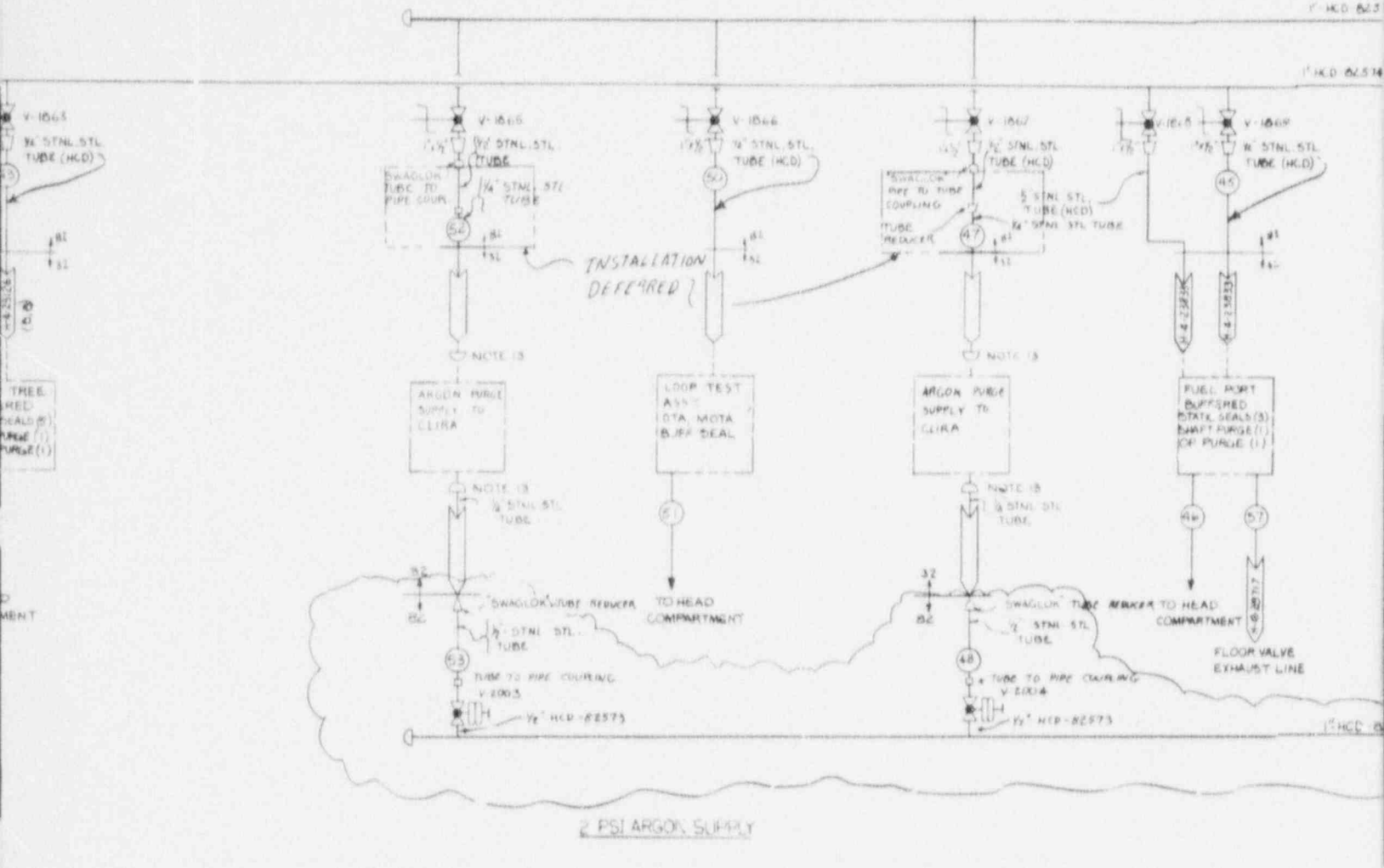
