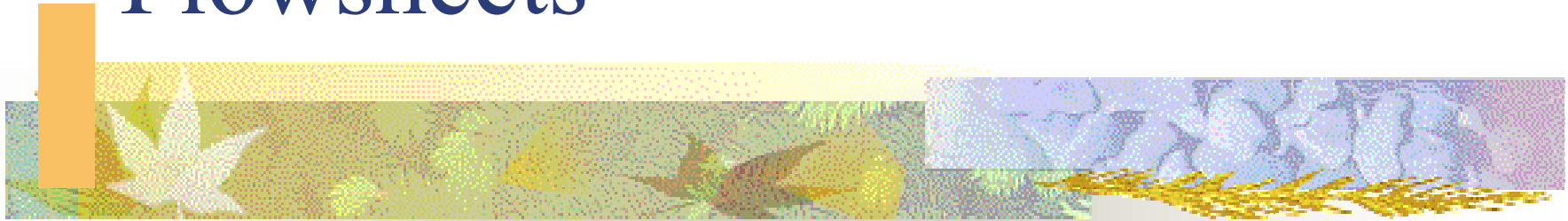
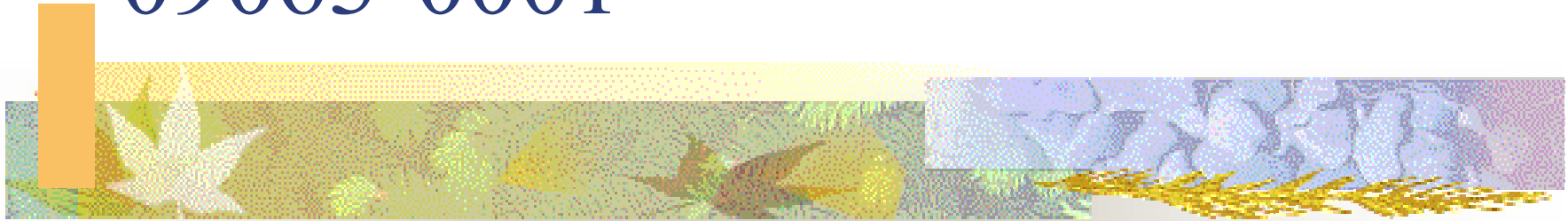


Flowsheets



09063-0001



The Legend

VALVE SYMBOLS

FIGURE

NORMALLY OPEN



GATE VALVE



GLOBE VALVE



BUTTERFLY VALVE



NEEDLE VALVE



BALL VALVE



DIAPHRAM VALVE



PLUG VALVE



BELLOWS SEALED
VALVE

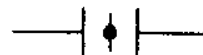


VALVE WITH
EXTENDED HANDLE

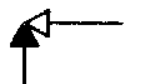


ANGLE VALVE

NORMALLY CLOSED



PERMANENTLY THROTTLED



VALVE OPERATORS



PISTON OPERATOR



ELECTRIC OPERATOR



ELECTROHYDRAULIC
OPERATOR



HYDRAULIC OPERATOR



OPERATOR WITH LOCKNUT



MANUAL OPERATOR



FLOAT OPERATOR

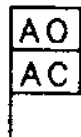
NOTE: THE FOLLOWING VALVES
MAY BE CV, MV, OR PV



