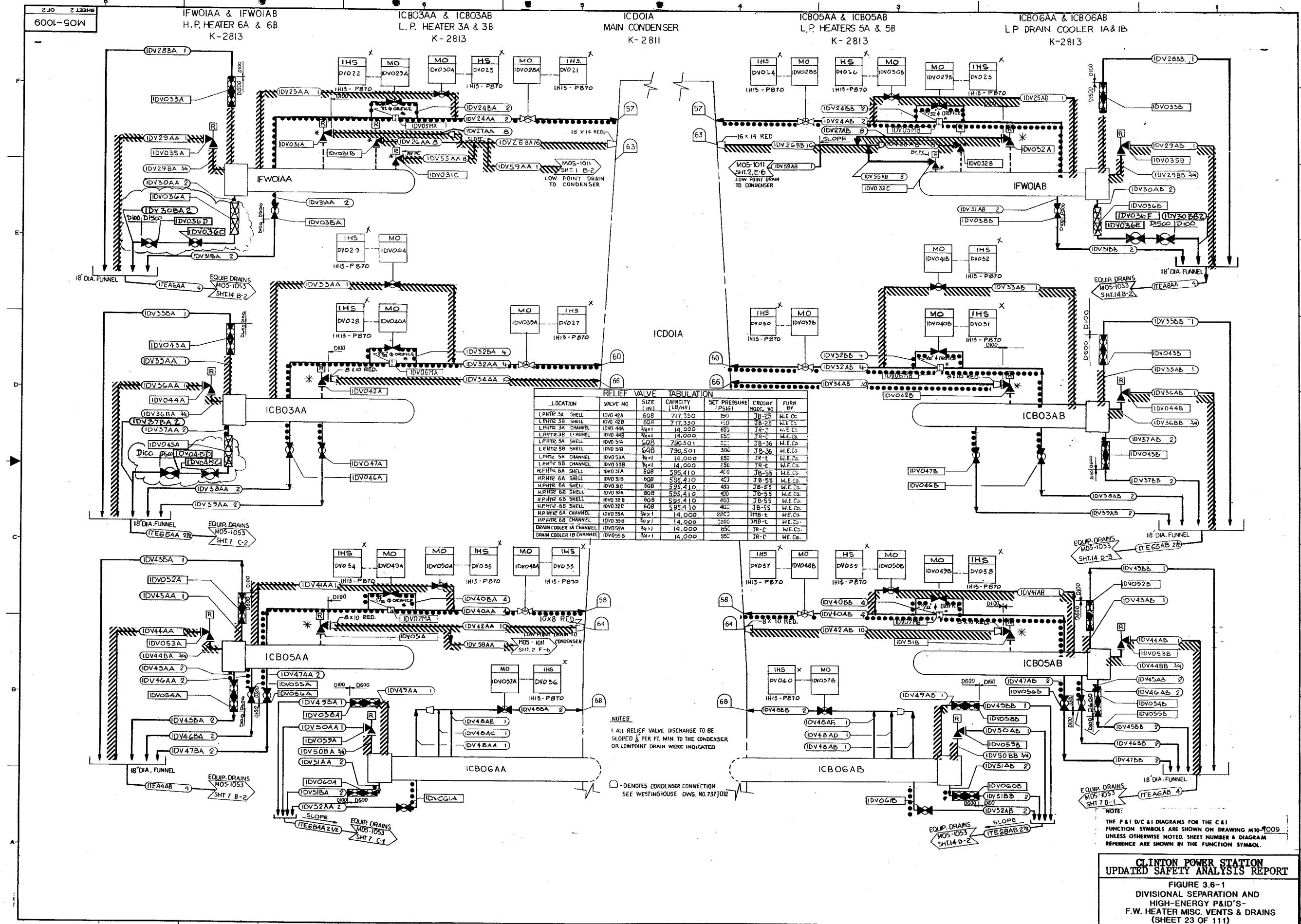


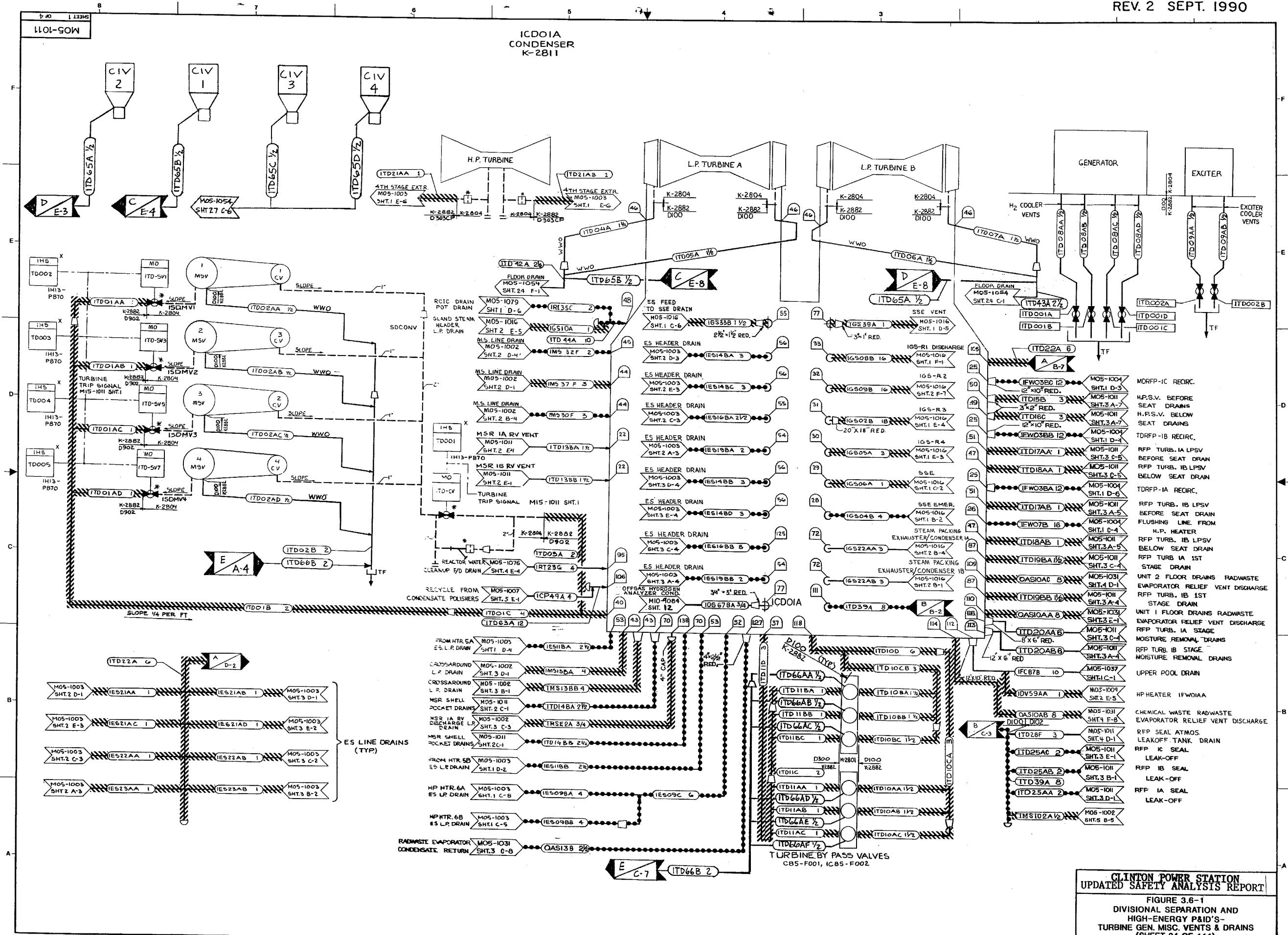


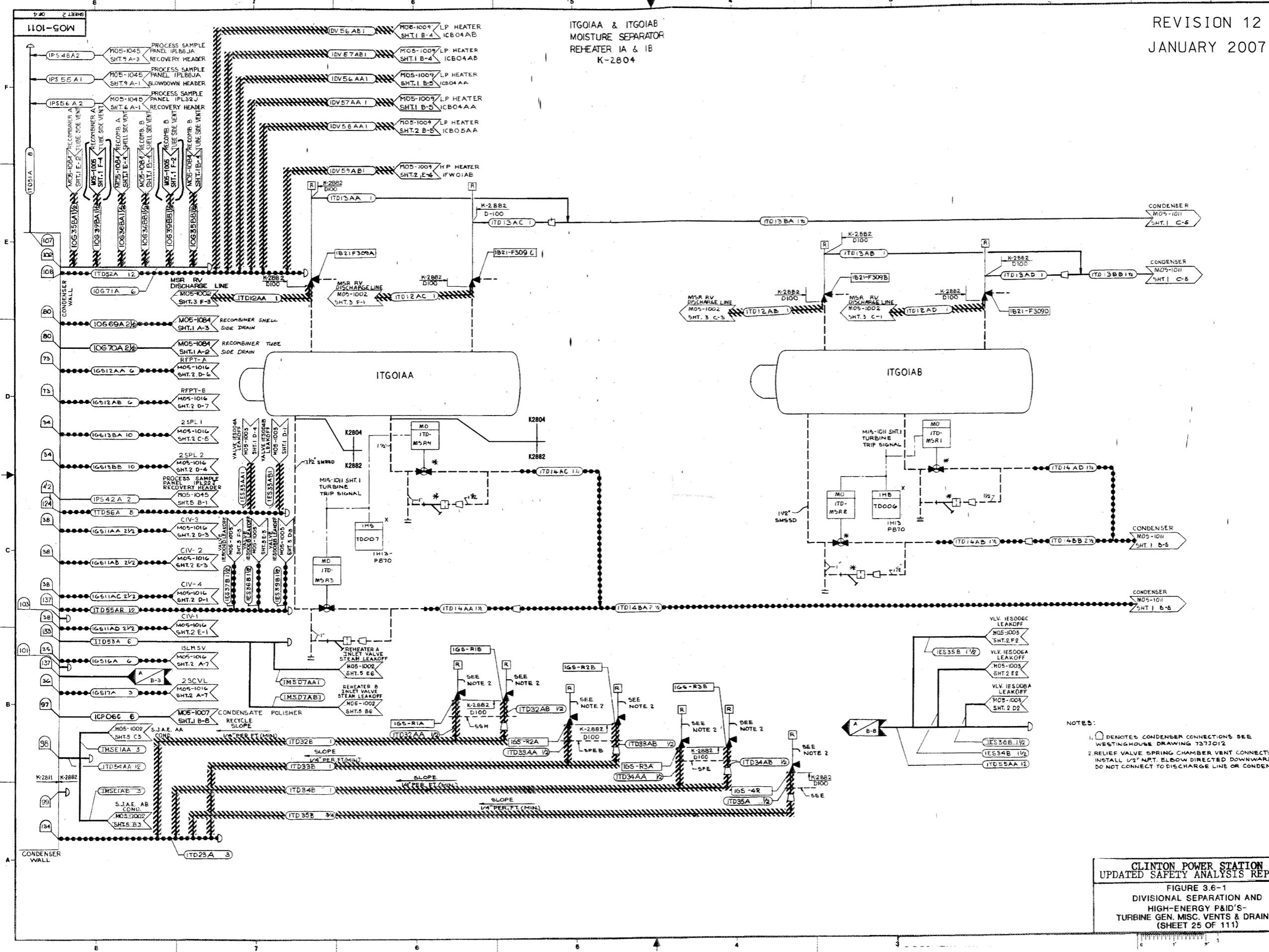
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DECEMBER 1996