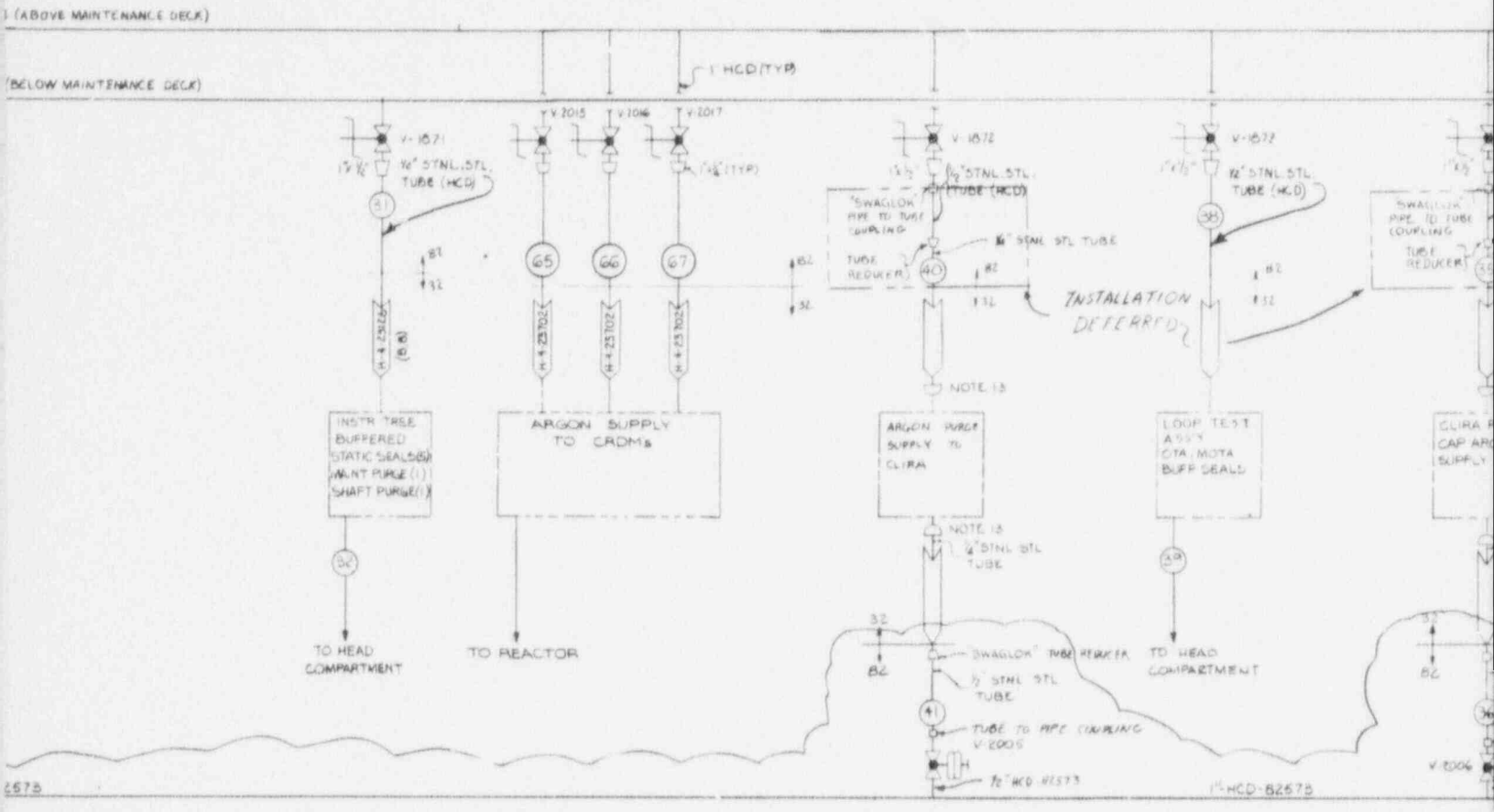
8001140146