AIR OPERATED
- AIR TO OPEN

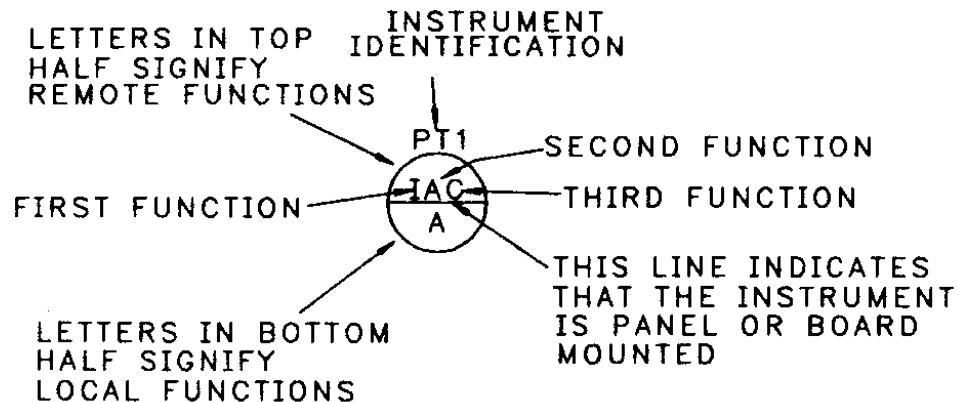


AIR OPERATED
- AIR TO CLOSE



AIR OPERATED
- AIR TO OPEN
- AIR TO CLOSE

INSTRUMENTATION



 INSTRUMENTATION DEVICE, PANEL OR BOARD MOUNTED WITH INDICATION ON CONTROL ROOM PANEL OR OTHER REMOTE PANEL

* INSTRUMENTATION DEVICE, PANEL OR BOARD MOUNTED WHICH READS OUT IN THE SECONDARY CONTROL AREA

* INSTRUMENTATION DEVICE, PANEL OR BOARD MOUNTED WHICH READS OUT IN BOTH THE SCA AND ANOTHER REMOTE LOCATION

 INSTRUMENTATION DEVICE, PANEL OR BOARD MOUNTED WITH INDICATION ON LOCAL PANEL IN FIELD

 INSTRUMENTATION DEVICE, MOUNTED LOCALLY ON THE EQUIPMENT WITH LOCAL INDICATION

 INSTRUMENTATION DEVICE, MOUNTED LOCALLY ON THE EQUIPMENT WITH REMOTE INDICATION

 BASIC INSTRUMENT SYMBOL WITH ONE PROCESS CONNECTION

I & C IDENTIFICATION CODES

I & C PARAMETER CODE

1st CODE LETTER

A	CURRENT
C	CONCENTRATION (DESIGNATION ON FLOWSHEET ONLY)
Cp	pH
Cc	CONDUCTIVITY
Co	O ₂
Cs	SILICA
Cl	CHLORINE
Ct	TURBIDITY
D	DENSITY
E	ECCENTRICITY
F	FLOW
G	GENERAL
H	HAND
K	VISCOSITY
L	LEVEL/HEIGHT
M	MOISTURE IN GAS, HUMIDITY
N	POSITION OR DIFFERENTIAL EXPANSION
O	OXYGEN
P	PRESSURE
Q	LEAK OR LEAK RATE
R	RADIOACTIVITY (INCLUDING NEUTRON FLUX)
S	SPEED/VELOCITY
T	TEMPERATURE OR TEMPERATURE DIFFERENCE
U	FREQUENCY/TIME
V	VOLTAGE
W	POWER
X	POWER-REACTIVE
Y	VIBRATION
Z	STRESS

I & C EQUIPMENT DEVICE CODE

2nd CODE LETTER

C	CONTROL (CONTROLLER)
D	DIGITAL COMPUTER DATA LOGGER
E	ELEMENT
F	TRIP
G	GAUGE
I	INDICATOR
L	LOGIC
M	SIGNAL MANIPULATOR (FUNCTION GENERATOR)
R	RECORDER
S	SWITCH
T	TRANSMITTER
V	VALVE
W	WELL
X	CONVERTER, TRANSDUCER, ANALYZER
Z	INTEGRATOR

I & C INSTRUMENT FUNCTION CODE

(DENOTED BY LETTER INSIDE CIRCLE)

CODE	FUNCTION
A	ALARM
C	CONTROL
D	DIGITAL COMPUTER, DATA LOGGER
F	TRIP
I	INDICATOR
L	LOGIC
R	RECORDER
Z	INTEGRATOR

CHANNALIZED SYSTEM DESIGNATORS

A,B,C - REACTOR REGULATING SYSTEM
D,E,F - SHUTDOWN SYSTEM #1
G,H,J - SHUTDOWN SYSTEM #2
K,L,M - ECI SYSTEM
N,P - NEGATIVE PRESSURE
CONTAINMENT SYSTEM

33000-0001



Title Block

Revisions

USIs

Grid Reference

TRANSPORT

Number

Revision Number

PREFIX ALL U.S.I. NUMBERS WITH UNIT NO., ALL PROCESS EQUIPMENT WITH 33120 AND ALL INSTRUMENTATION WITH 63312 UNLESS OTHERWISE INDICATED.

12	Feb 11 2002	AS PER DCR864: DRAWING UNITIZED. NOTE 11 DELETED. SUPERSEDED NK29-F0X-33000-00001-U6-0002	DG	ROOM
		AS PER DCR 208. CORRECTED B0 TO B0. AT GRID A2,B2,D2,E2,B8,A8,D8 & E8. DRAWING REVISED TO DOUBLE-SIDED. FORMAT TO ACCOMODATE ON-SITE PRINTING.	DG	ROOM
11	93-10-07	TE7 (A), (B) & (C) ARE SPARES NOW. CORRECTED TIE POINT VALVE AT GRID B-8	DG	
10	91-10-24	NUMBERS CHANGED IN TIES TO FAILED FUEL CHANNEL SYSTEM GRIDS C-4,-5; D-4,-5.	JGM	IH
			TCL	GHC
9	91-06-24	GENERAL REVISION. REDRAWN ON CADS. ALL ANNUNCIATION MOVED TO 33000-0001 SHT 2. ECN X308 COMPLETED ON ALL UNITS AI's 1346, 2446, 2442, 606, 602, 1342. AI's 211, 212, & 213 DELETED. KEYS RENUMBERED. SSMC INPUTS A	JGM	IH
			PW	GHC
REV. NO.	DATE	DESCRIPTION	DWN.	VERIF.
			PREP.	APPR.
BRUCE NUCLEAR OPERATIONAL FLOWSHEET			UNIT 6	
TRANSPORT		Number		
Revision Number				
DRAWN BY:	PREP. BY:	VER. BY:	APPR. BY:	DATE:
D.CARLOUGH	B.LEWIS	P.LAFRENIERE	J.BAGSHAW	OCT 12-82
DWG. NO. NK29-FXX-33000-0001-U6-0001				REV. 12

LEGEND

* SCA INDICATION

NOTES:

Notes

1. CONNECTIONS TO THE HEAT TRANSPORT COLLECTION SYSTEM (33800-0001)
2. FLOW MEASUREMENT ON 22 REACTOR INNER ZONE CHANNELS AT INLET AND OUTLET, TOTAL 44 MEASUREMENTS. TRANSDUCERS 63106-FT1 TO FT22 INCL. (INLET) AND 63106-FT23 TO FT44 INCLUSIVE (OUTLET). SEE 63106-0001 FOR DETAILS (REACTOR THERMAL POWER COMPUTATION)
3. DIRECT AND DIFFERENTIAL TEMPERATURE MEASUREMENTS ON 22 INNER ZONE CHANNELS INLET AND OUTLET: TOTAL 88 MEASUREMENTS 63106-FT45 TO FT-132. SEE 63106-0001
4. TRIPPLICATED FLOW MEASUREMENTS ON 4 INLET FEEDERS 37240-F5,F6,F7 AND F8 (D.E.F). SEE -63720-0001 (FOR LOW GROSS FLOW TRIP).
5. TO D2O SAMPLING SYSTEM TOTAL 2 HIGH PRESSURE SAMPLES. SEE -34940-0001
6. REACTOR INLET CHANNEL 24 CONNECTIONS. USE 63724-FT5, FT6, FT7, FT8.
7. TO FUEL HANDLING SYSTEM, CONTROL SYSTEM.
8. REACTOR OUTLET CHANNELS TEMPERATURE MONITORING. USE 63102-TT1 TO TT480 INCLUSIVE.
9. SDS 2 H.T. HI PRESSURE TEST SIGNAL 63730-0001
10. REACTOR INLET CHANNEL 44 CONNECTIONS. USE 63106-F1 TO F-22 INCLUSIVE. (2 CONNECTIONS EACH)
11. SPARE
12. NO MEASURING INSTRUMENTS PROVIDED.
13. FOR DETAILS OF HEADER INSTRUMENTATION, SEE THE APPROPRIATE INSTRUMENTATION FLOWSHEET. (e.g. FOR 63737-PT2 [H], SEE 63737-0001)
14. FOR (3) CONNECTIONS TO FUEL CHANNEL SAMPLING SYSTEM, SEE 34940-0003.