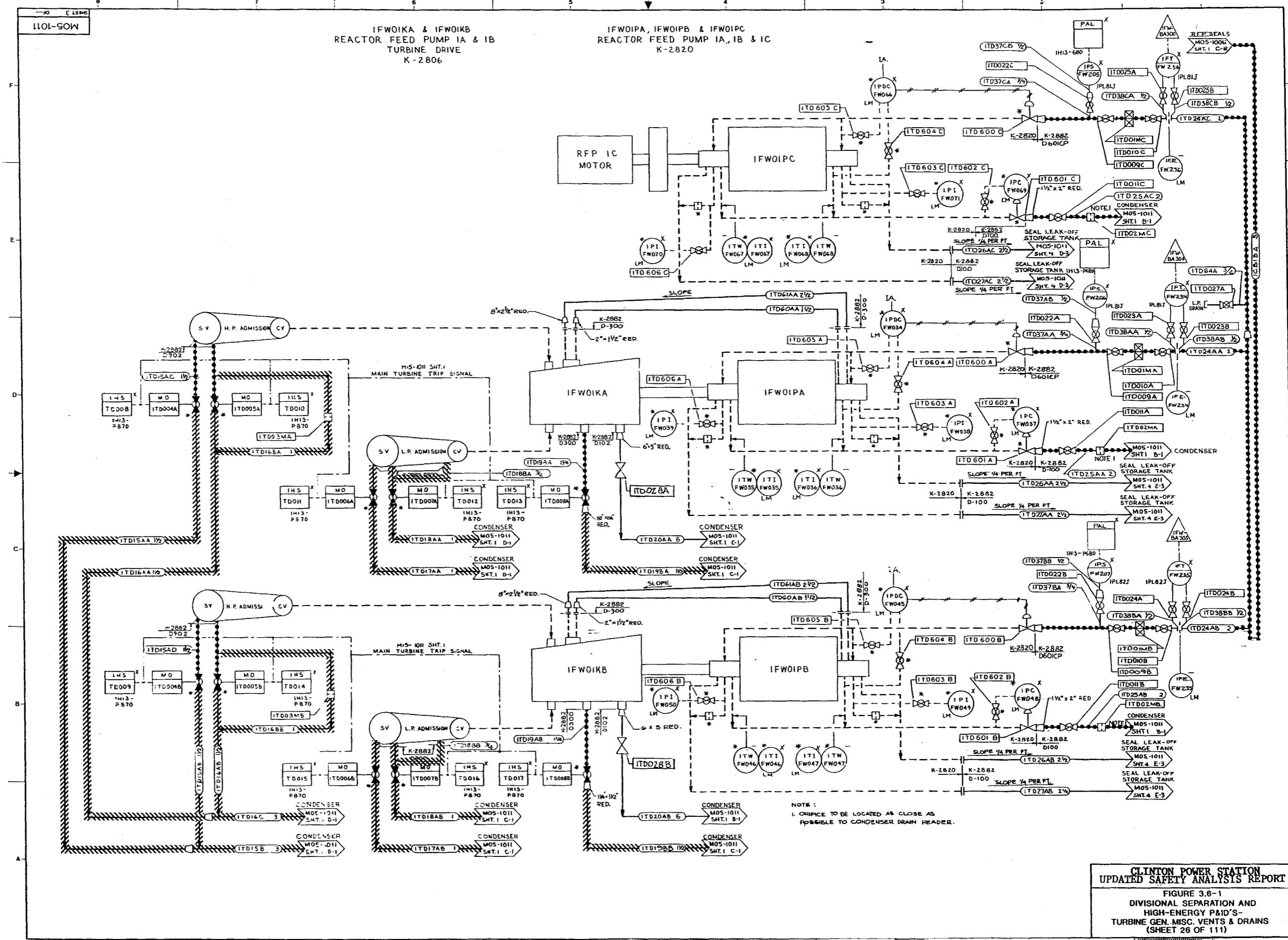


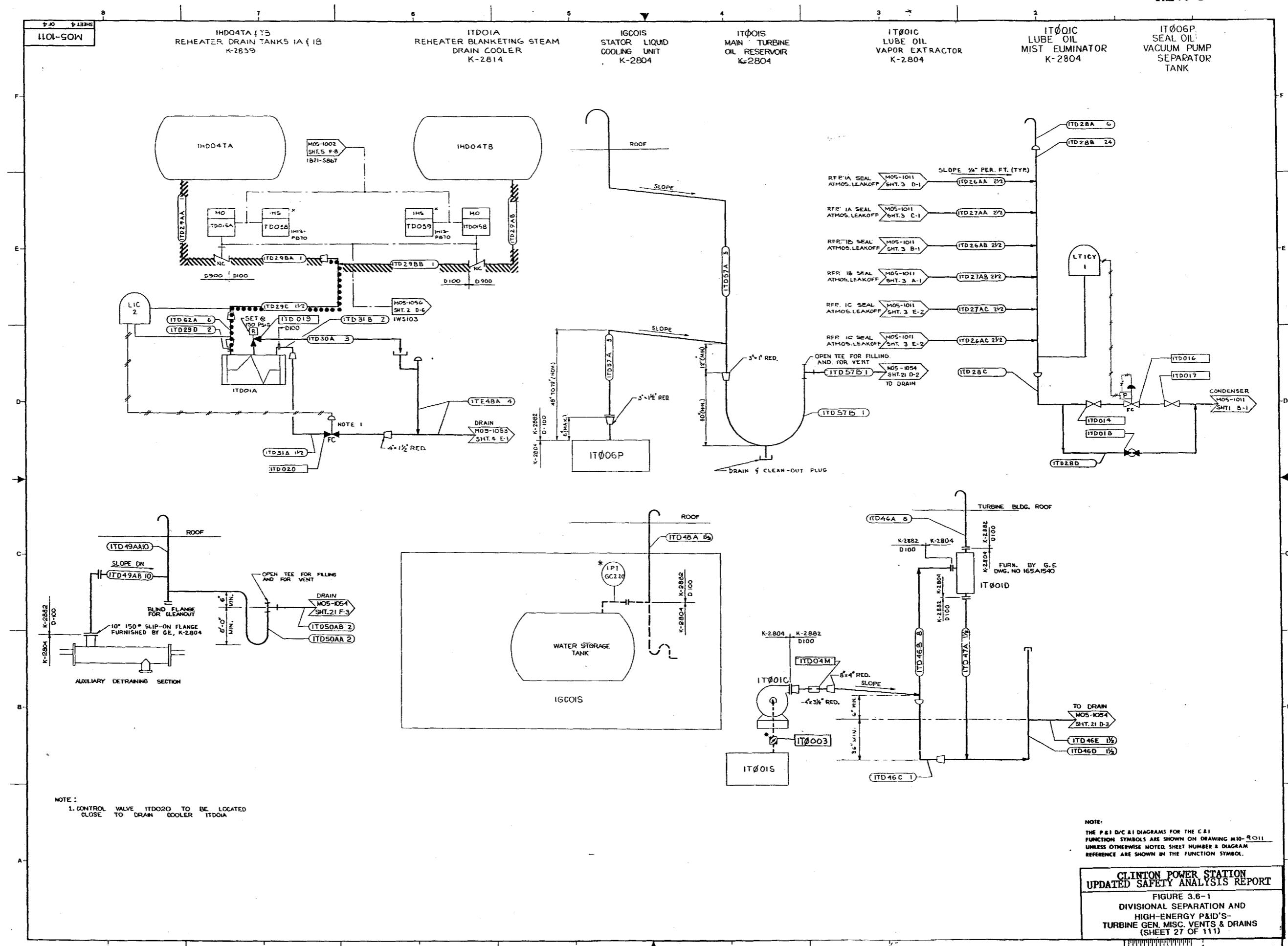




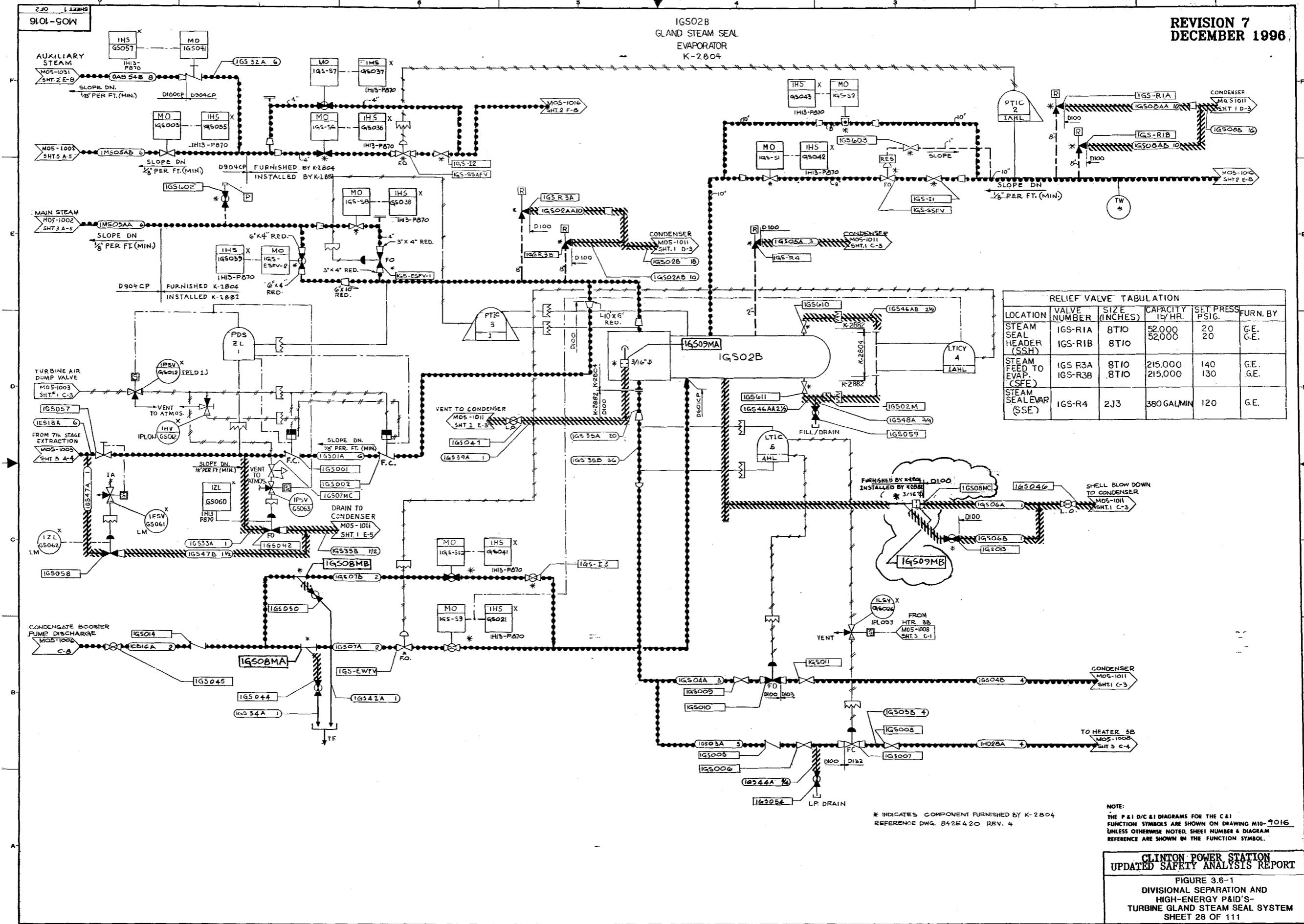




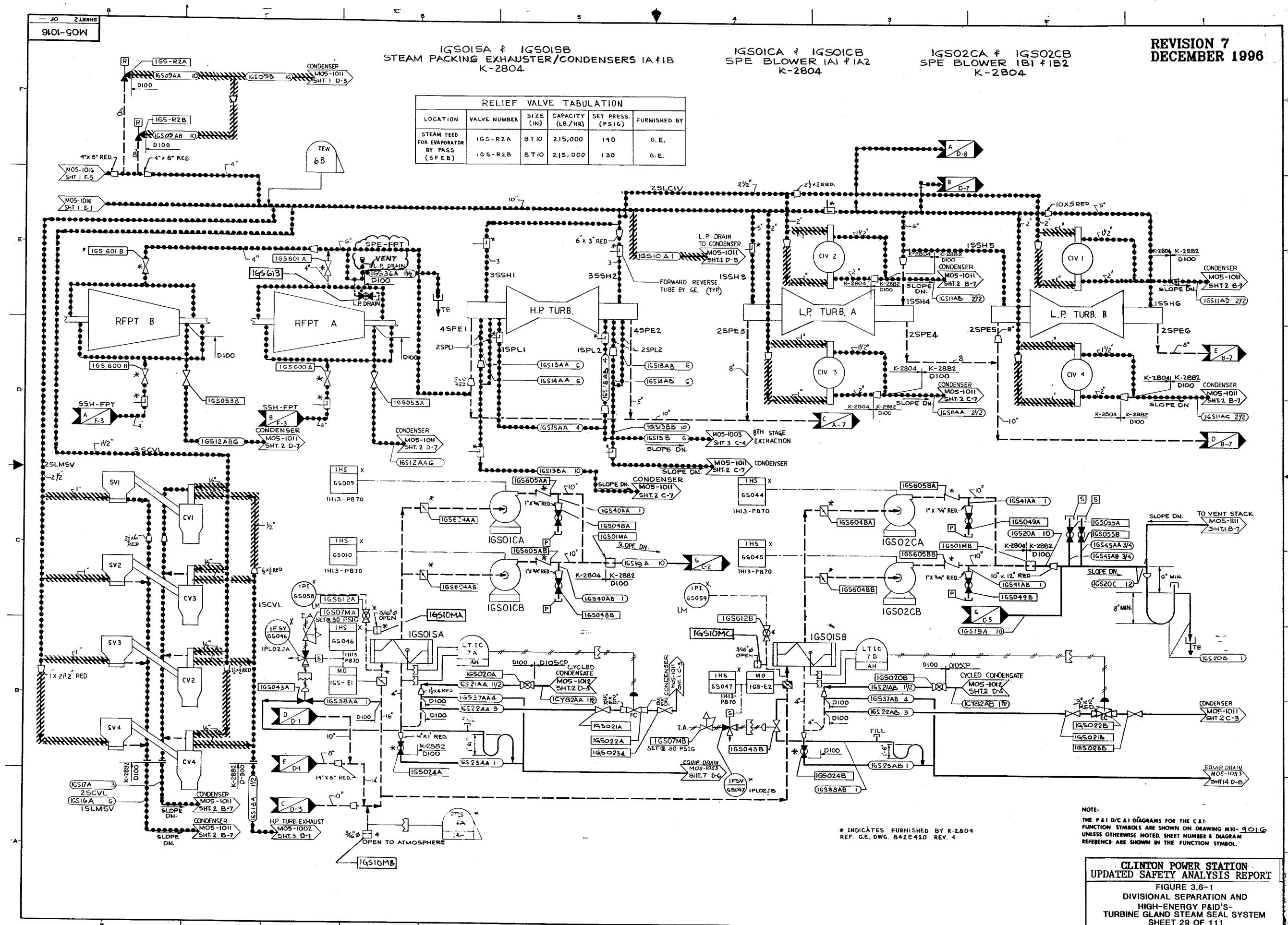


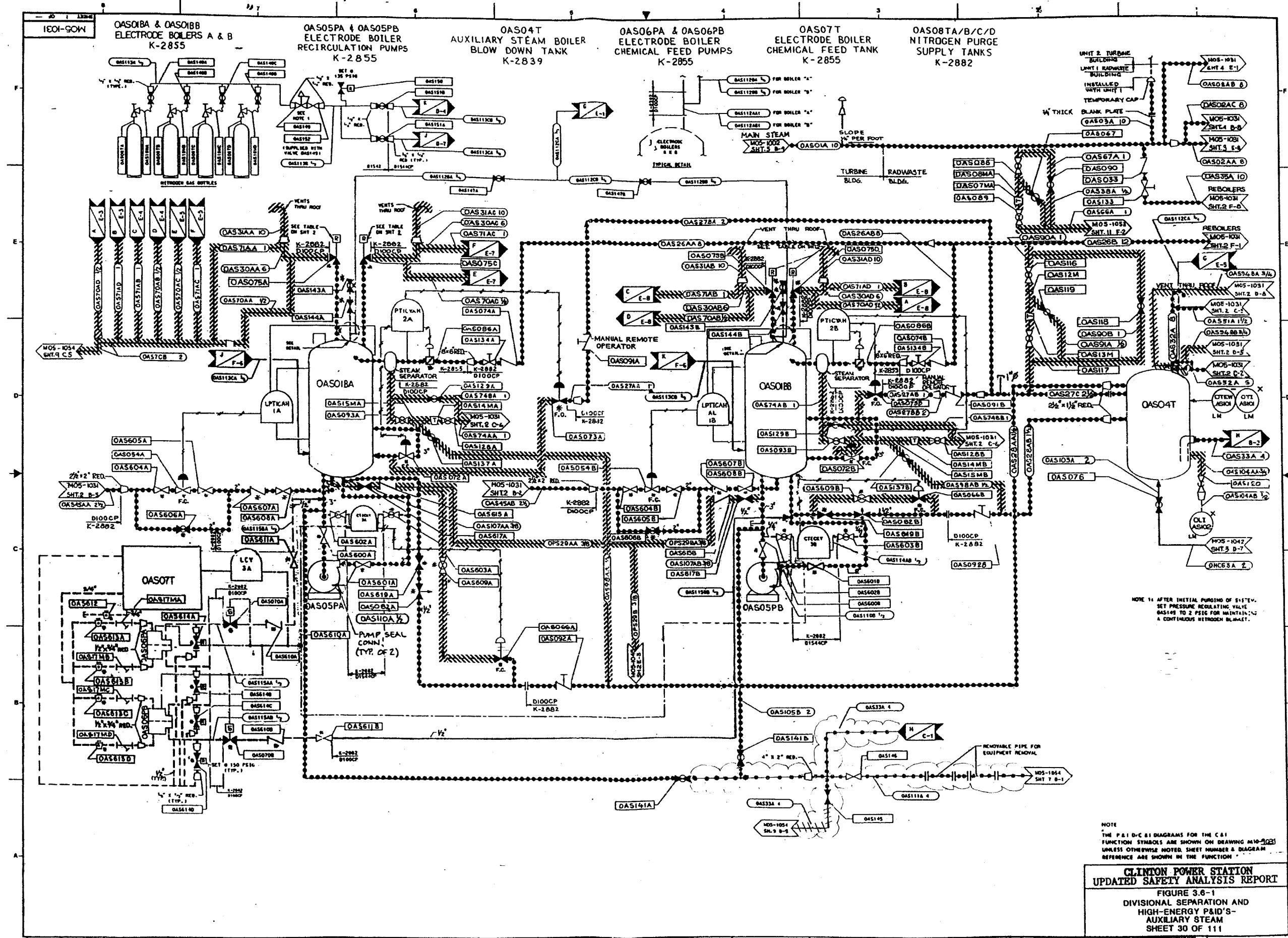


REVISION 7  
DECEMBER 1996

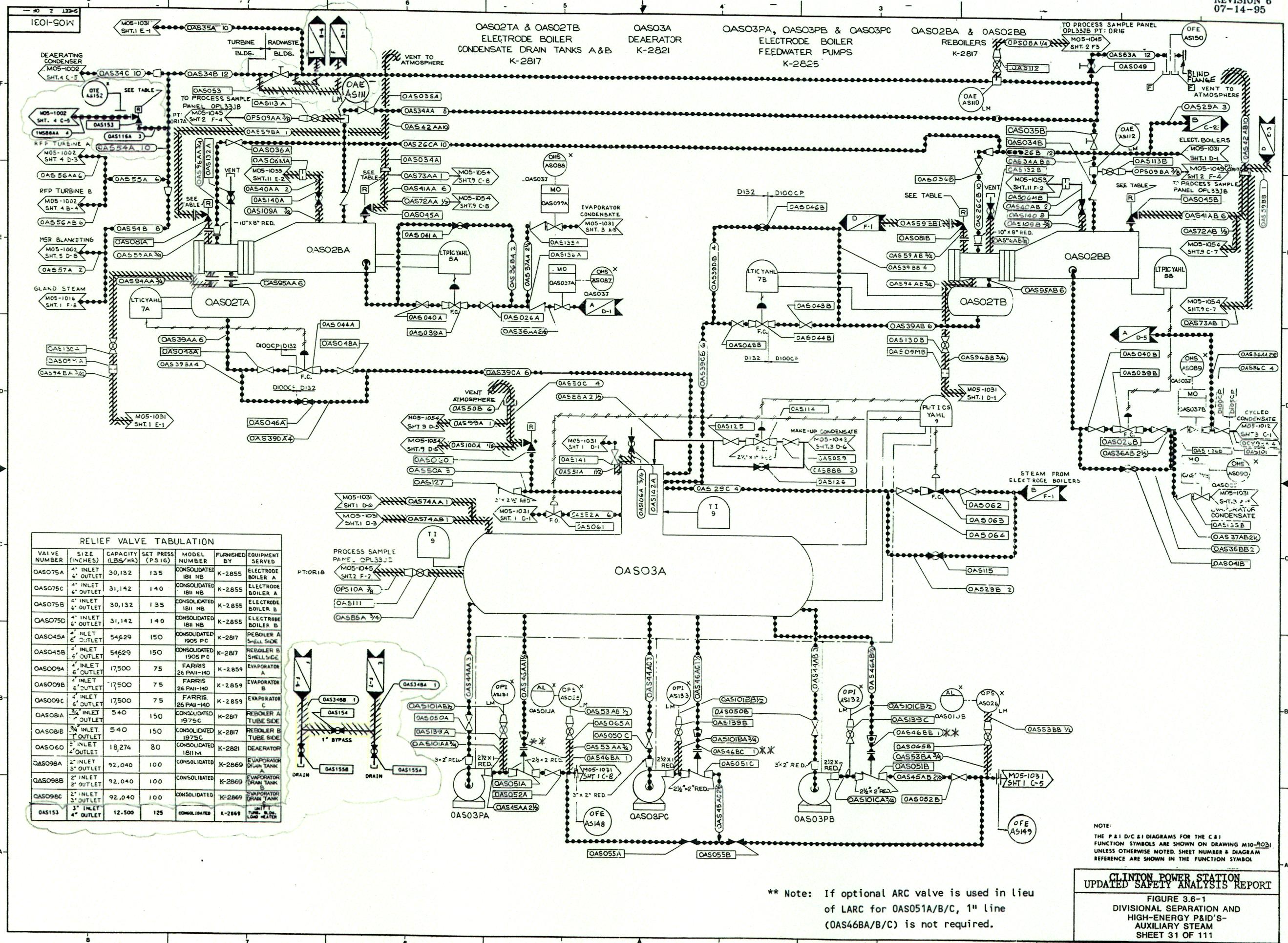