U. S. ATOMIC ENERGY COMMISSION	
RICHLAND OPERATIONS OFFICE	
Hanford Engineering Development Laboratory	
BECHTEL SAN FRANCISCO	
PIPING & INSTRUMENT DIAGRAM ARGON SEAL PURGE GAS DISTR HEAD COMPT	
FAST FLUX TEST FACILITY	
H-4-82526	


(ABOVE MAINTENANCE DECK)
(BELOW MAINTENANCE DECK)
1" HCD (TYP)
V-1871
V-2015
V-1016
V-2017
V-1872
V-1873
½" STNL. STL. TUBE (HCD)
¼" (TYP)
"SWAGELOK" PIPE TO TUBE COUPLING
TUBE REDUCER
¼" STNL STL TUBE
INSTALLATION DEFERRED
NOTE 13
INSTR TREE BUFFERED STATIC SEALS(6) ANNT PURGE (1) SHAFT PURGE (1)
ARGON SUPPLY TO CRDMs
ARGON PURGE SUPPLY TO CLIRA
LOOP TEST ASSY CTA, MOTA BUFF SEALS
TO HEAD COMPARTMENT
TO REACTOR
TO HEAD COMPARTMENT
"SWAGELOK" TUBE REDUCER
½" STNL STL TUBE
TUBE TO PIPE COUPLING V-2005
½" HCD-82573
1"-HCD-82573
V-2006
2 PSI ARGON SUPPLY
LOCAL

HEAD COMPARTMENT (SEE NOTE 14) PENETRATION

V-639 FLOW RESTRICTOR

1" HCD-82574

1" HCD-82574 (ABOVE MAINTENANCE DECK)

1" HCD-82574

V-1874 V-1875 V-1876 V-1878 V-1880

1"x½" 1"x½" 1"x½" 1"x¼"

½" STNL. STL. TUBE (HCD)

⅜" STNL. STL. TUBE (HCD)

¼" STNL. STL. TUBE

¾" STNL. STL. TUBE (HCD)

¼" STNL. STL. TUBE (HCD)

55 54 54A 19 28

B2 B1

NOTE 13

NOTE 12

FUEL PORT BUFFERED STATIC SEALS (3) SHAFT PURGE (1) OP PURGE (1)

INSTR. TREE BUFFERED STATIC SEALS (3) MAINT PURGE (1) SHAFT PURGE (1)