Flow Direction

DCC Input

On Page Connector

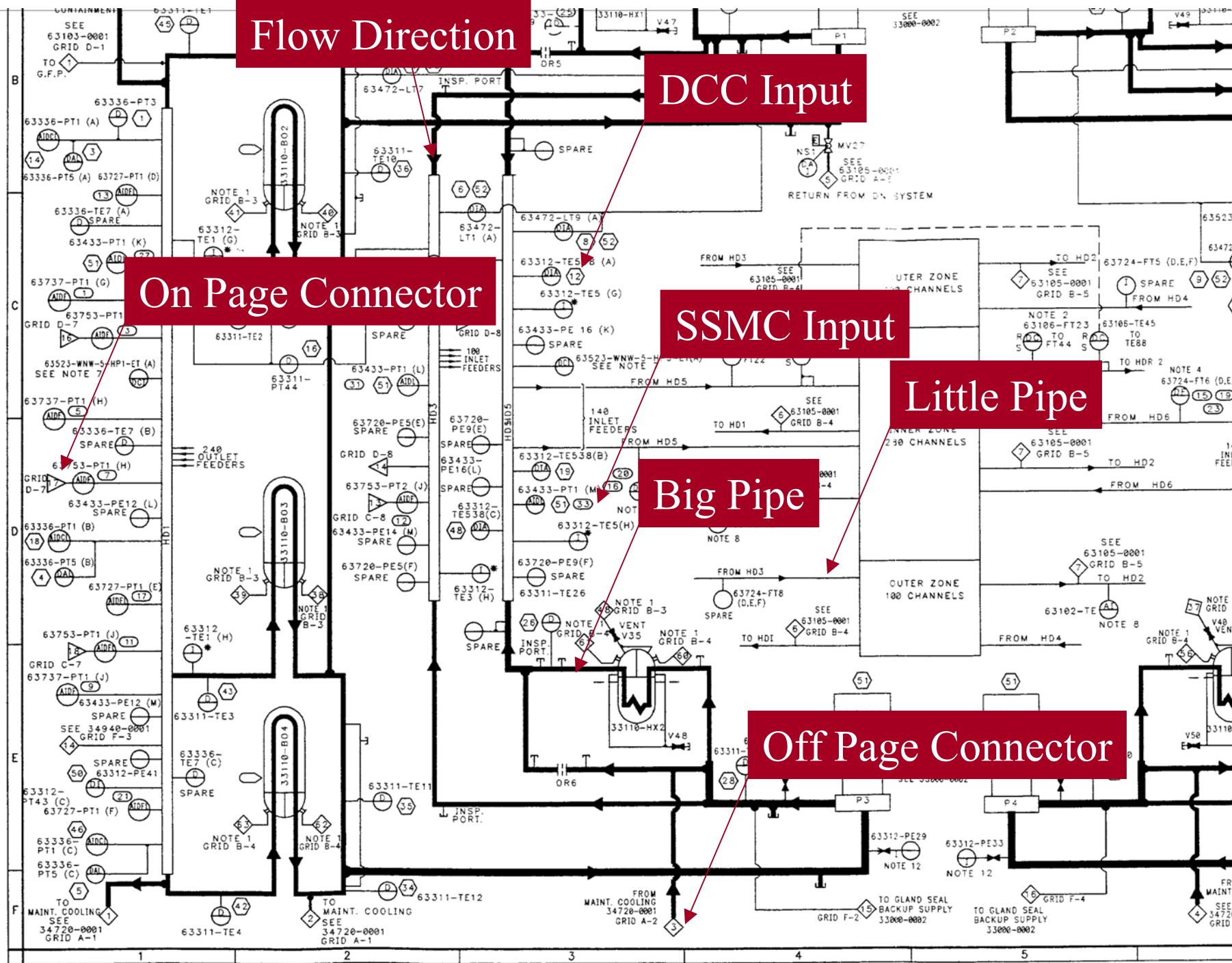
SSMC Input

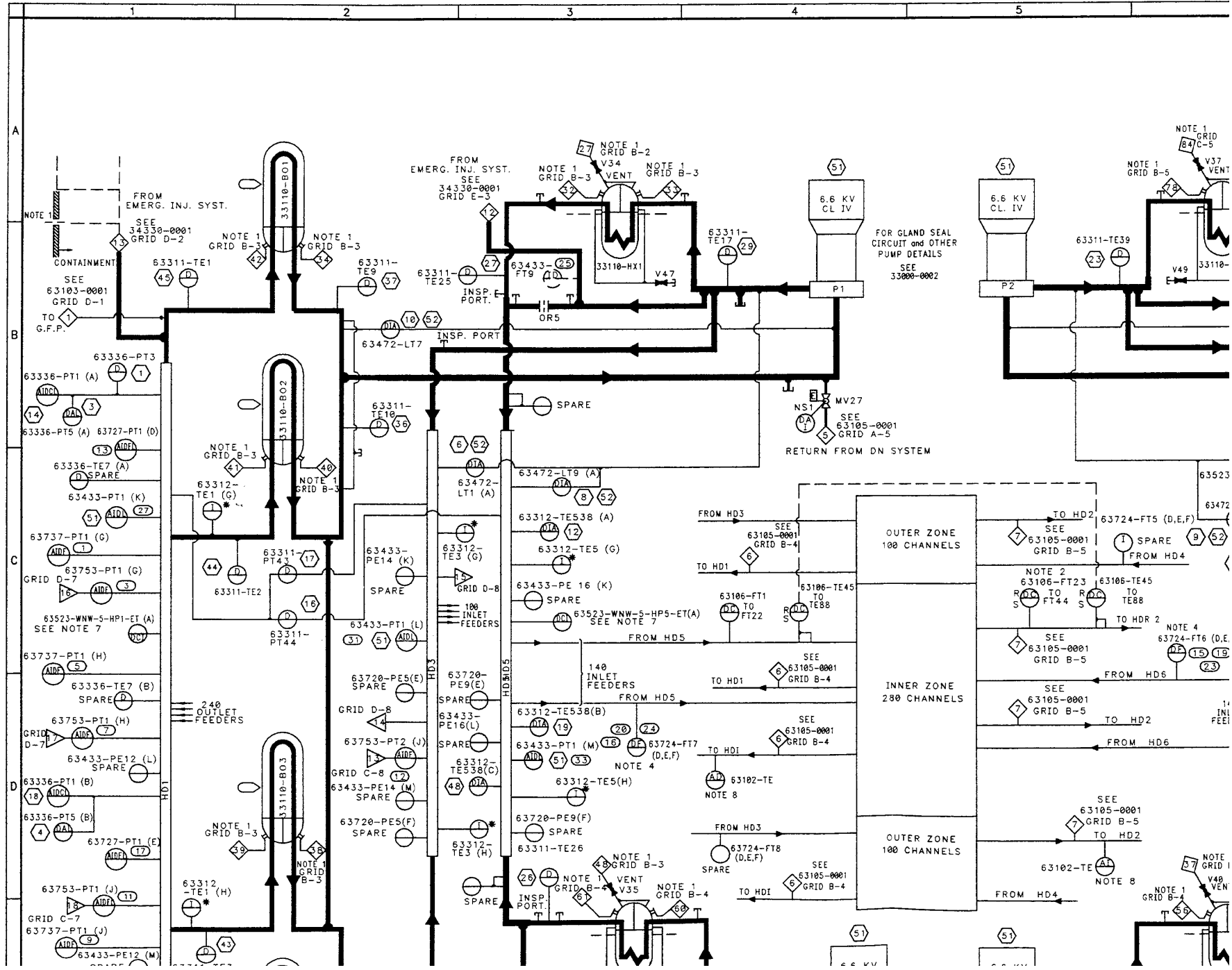
