ATTACHMENTS

Reactor Containment Building Integrated Leak Rate Test

Local Leakage Rate (Type B and C) Testing

POWER AUTHORITY OF THE STATE OF NEW YORK
Indian Point 3 Nuclear Power Plant
Docket No. 50-286
December, 1982

LOCAL LEAKAGE RATE (TYPE B AND C) TESTING

DECEMBER, 1979

December 1979:

The combined gaseous leakage was determined to be less than 2.64 SCFM, which is below the acceptance limit of 4.11 SCFM (.06%/day by weight at design accident conditions). The combined Type "B" and Type "C" leakage was derived from the leakage test results as follows:

2.31	SCFM	- Air Lock Leakage Testing
.30	SCFM	- Sensitive Leakage Rate Testing
.024	SCFM	- Containment Isolation Valve Testing
.001	SCFM	- N_2 Leakage from the IVSW system testing
2.635	SCFM	TOTAL

The combined measured liquid leakage rate of the 5 (five) Isolation Valve Seal Water system zones was 2014.2 cc/hr which is well below the limit of 14,700 cc/hr as required by the Unit's Technical Specifications.

The results of the Containment Recirculation Fan Cooler Units Service Water In-Leakage tests is as follows:

UNIT	MEASURED LEAKAGE
#31 CRFCU	0.004 GPM
#32 CRFCU	0.148 GPM
#33 CRFCU	0.141 GPM
#34 CRFCU	0.050 GPM
#35 CRFCU	0.000 GPM

The measured leakage of all Containment Recirculation Fan Cooler Units were well within the acceptable limits of .36 GPM per fan cooler unit.

Valve Number	Letter Symbol	T.S. Penet. Number	Minimum Test Pressu	Pipe Size	Line Number	Test Fluid	Leakage in cc/min or as Noted	Component Name
549	Y	1	45	3/8"	Line 24	Water (4)		PRT Gas Anal. Isolation
548	Y	1	45	3/8"	Line 24	Water (4)		PRT Gas Anal. Isolation
956E	W	12	45	3/8	Line 59	Water (4)		RCS Sample Isolation
956F	W	12	45	3/8"	Line 59	Water (4)		RCS Sample Isolation
1786	V	19	45	3/4"	Line 23	Water (4)		Containment Vent Header Isolat
1787	V	19	45	3/4"	Line 28	Water (4)		Containment Vent Header Isolat
1788	V	20	45	3/8"	Line 30	Water (4)		RCDT Gas Anal. Isolation
1789	V	20	45	3/8"	Line 30	Water (4)		RCDT Gas Anal. Isolation
PCV-1215	AA	37	45	2"	Line 45	Water (4)		S/G Blowdown Isolation
PCV-1215A	AA	37	45	2"	Line 45	Water (4)	Station 1 Total 6.67	S/G Blowdown Isolation
PCV-1214	BB	37	45	2"	Line 46	Water (4)		S/G Blowdown Isolation
PCV-1214A	BB	37	45	2"	Line 46	Water (4)		S/G Blowdown Isolation
PCV-1216	CC	37	45	2"	Line 47	Water (4)		S/G Blowdown Isolation
PCV-1216A	CC	37	45	2"	Line 47	Water (4)		S/G Blowdown Isolation
PCV-1217	DD	37	45	2"	Line 48	Water (4)		S/G Blowdown Isolation
PCV-1217A	DD	37	45	2"	Line 48	Water (4)		S/G Blowdown Isolation
956A	W	52	45	3/8"	Line 25	Water (4)		Pzr. Steam Space Isolation
956B	W	52	45	3/8"	Line 25	Water (4)		Pzr. Steam Space Isolation
956C	W	53	45	3/8"	Line 26	Water (4)		Pzr. Liquid Space Isolation
956D	W	53	45	3/8"	Line 26	Water (4)		Pzr. Liquid Space Isolation
552	Y	3	45	3"	Line 33	Water (4)		PRT PW Makeup Isolation
519	Y	3	45	3"	Line 45	Water (4)		PRT PW Makeup Isolation
859A	Y	16	45	3/4"	Line 31	Water (4)	Station 2 Total 4.17	SIS Test Line Isolation
859C	Y	16	45	3/4"	Line 31	Water (4)		SIS Test Line Isolation
SA-24	Y	41	45	2"	Line 34	Water (4)		Station Air Isolation
SA-24	Y	41	45	2"	Line 34	Water (4)		Station Air Isolation
1728	Y	31	45	2"	Line 338	Water (4)		Cont. Sump Pump Discharge Isol.
1723	Y	31	45	2"	Line 338	Water (4)		Cont. Sump Pump Discharge Isol.
1833A	Q	15	45	3/4"	Line 270	Water (4)		SIS Bit Tank Isolation
1833B	Q	15	45	3/4"	Line 270	Water (4)		SIS Bit Tank Isolation
201	X	8	45	2"	Line 27	Water (4)		Letdown Isolation
202	X	8	45	2"	Line 27	Water (4)		Letdown Isolation
1702	Z	21	45	3"	Line 40	Water (4)		RCDT Pump Disch. Isolation
1705	Z	21	45	3"	Line 40	Water (4)	Station 3 Total 5.83	RCDT Pump Disch. Isolation
791	U	29	45	3"	Line 22	Water (4)		Excess Letdown Heater Ex. Cooling Water Supply
798	U	29	45	3"	Line 22	Water (4)		Excess Letdown Heater Ex. Cooling Water Supply
796	U	30	45	3"	Line 18	Water (4)		Excess Letdown Heater Ex. Cooling Water Return