LOOP TEST ASSEMBLY

34 34A 20 29

TO HEAD COMPARTMENT

TO HEAD COMPARTMENT

TO HEAD COMPARTMENT

SWAGELOK TUBE FITTING ¼" STNL. STL. TUBE

TUBE TO PIPE COUPLING

FLOOR VALVE EXHAUST LINE

½" HCD-82573

HEAD COMPARTMENT (SEE NOTE 14) PENETRATION

1" HCD-82573

15

C5

VENT

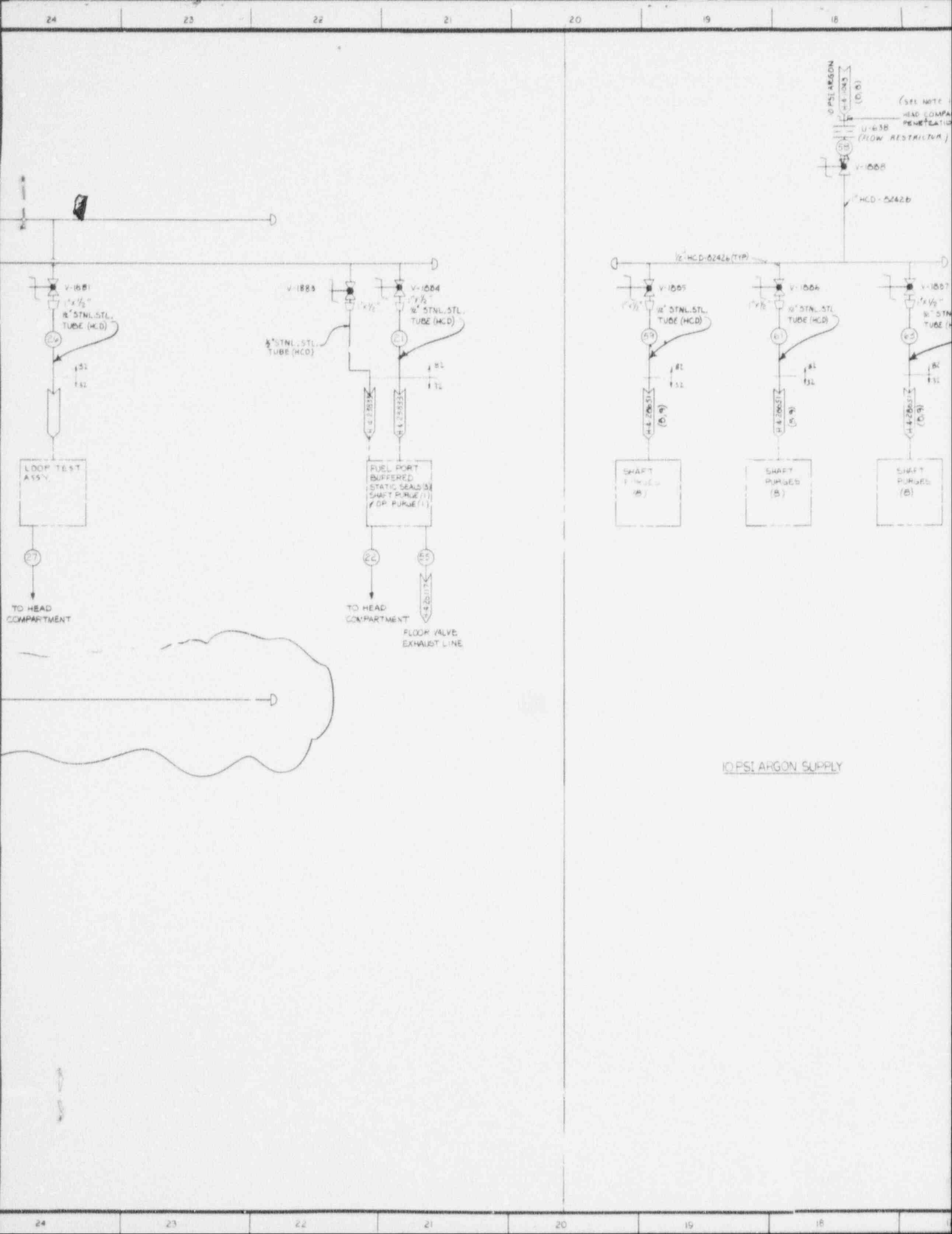
HV (520K)

HV (500K)