Little Pipe

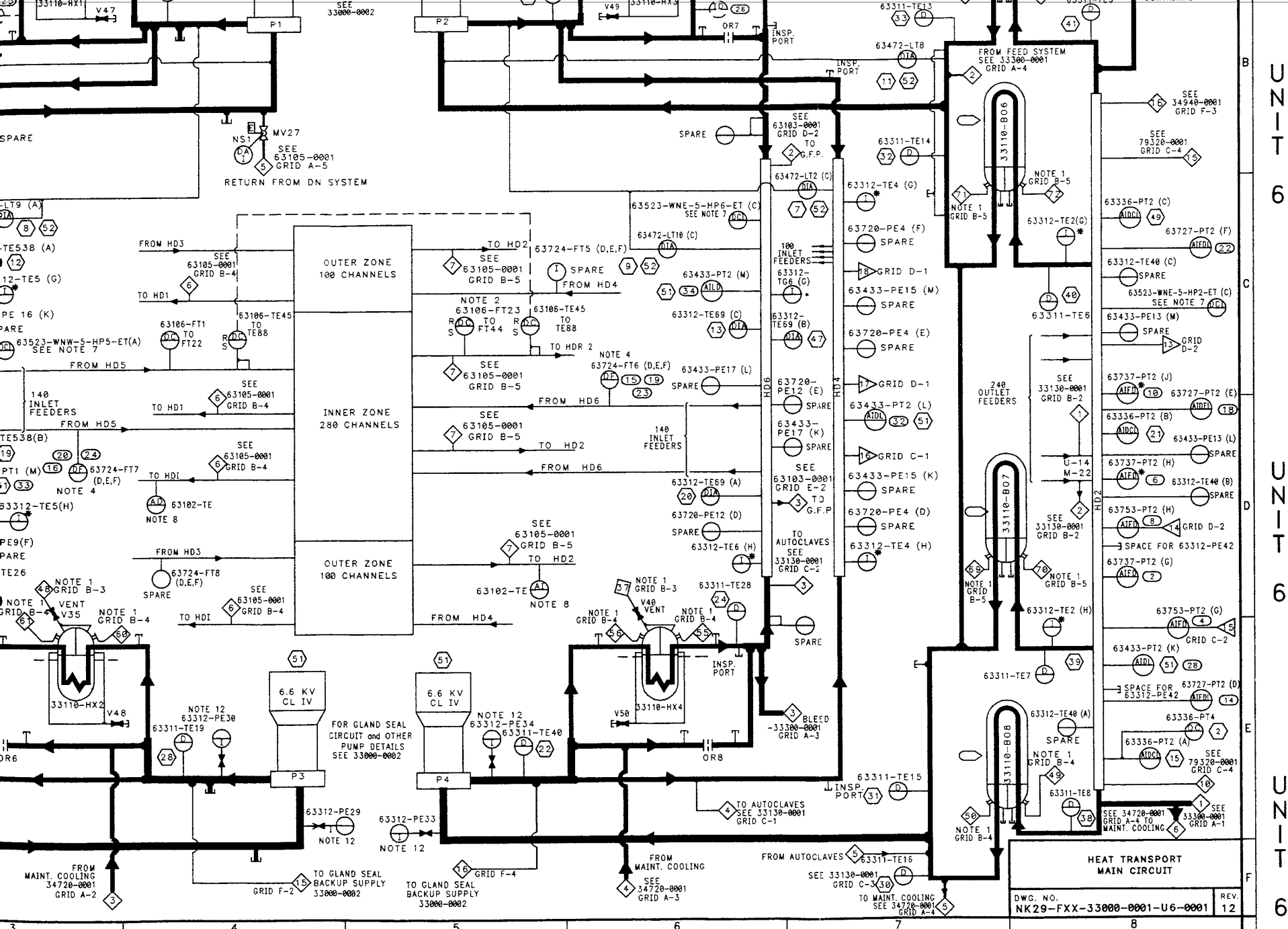
Big Pipe

Off Page Connector

ISSUED FOR APPROVAL

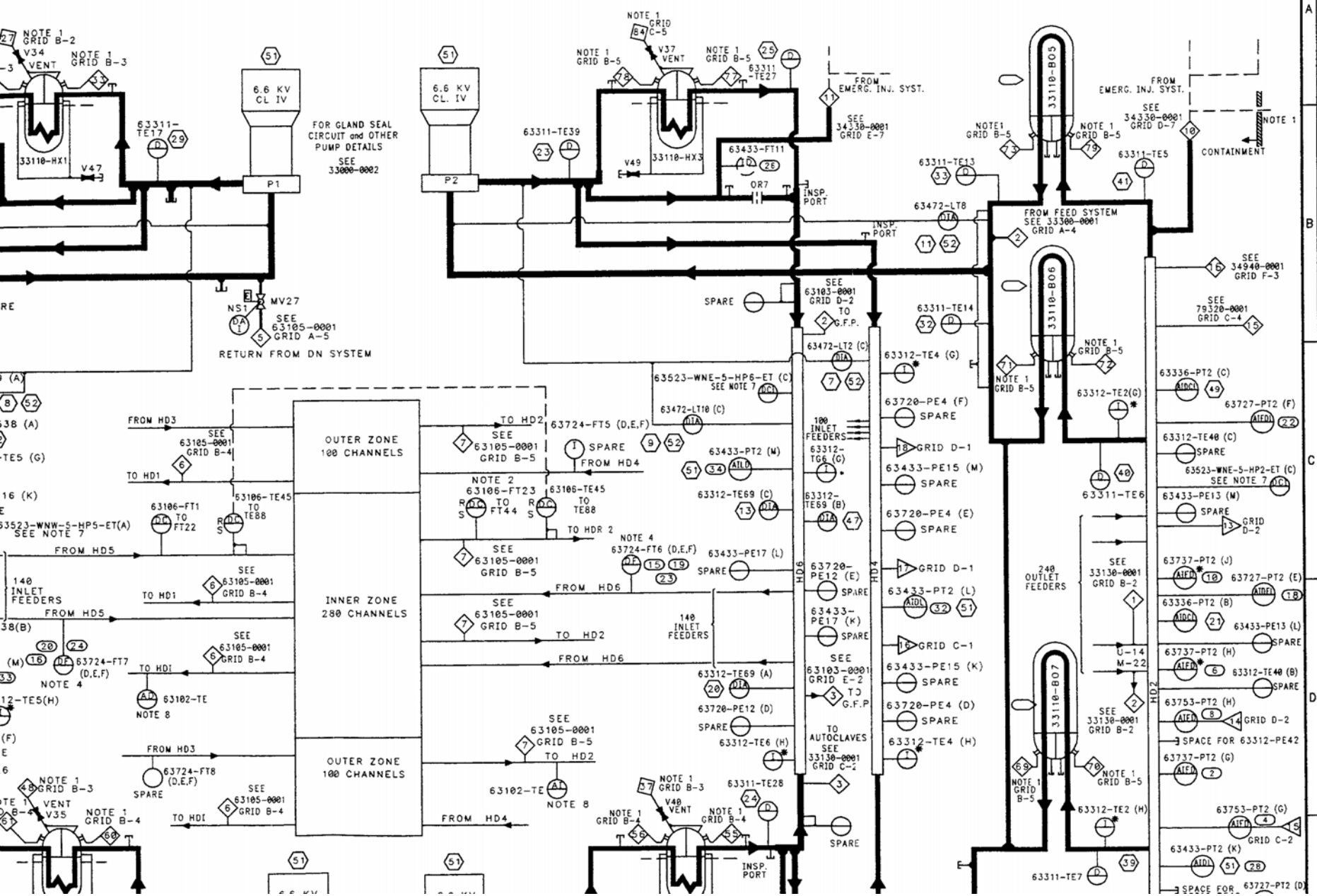