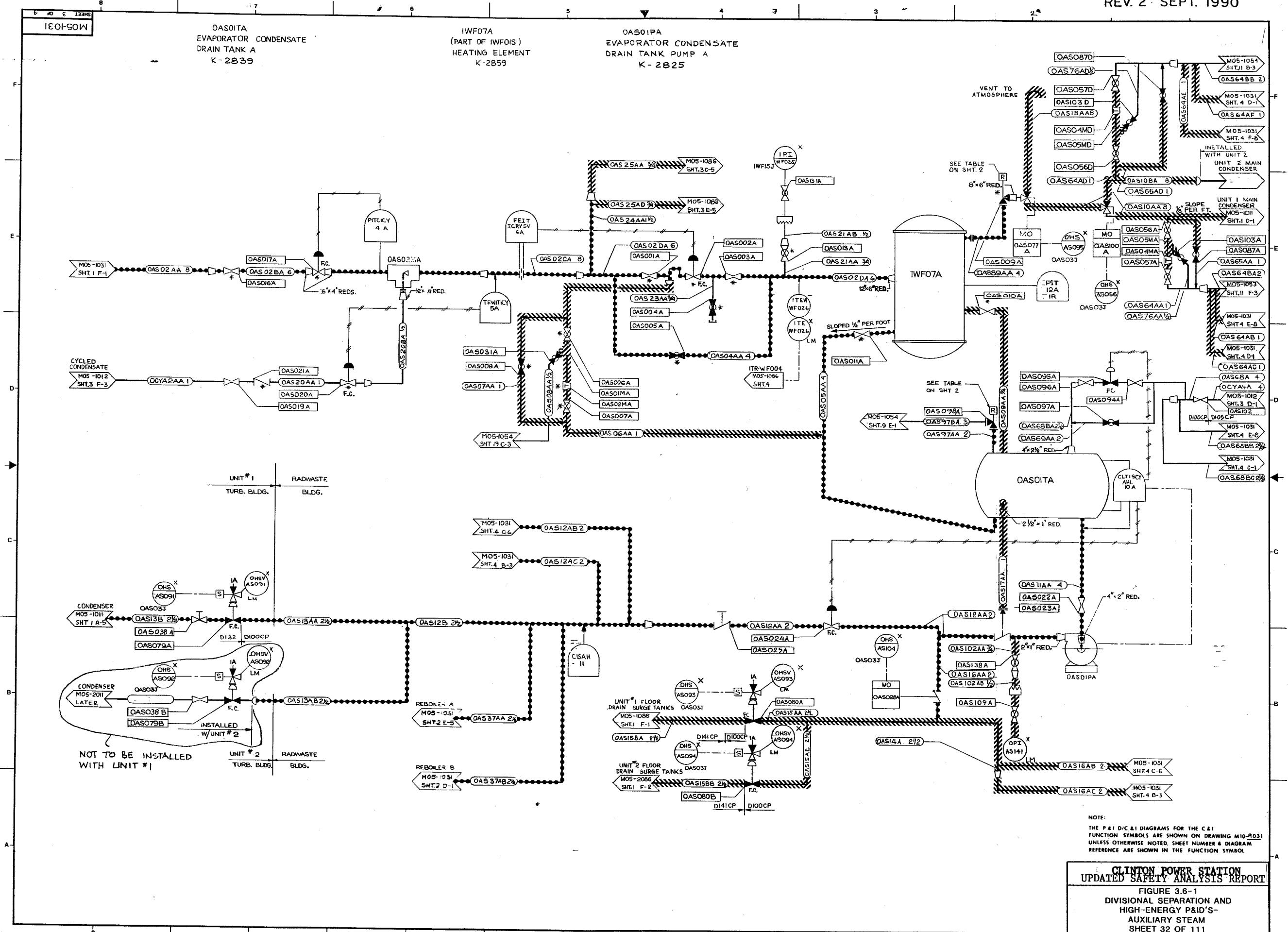
REVISION 7  
DECEMBER 1996





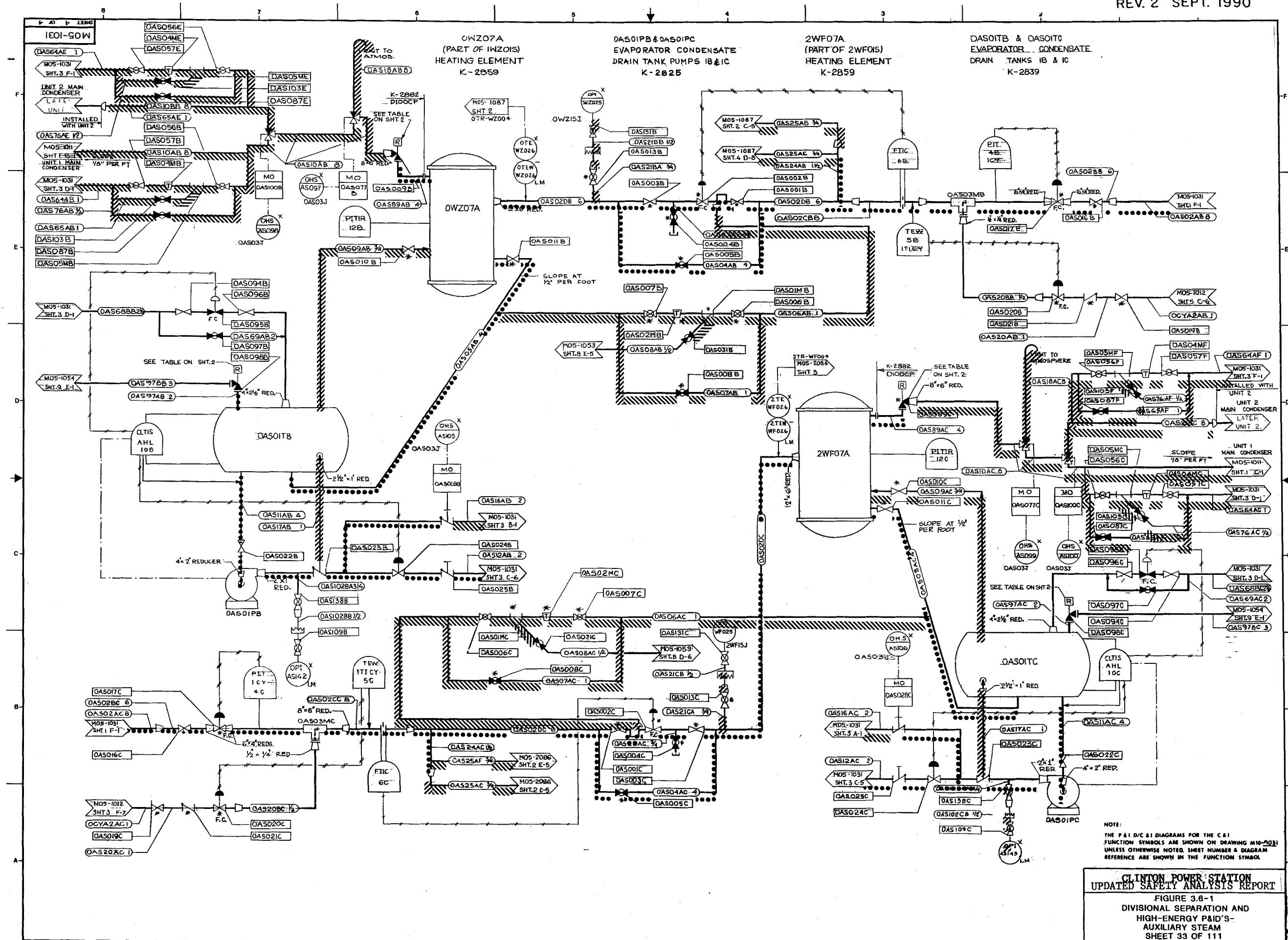
CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S -  
AUXILIARY STEAM  
SHEET 30 OF 111

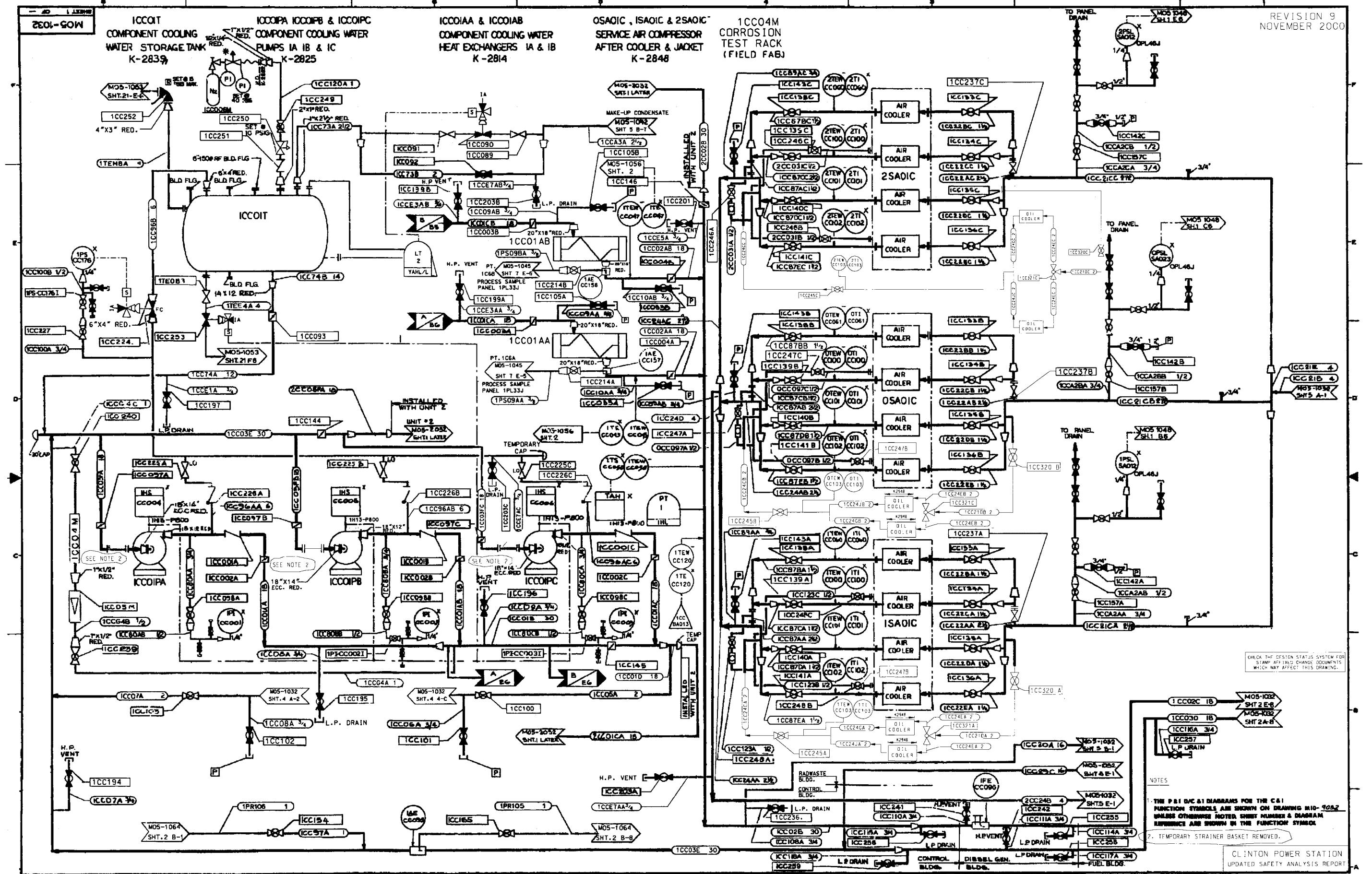