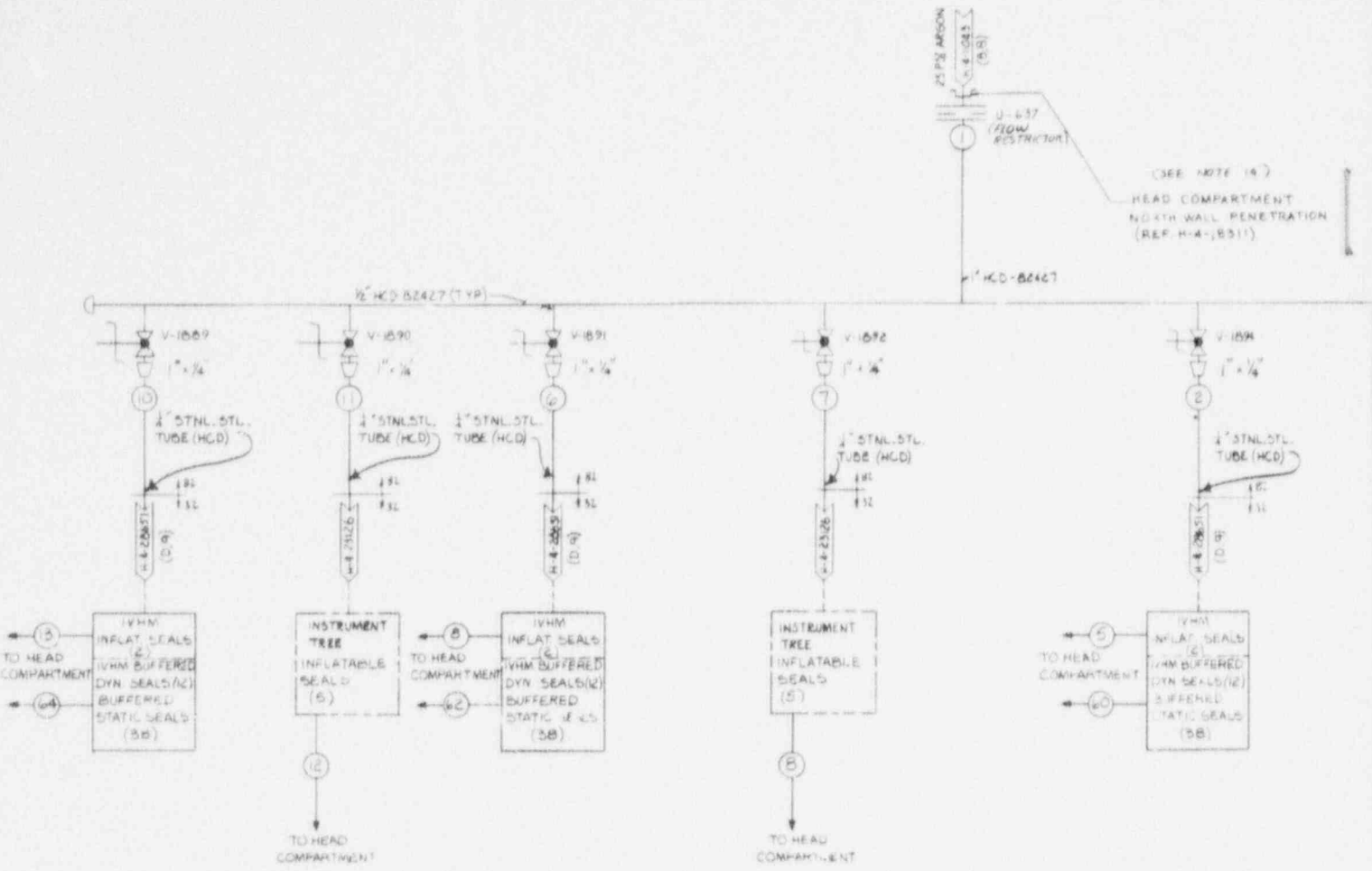
1" HCD-82580

7

U. S. ATOMIC ENERGY COMMISSION
RICHLAND OPERATIONS OFFICE
Hanford Engineering Development Laboratory
BECHTEL SAN FRANCISCO
PIPING DIAGRAM
ARGON SEAL & PURGE GAS DISTR. HEADER
FAST FLUX TEST FACILITY



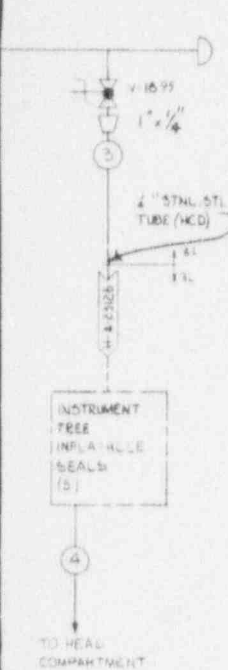
24
23
22
21
20
19
18
V-1881
1"x½"
½" STNL.STL.
TUBE (HCD)
LOOP TEST
ASS'Y.
TO HEAD
COMPARTMENT
V-1883
1"x½"
½" STNL.STL.
TUBE (HCD)
V-1884
1"x½"
½" STNL.STL.
TUBE (HCD)
FUEL PORT
BUFFERED
STATIC SEALS(3)
SHAFT PURGE(1)
DP PURGE(1)
TO HEAD
COMPARTMENT
FLOOR VALVE
EXHAUST LINE
10 PSI ARGON
U-638
(FLOW RESTRICTOR)
V-1888
1" HCD-82426
½" HCD-82426 (TYP)
V-1885
½" STNL.STL.
TUBE (HCD)
SHAFT
PURGES
(8)
V-1886
½" STNL.STL.
TUBE (HCD)
SHAFT
PURGES
(8)
V-1887
SHAFT
PURGES
(8)
10 PSI ARGON SUPPLY



25 PSI ARGON SUPPLY

U. S. ATOMIC ENERGY COMMISSION	
RICHLAND OPERATIONS OFFICE	
Hanford Engineering Development Laboratory	
BECHTEL SAN FRANCISCO	
PIPING & INSTRUMENT DIAGRAM ARGON FAC/PURGE FACILITY HEAD COMPT	
FAST FLUX TEST FACILITY	
H-1-E2522	

THIS DRAWING IS CONTAINED IN SDD 82
ALL CHANGES TO THIS DRAWING MUST BE PROCESSED USING THE SDD REVISION PROCESS.