UNIT 6
 UNIT 6
 UNIT 6

NOTE
TWO-SIDED
FLOWSHEET

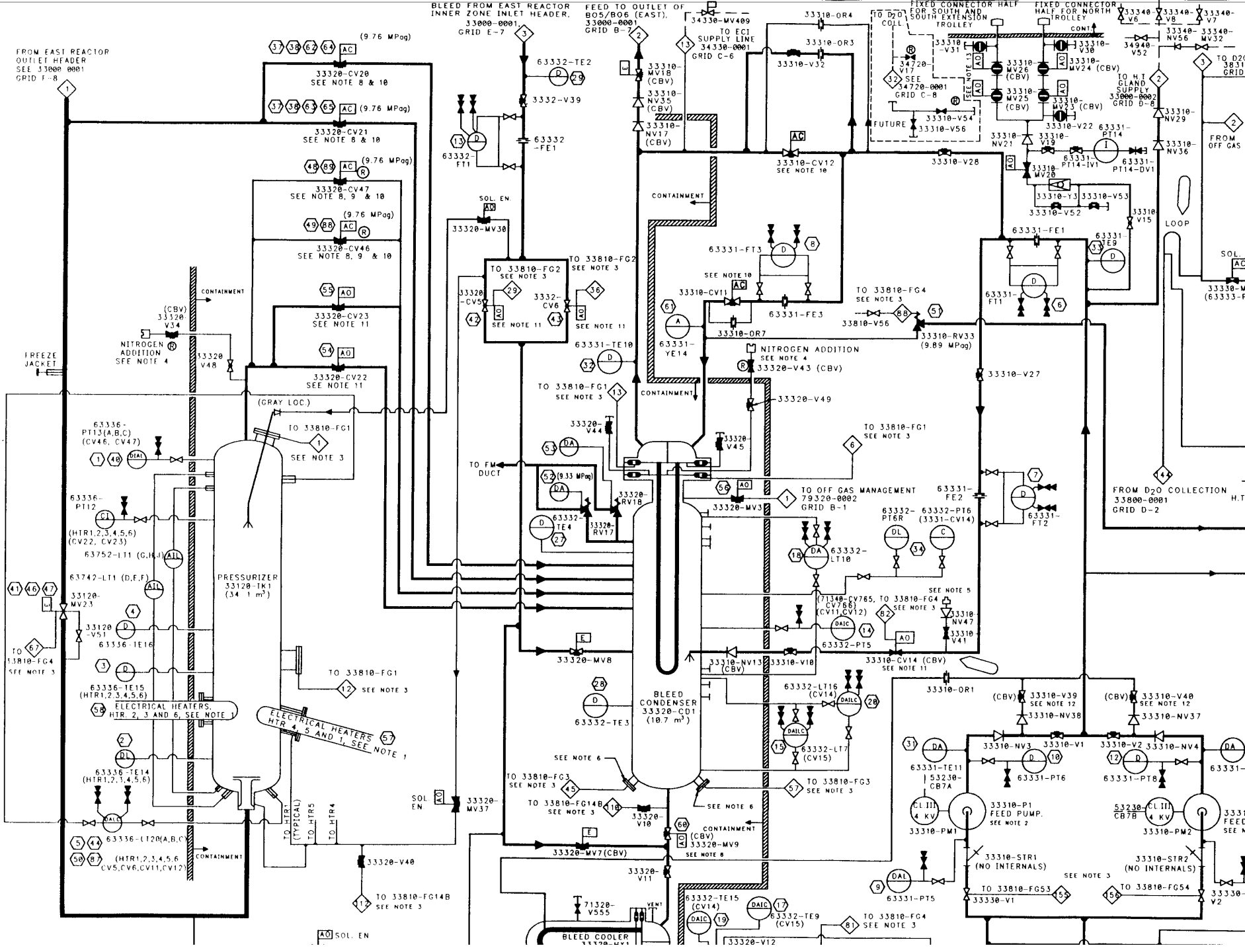


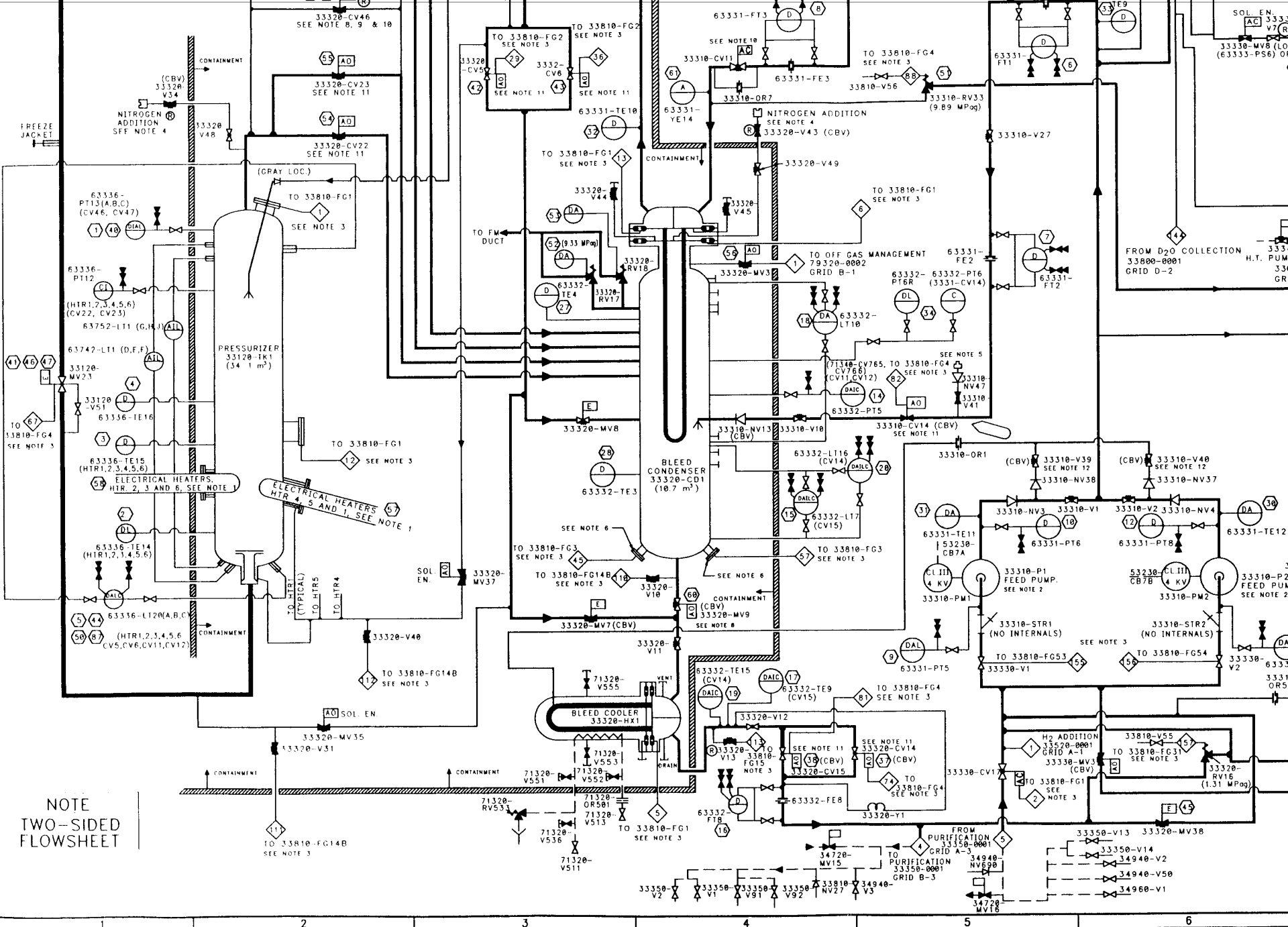
A