Valve Number	Letter Symbol	T.S. Per Number	Minimum Test Pre	Pipe Size	Line Number	Test Fluid	Leakage cc/min as Note	Compone Name
793	R	30	45	3"	Line 18	Water (4)		Excess Letdown Heater Ex. Cooling Water Return
956G	RR	18	45	3/8"	Line 69	Water (4)		Acc Sample Line Isol.
956H	RR	18	45	3/8"	Line 69	Water (4)		Acc Sample Line Isol.
UH-37	S	45	45	3"	Line 20	Water (4)		Auxiliary Steam
UH-38	T	46	45	3"	Line 95	Water (4)		Auxiliary Steam
205	R	9	45	3"	Line 19	Water (4)		Charging Water Isolation
226	R	9	45	3"	Line 19	Water (4)		Charging Water Isolation
227	R	9	45	3"	Line 19	Water (4)		Charging Water Bypassing
241C	Z	10	45	2"	Line 43	Water (4)		RCP Seal H_2O Supply Isolation
241B	Z	10	45	2"	Line 42	Water (4)		RCP Seal H_2O Supply Isolation
250C	Z	10	45	2"	Line 43	Water (4)		RCP Seal H_2O Supply Isolation
250D	Z	10	45	2"	Line 44	Water (4)		RCP Seal H_2O Supply Isolation
241D	Z	10	45	2"	Line 44	Water (4)		RCP Seal H_2O Supply Isolation
222	R	10	45	4"	Line 44	Water (4)		RCP Seal H_2O Return
869A	GG	14	45	8"	Line 51	Water (4)	Station 4	Containment Spray Header Isola
869B	P	14	45	8"	Line 15	Water (4)		Containment Spray Header Isola
851A	NN	15	45	4"	Line 145	Water (4)	16.7	SIS from Pumps Isolation
850A	NN	15	45	4"	Line 56	Water (4)		SIS from Pump Isolation
797	N	22	45	6"	Line 13	Water (4)		RCP Cooling Water Supply
769	N	22	45	6"	Line 13	Water (4)		RCP Cooling Water Supply
784	O	23	45	6"	Line 4	Water (4)		RCP Cooling Water Return
786	O	23	45	6"	Line 4	Water (4)		RCP Cooling Water Return
FCV-625	C	24	45	3"	Line 21	Water (4)		RCP Cooling Water Return
789	C	24	45	3"	Line 21	Water (4)		RCP Cooling Water Return
250A	Z	10	45	2"	Line 41	Water (4)		RCP Seal H_2O Supply Isolation
241A	Z	10	45	2"	Line 41	Water (4)		RCP Seal H_2O Supply Isolation
250B	Z	10	45	2"	Line 42	Water (4)		RCP Seal H_2O Supply Isolation
990A	TT	51	41	3/8"	Line 711	Nit. (4)		Recirc. Pump Sample Line
990B	TT	51	41	3/8"	Line 711	Nit. (4)		Recirc. Pump Sample Line
744	J	4	41(3)	14"	Line 9	Nit. (4)		RHR Loop in Check Valve
1835A	Q	15	41	4"	Line 16	Nit. (4)		SIS from Bit Tank
1835B	Q	15	41	4"	Line 16	Nit. (4)		SIS from Bit Tank
888A	QQ	5	41	8"	Line 60	Nit. (4)	N_2 Inject. Hdr. Total 20	RHR to SIS
888B	QQ	5	41	8"	Line 60	Nit. (4)		RHR to SIS
958	N/A	5	41	3/4"	Line 294	Nit. (4)		RHR Loop Sample
959	N/A	5	41	3/4"	Line 294	Nit. (4)		RHR Loop Sample
990C	N/A	5	41	3/4"	Line 294	Nit. (4)		RHR Loops Sample Bypass
1870	N/A	5	41	3"	Line 337	Nit. (4)		RHR Mon. Flow Isolation
743	N/A	5	41	3"	Line 337	Nit. (4)		RHR Mon. Flow Isolation
732	K	6	41	14"	Line 10	Nit (4)		RHR Loop Out
891A	RR	17	41	1"	Line 68	Gas	< 10	Accumulator N_2 #31 Tank
891B	RR	17	41	1"	Line 68	Gas	< 10	Accumulator N_2 #32 Tank
891C	RR	17	41	1"	Line 68	Gas	< 10	Accumulator N_2 #33 Tank
891D	RR	17	41	1"	Line 68	Gas	< 10	Accumulator N_2 #33 Tank
741	J	44	45(3)	14"	Line 9	Water	71	RHR Loop Disch Isol. Valve