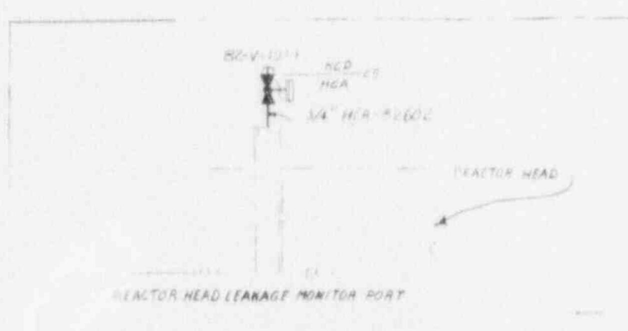
LINE NO	FLOW (SCFM)			INTERMITTENT TOTAL VOLUME (SCF)	NOTES
	REACTOR OPERATION	REFUELING PREPARATION	REFUELING OPERATION		
1	0.001	0.5	1.0	9.0	(1, 2, 15)
2	.0003		0.5 (7)	0.5	
3		0.5 (7)	0.0003	2.5	
4		0.5 (7)	0.0003	2.5	
5	.0003		0.5 (7)	0.5	
6	.0003		0.5 (7)	0.5	
7		0.5 (7)	0.0003	2.5	
8		0.5 (7)	0.0003	2.5	
9	.0003		0.5 (7)	0.5	
10	.0003		0.5 (7)	0.5	
11		0.5 (7)	0.0003	2.5	
12		0.5 (7)	0.0003	2.5	
13	.0003		0.5 (7)	0.5	
14					
15					
16					
17					
18	0.55	2.66	0.6	168 TO 468*	(1, 3, 4, 16)
19	0.1604	2.6604 (7)	0.1604	6.0	(3)
20	0.0004	0.0004	0.0004	6.0	
21	0.0122	2.5122 (7)	0 (8.6)	50	(3)
22	0.0002	0.0002	0 (8.6)	0	
23					
24					
25					
26					
27					
28					
29					
30					
31	0.1604	2.6604 (7)	0.1604	6.0	(3)
32	0.0004	0.0004	0.0004	6.0	

*DEPENDENT ON NUMBER OF CLIRA'S BEING CHANGED OUT

LINE NO	FLOW (SCFM)			INTERMITTENT TOTAL VOLUME (SCF)	NOTES
	REACTOR OPERATION	REFUELING PREPARATION	REFUELING OPERATION		
33	0.0122	2.5122 (7)	0 (8.6)	50	(3)
34	0.0002	0.0002	0 (8.6)	0	
35	0.0084	0	0	—	
36	0.0084	0	0	—	
37					
38	0.0002	0.0002			
39	0.0001	0.0001			
40	0.0084	0	0	—	
41	0.0084	0	0	—	
42					
43	0.1604	2.6604 (7)	0.1604	6.0	(3)
44	0.0004	0.0004	0.0004	6.0	
45	0.0122	2.5122 (7)	0 (8.6)	50	(3)
46	0.0002	0.0002	0 (8.6)	0	
47	0.0084	0	0	—	
48	0.0084	0	0	—	
49					
50	0.0002	0.0002			
51	0.0001	0.0001			
52	0.0084	0	0	—	
53	0.0084	0	0	—	
54					
55	0	2.5	0	50	
56	0	2.5	0	50	
57	0	2.5	0	50	
58	2.7	3.2	3.2	—	(1, 3, 5, 16)
59	0.89	1.59 (7.6)	1.59 (7.6)	—	(3)
60	0.0008	0.003	0.003	—	
61	0.89	1.59 (7.6)	1.59 (7.6)	—	(3)
62	0.0008	0.003	0.003	—	
63	0.89	1.59 (7.6)	1.59 (7.6)	—	(3)
64	0.0003	0.003	0.003	—	
65	0.003	0.003	0.003		(17)
66	0.003	0.003	0.003		(17)
67	0.003	0.003	0.003		(17)