B
C
D

UNIT 6

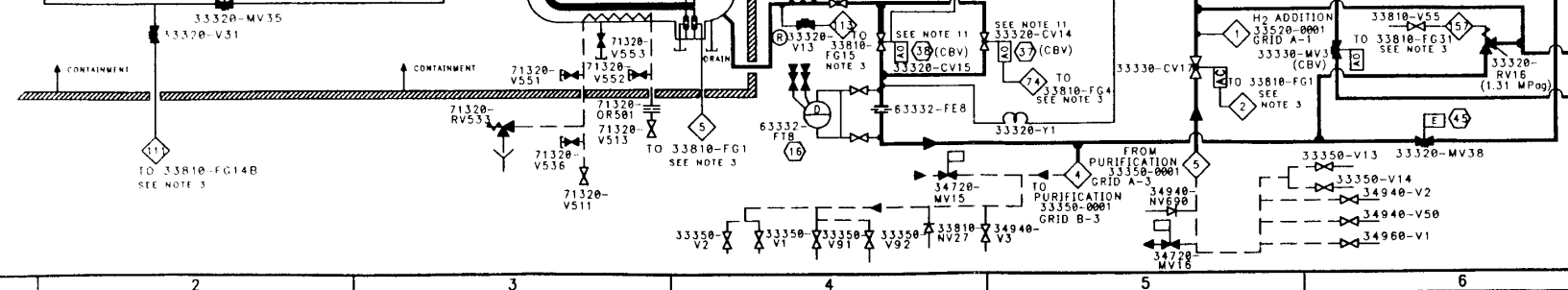
UNIT 6

UNIT 6





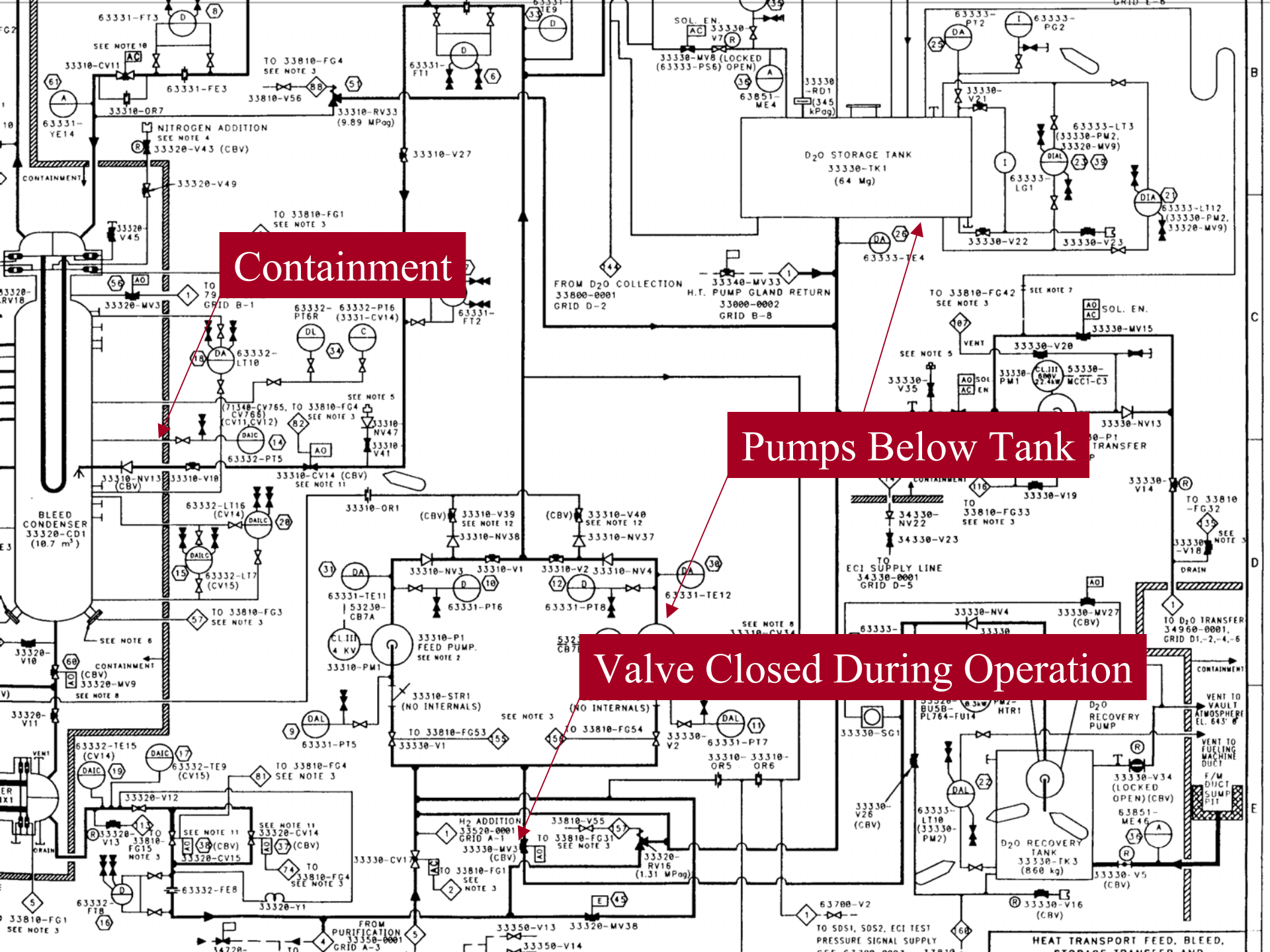
NOTE
TWO-SIDED
FLOWSHEET