NOTE:  
THE P & I D/C & I DIAGRAMS FOR THE C & I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-R031  
UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL

**CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT**





REVISION 9  
EMBER 2000

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

I BAC & I DIAGRAMS FOR THE C&I  
IN SYMBOLS ARE SHOWN ON DRAWING MIG-7052  
OTHERWISE NOTED. SHIFT NUMBER & DIAGRAM  
ARE SHOWN IN THE FUNCTION SYMBOL

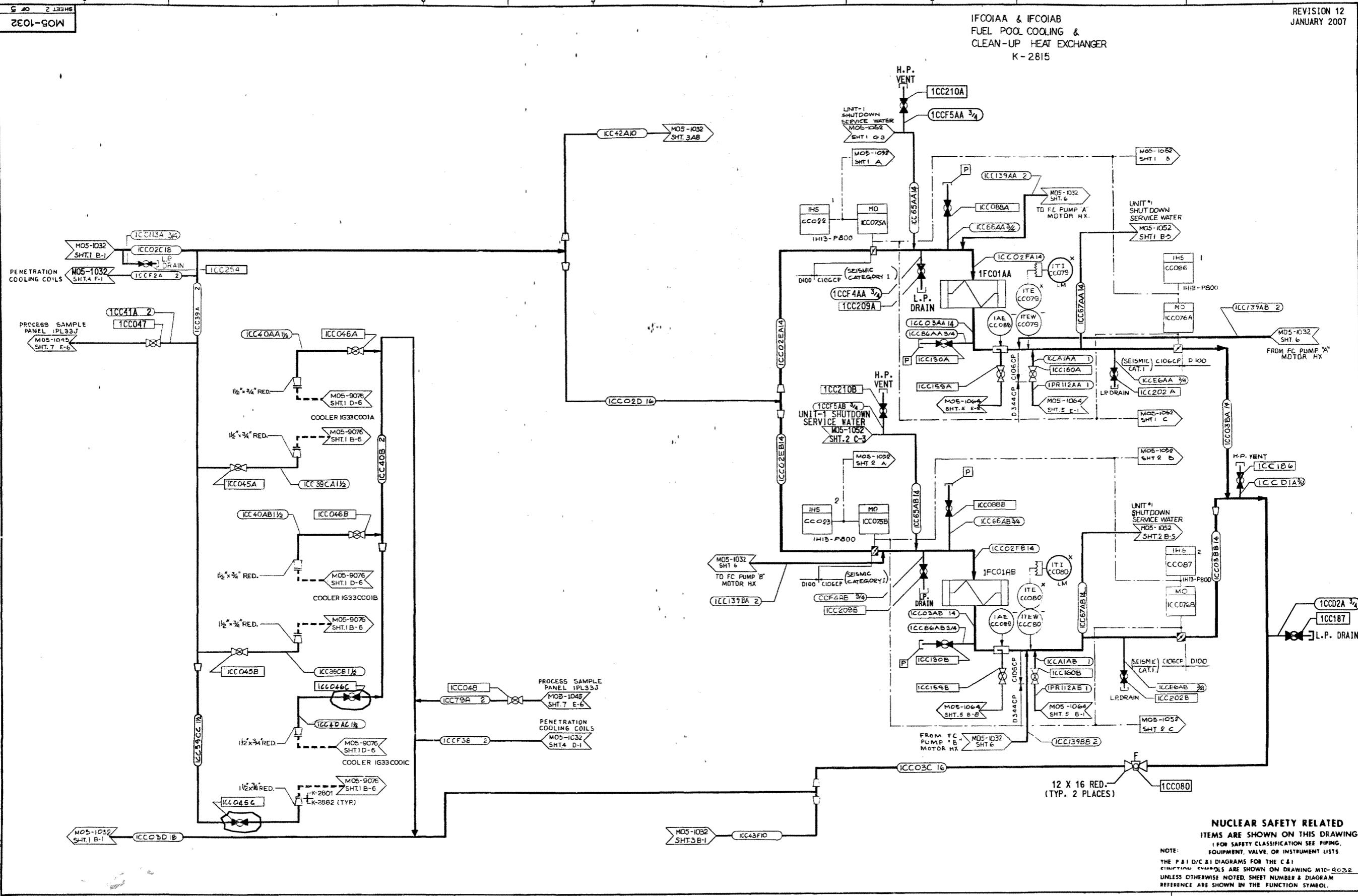
ARY STRAINER BASKET REMOVED.