NOTES

1. INLE
2. 25
3. OXY ON CON ANN
4. 2 P REA
5. 10 P 2.6
6. UNI RAT
7. INT
8. CON
9. NOT
10. SEE OPE
11. FOR 110
12. ALL
13. SER WI TO
14. PIPE 13
15. FE
16. F
17. IN SC



ENGINEERING RELEASE BY HEDL
REV / DATE
ERO

2 1

REFERENCE DRAWINGS

DWG. NO.	REV NO.	TITLE
1043		P&ID AR SUPPLY & REACTOR DISTRIBUTION
8126		INSTRUMENT TREE AR DIST. CONTROL CABINET ASSY.
8702		HEAD COMPARTMENT PURGE / BUFFER GAS LINES
8651		P&ID AR DISTRIBUTION SYS. @ IVHM
8717		DRAWING FOR FUEL PORT FLOOR VALVE

T TEMPERATURE 100°F (MAX).

PSIG - MAXIMUM FLOW 6.0 SCFM.

GEN & HYDROGEN CONTENT OF PURGE GAS TO ANNULI
THE IVHM, FUEL TRANSFER PORT & INSTRUMENT TREE
TROLLED TO MINIMIZE SODIUM FROST BUILDUP IN
ULI.

SIG - MAXIMUM FLOW 3.2 SCFM - TOTAL FLOW TO
CTOR 0.54 SCFM.

SIG - MAXIMUM FLOW 3.8 SCFM - TOTAL FLOW TO REACTOR
SCFM @ FULL POWER & 3.69 @ REFUELING.

S NOT IN REFUELING OPERATION RETAIN NORMAL FLOW
E (COLUMN 1).

RMITTENT, ONE UNIT AT A TIME.

TINUOUS, TO ACCOMODATE TWO UNITS AT ONE TIME.

USED

FLOOR VALVE SUPPLY REQUIREMENTS FOR REFUELING
RATIONS EXHAUSTED TO FLOOR VALVE (600-61)

SYMBOL USAGE SEE LEGEND SHEETS: H-4-11093,
4, 11095, 11096, 11098 & 11099.

MANUAL VALVE NUMBERS ARE PREFIXED BY 82-

VICE LINES ROUTED TO CENTER ISLAND POSITION BUT
L NOT BE USED INITIALLY FOR CLIRA 1 & 2)
BE CAPPED WITH "SWAGELOK" COMPRESSION FITTINGS

& TUBE LAYOUT INSIDE HEAD COMPARTMENT,
SYS 32 RESPONSIBILITY.

OW RESTRICTED TO MAX. 3 SCFM.

OW RESTRICTED TO MAX. 5 SCFM.

TERMITTENT FLOW LIMITED TO 0.018
FM MAXIMUM.

REVISIONS (DESCRIPTION)
REVISED PER ECN A-2...
REVISED PER "ECN" ...
REVISED PER ECN W-2272
REVISED PER ECN ...40
REVISED & RELEASED ERO B-6860
[illegible]
[illegible]
RELEASED, HEDL ERO B-6102, 10-2-74.
RELEASED, HEDL ERO [illegible] (4-24-74)
[illegible]

REVISIONS

DRAWING STATUS

DATA

HUGULEY

U. S. ATOMIC ENERGY COMMISSION
RICHLAND OPERATIONS OFFICE
Hanford Engineering Development Laboratory
Westinghouse Hanford Company

BECHTEL
SAN FRANCISCO

JOB NO. 5846-2

PIPING & INSTRUMENT DIAGRAM
ARGON SEAL/PURGE GAS DISTR.
HEAD COMPT. SYS 82

FAST FLUX TEST FACILITY

405 27004

H-4-53522 (Sys. 82)

1