1 2 3 4 5 6

33300-0001





Containment

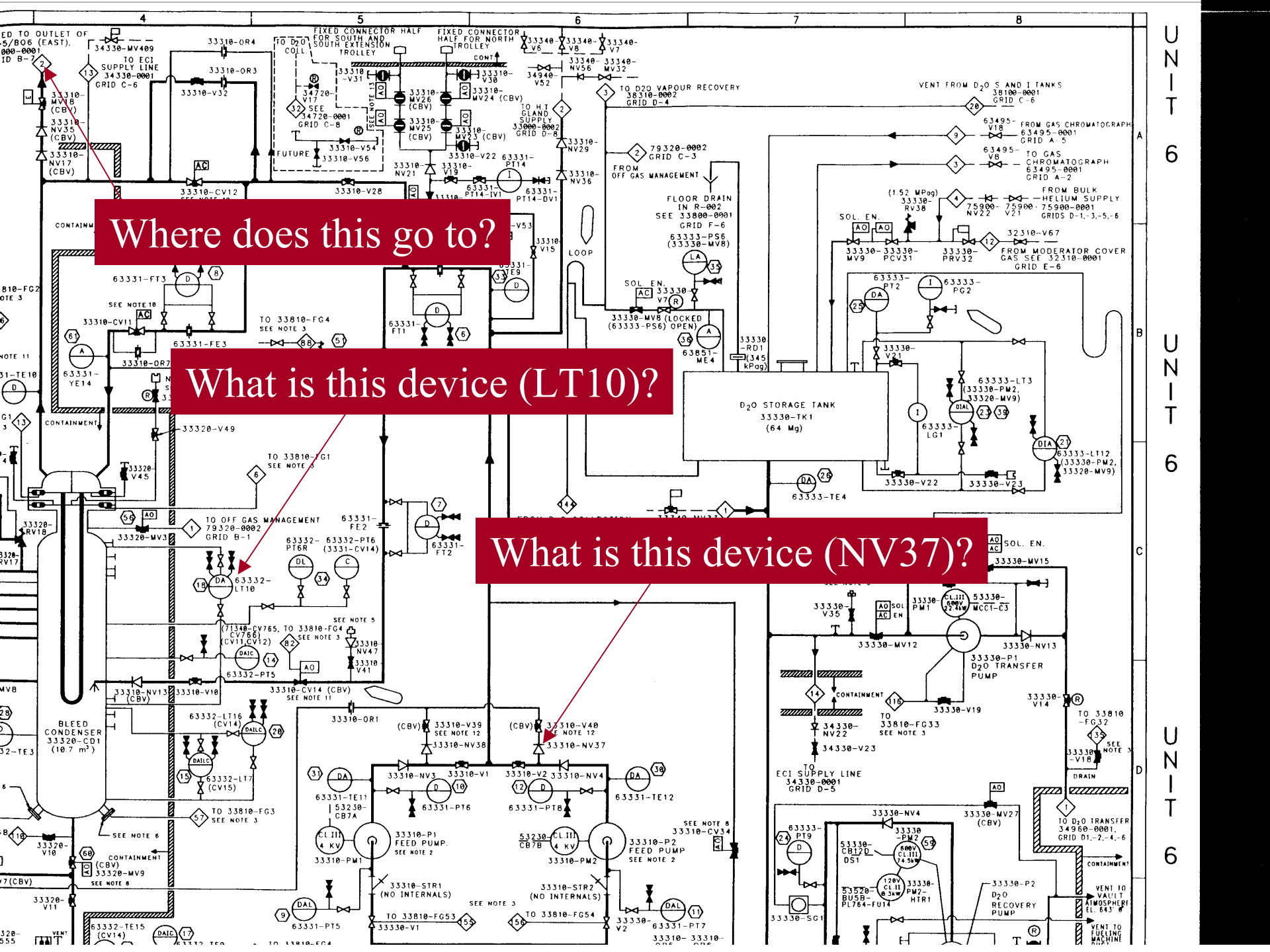
Pumps Below Tank

Valve Closed During Operation

Where does this go to?

What is this device (LT10)?

What is this device (NV37)?



UNIT 6
UNIT 6
UNIT 6

For You to Do

- Answer questions on page 52