INTON POWER STATION  
NUCLEAR SAFETY ANALYSIS REPORT

FIGURE 3.6-1

SIGNAL SEPARATION AND  
HIGH-ENERGY P&ID'S -  
COMPONENT COOLING WATER  
SHEET 34 OF 111

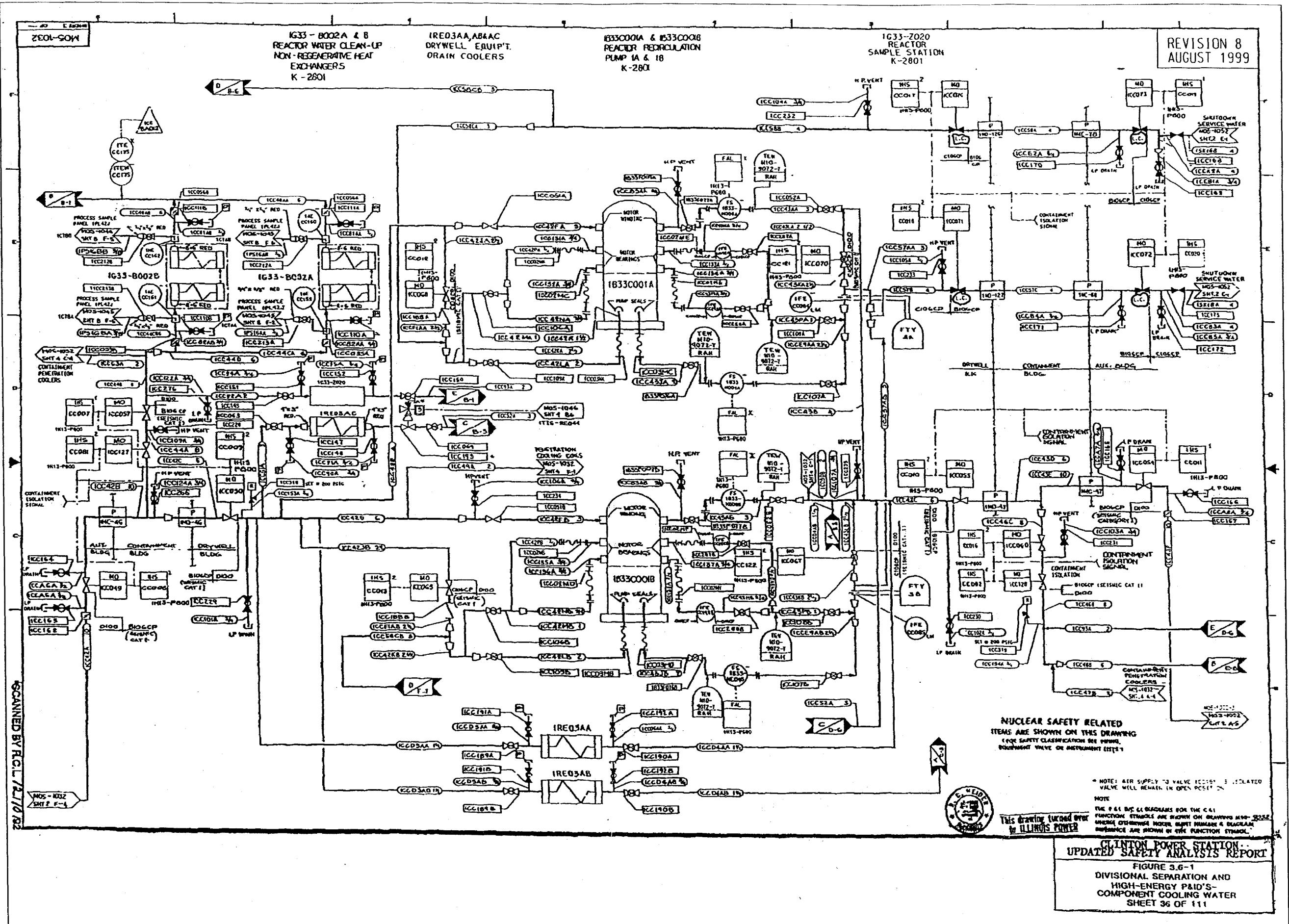
IFCOIAA & IFCOIB  
FUEL POOL COOLING &  
CLEAN-UP HEAT EXCHANGER  
K-2815

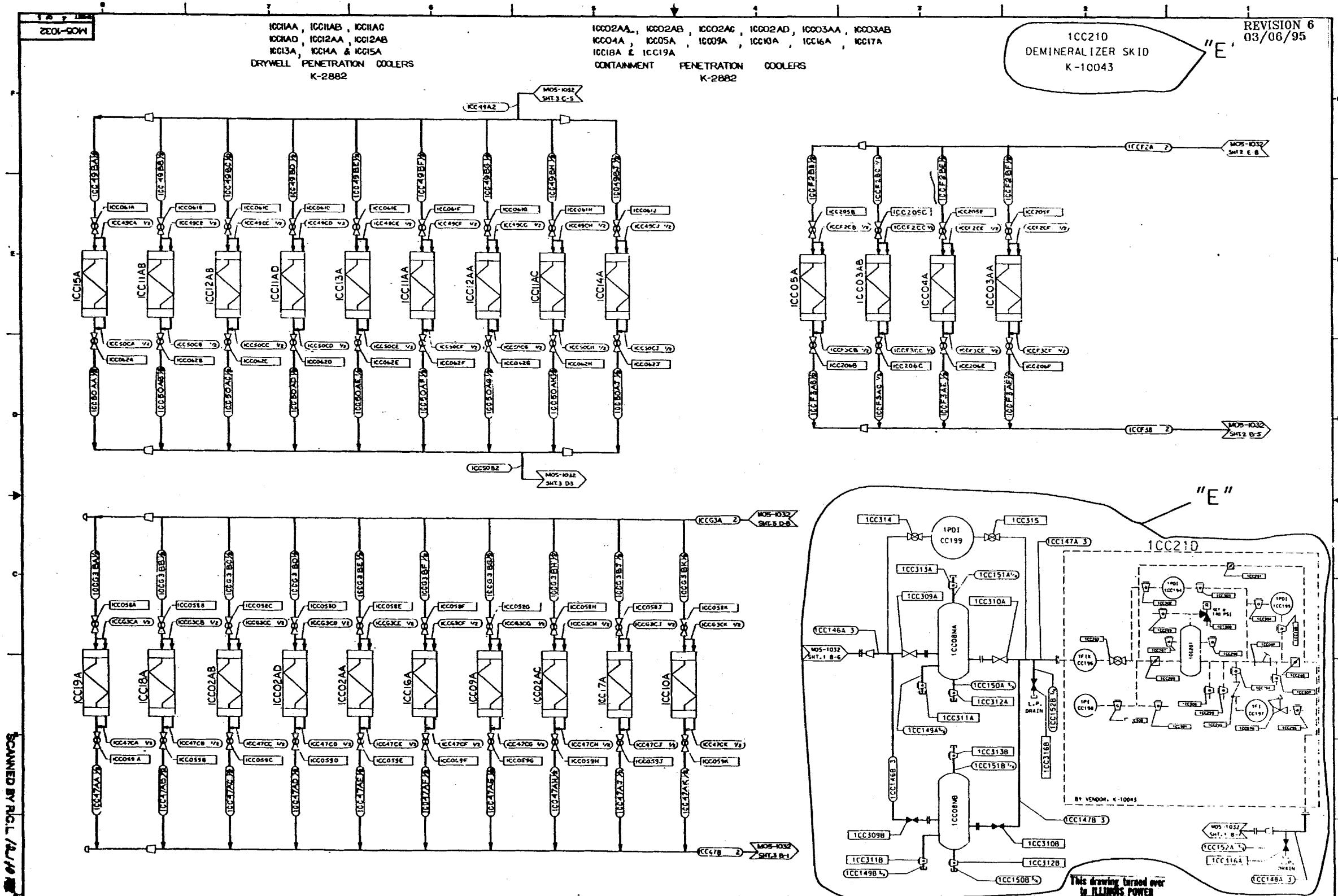


NUCLEAR SAFETY RELATED  
ITEMS ARE SHOWN ON THIS DRAWING  
(FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.  
NOTE:  
THE P & I D/C & I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-032  
UNLESS OTHERWISE NOTED, SHEET NUMBER & DIAGRAM  
REFERENCE ARE 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



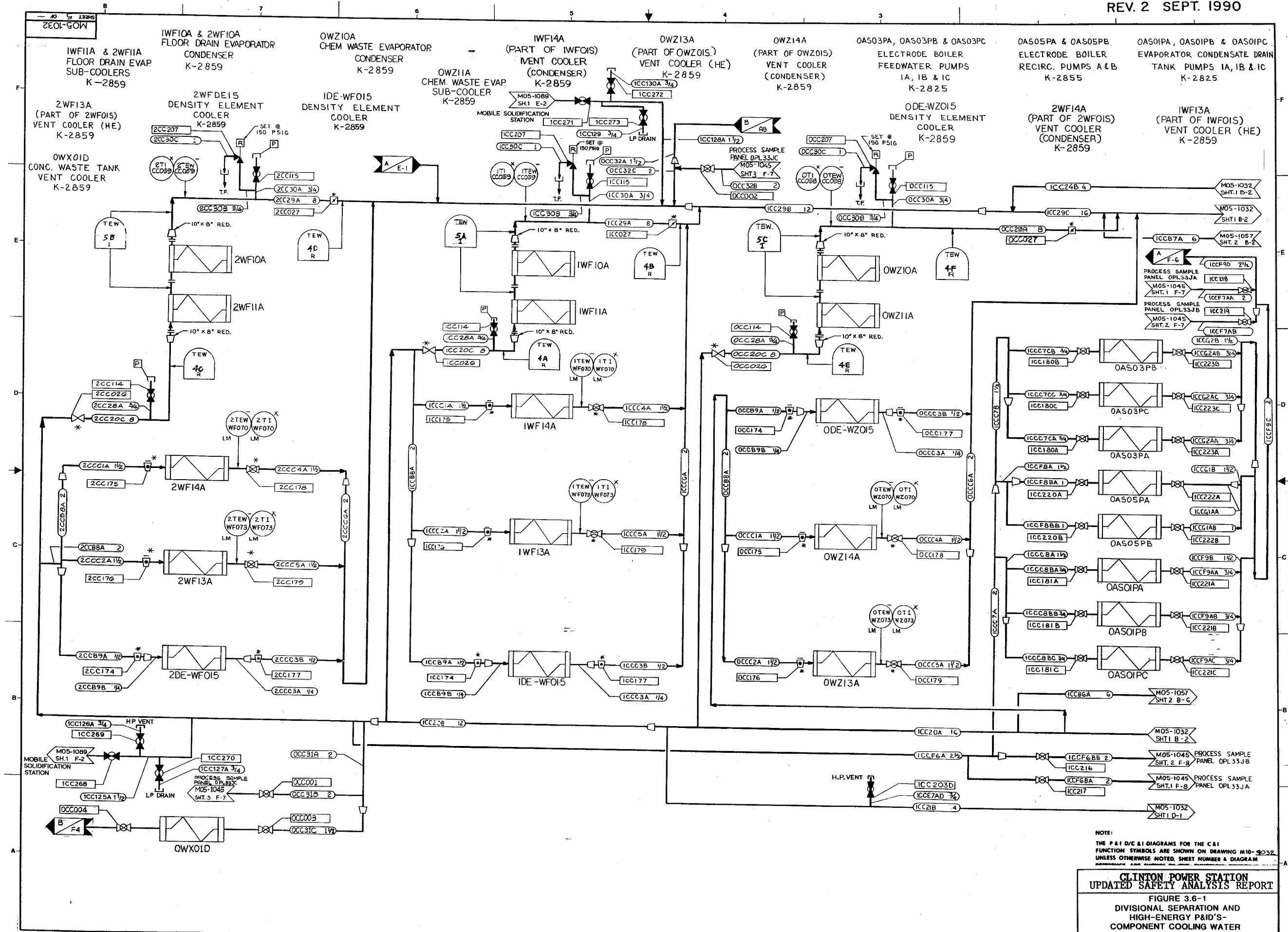


# **CLINTON POWER STATION**

## **UPDATED SAFETY ANALYSIS REPORT**

**FIGURE 3.6-1**

**DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
COMPONENT COOLING WATER  
SHEET 37 OF 111**



**NOTE:**  
THE P & I D/C & I-DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9032.  
UNLESS OTHERWISE NOTED SHEET NUMBER & DIAGRAM

## CLINTON POWER STATION

# ~~UPDATED SAFETY ANALYSIS REPORT~~

**FIGURE 3.6-1**

## DIVISIONAL SEPARATION AND

## **HIGH-ENERGY P&ID'S-**

## **COMPONENT COOLING WATER**

**UPDATED SAFETY ANALYSIS REPORT**

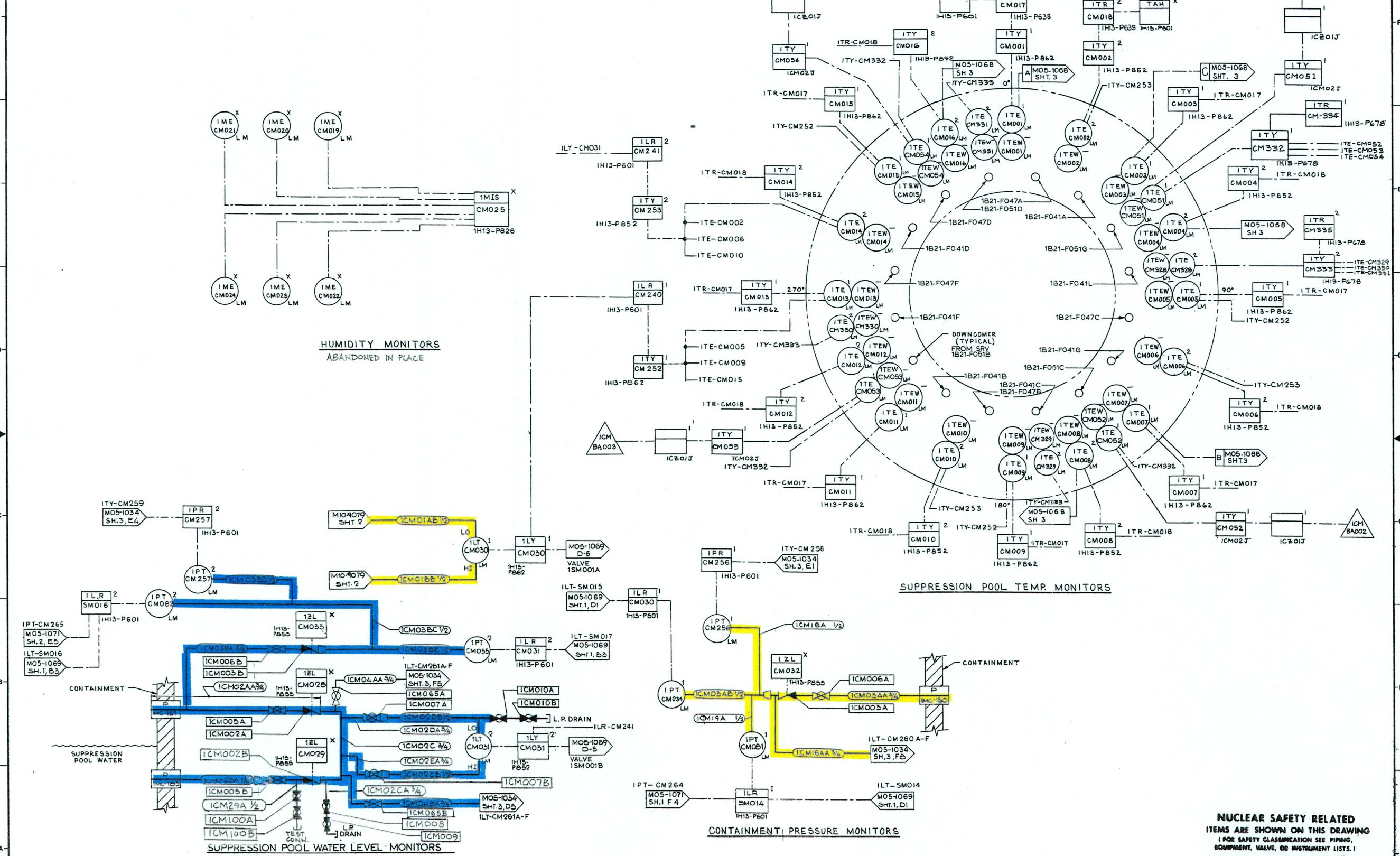
**FIGURE 3.6-1**

**DIVISIONAL SEPARATION AND**

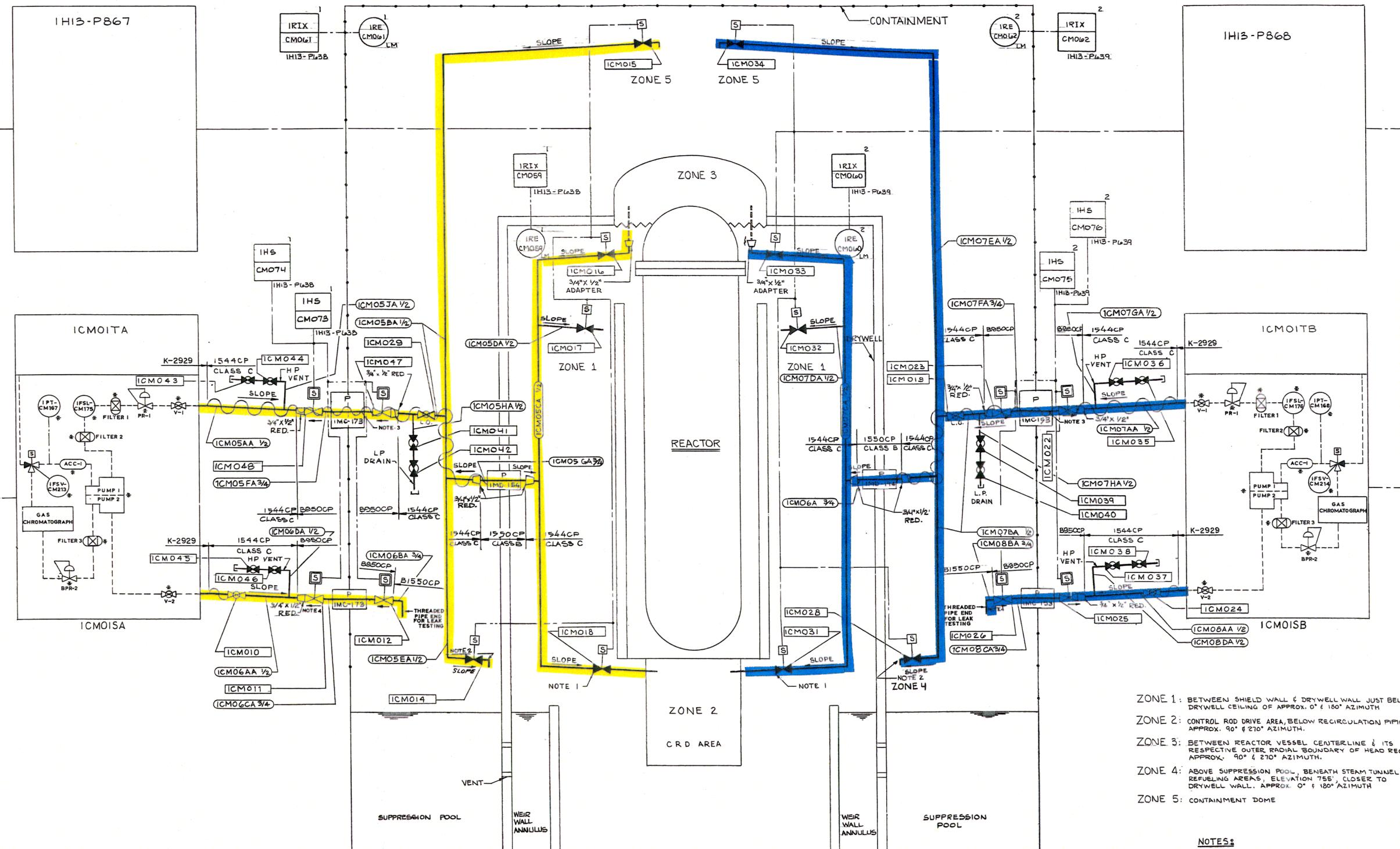
**HIGH-ENERGY P&ID'S-**

**COMPONENT COOLING WATER**

**SHEET 38 OF 111**

SHEET 1 OF  
M05-1034

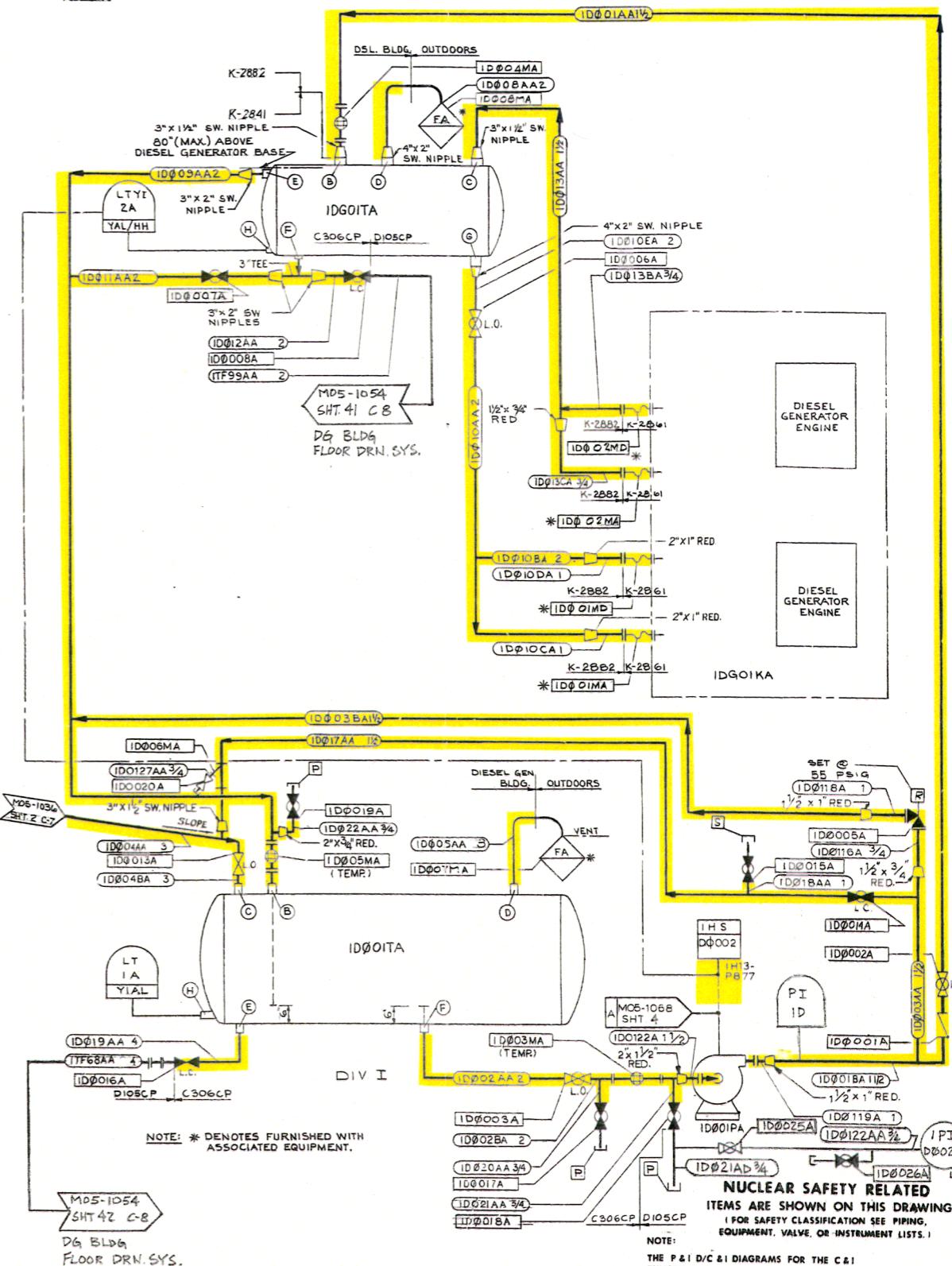
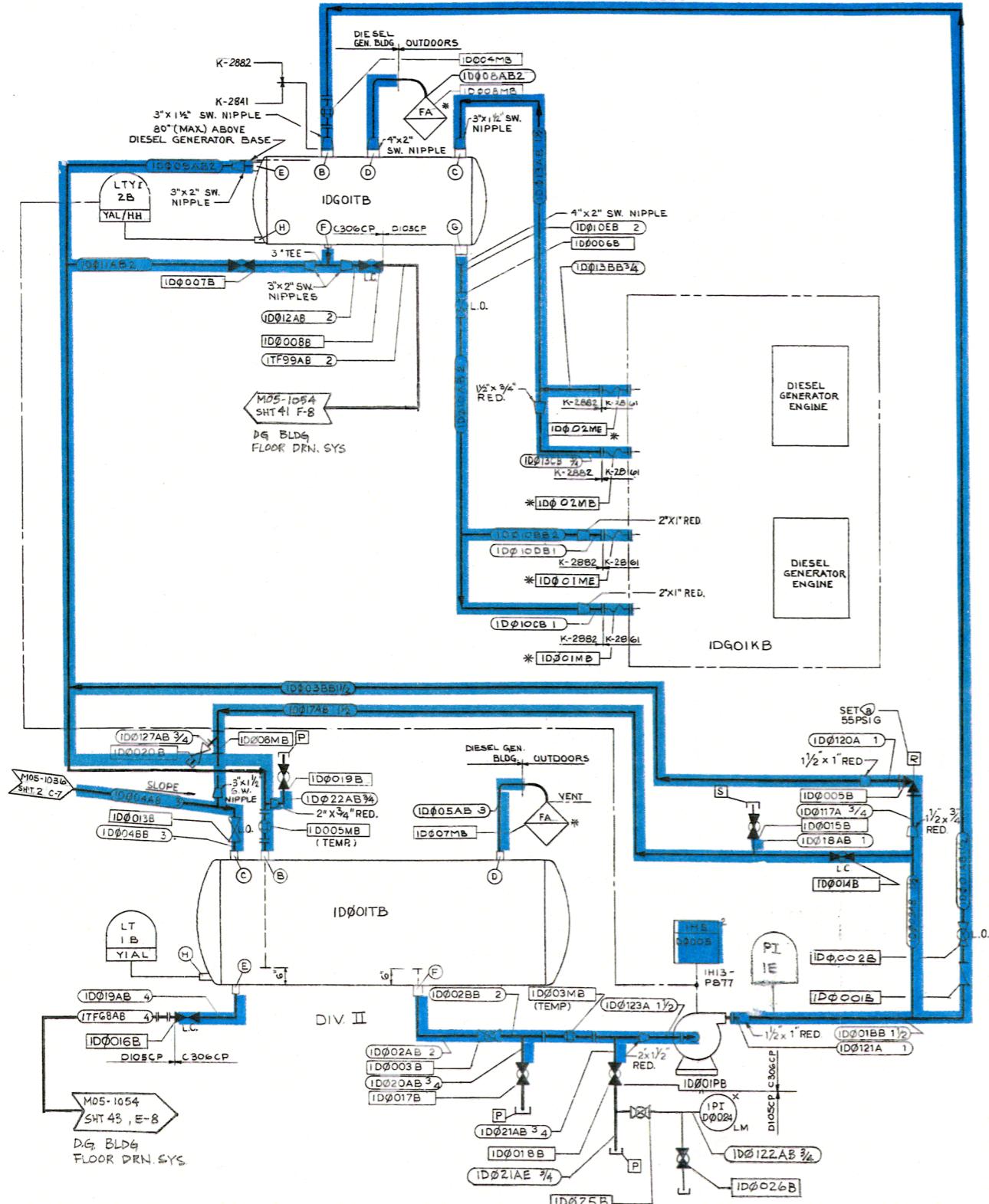
CLINTON POWER STATION  
UPDATED SAFETY ANALYSIS REPORT  
FIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&I'S-  
CONTAINMENT MONITORING SYSTEM  
SHEET 39 OF 111



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

- 1.) SOLENOID ABOVE 741' EL.  
 2.) SOLENOID ABOVE 762' EL.  
 3.) PENETRATION IMC-153 & IMC-173, SAMPLE LINE  
 MUST BE HEAT TRACED  
 4.) VALVES WITH → TO BE INSTALLED TO PROHIBIT  
 FLOW IN DIRECTION SHOWN WHEN CLOSED



SHEET 1 OF -  
M05-1036IDGOITA & IDGOITB  
DIESEL GENERATOR FUEL OIL  
STORAGE TANKS  
K-2842IDGOIPA & IDGOIPB  
DIESEL GENERATOR FUEL OIL  
TRANSFER PUMPS  
K-2826AIDGOITA & IDGOITB  
DIESEL GENERATOR FUEL OIL  
DAY TANK  
K-2841IDGOIKA & IDGOIKB  
DIESEL GENERATOR ENGINES SET SKID  
K-2861CLINTON POWER STATION  
FINAL SAFETY ANALYSIS REPORTFIGURE 3.6-1  
DIVISIONAL SEPARATION AND  
HIGH-ENERGY P&ID'S-  
DIESEL GENERATOR FUEL OIL SYSTEM  
SHEET 42 OF 111

THE P&I D/C & I DIAGRAMS FOR THE C&I  
FUNCTION SYMBOLS ARE SHOWN ON DRAWING M05-1036  
UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM  
REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

ITEMS ARE SHOWN ON THIS DRAWING

(FOR SAFETY CLASSIFICATION SEE PIPING,  
EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)