Valve Number	Letter Symbol	T.S. Penet. Number	Minimum Test Pressur	Pipe Size	Line Number	Test Fluid	Leakage in cc/min or as Noted	Component Name
863	RR	17	41	1"	Line 68	Gas	< 10	Accumulator N_2 Isolation
1610	V	19	41	1"	Line 67	Gas	< 10	N_2 to RCDT
1616	V	19	41	1"	Line 67	Gas	< 10	N_2 to RCDT
367A 378A	BB BB	14 14	41 41	8" 3/4"	Line 51 Line 164	Gas Gas	< 200	#32 Cont. Spray Pump Discharge #31 Recirc. Isolation
367B 378B	P P	14 14	41 41	8" 3/4"	Line 15 Line 41	Gas Gas	< 200	#32 Cont. Spray Pump Discharge #32 Recirc Isolation Valve
CB-1 CB-2		69 69	41 41	1" 1"		Gas Gas	< 10	Containment Personel Air Lock V Containment Personel Air Lock V
CB-5 CB-6			41 41	1" 1"		Gas Gas	< 10	Equipment Air Lock Valves Equipment Air Lock Valves
CB-7			41	3"		Gas	15.5	Equipment Air Lock Valves
CB-8			41	3"		Gas	< 10	Equipment Air Lock Valves
550	Y	2	41	3/4"	Line 32	Gas	< 10	Prt N_2 Supply Isolation
518	Y	2	41	3/4"	Line 32	Gas	61.3	PRT N_2 Supply Isolation
814A	RR	55	41	3/4"	Line 368	Gas	< 10	Containment Air Press Isolation
814B	LL	55	41	3/4"	Line 369	Gas	< 10	Containment Air Press Isolation
890G 890H 890J	R R O	57 57 57	41 41 41	3/4" 3/4" 3/4"	Line 836 Line 837 Line 837	Gas Gas Gas	< 10	Post Accident Sampling Return Post Accident Sampling Return
882A V-2A V-2B	O O O	58 58 58	41 41 41	3/4" 1" 1"	Line 571 Line 571	Gas Gas	< 10	O_2 Supply to Containment O_2 Supply to Containment
875A V-3A	SS SS	59 59	41 41	3/4" 3/4"	Line 576 Line 576	Gas Gas	< 10	H_2 Supply to 31 Combustor H_2 Supply to 31 Combustor
876A V-5A	SS SS	60 60	41 41	2" 2"	Line 575 Line 575	Gas Gas	< 10	H_2 Supply to 31 Combustor H_2 Supply to 31 Combustor
875B V-3B	TT TT	61 61	41 41	3/4" 3/4"	Line 574 Line 574	Gas Gas	< 10	H_2 Supply to #32 Combustor Isol H_2 Supply to #32 Combustor Isol
876B V-5B	TT TT	62 62	41 41	2" 2"	Line 573 Line 573	Gas Gas	< 16	H_2 Supply to #32 Combustor Isol H_2 Supply to #32 Combustor Isol
406	RR		41	1"	Line 68	Gas	< 10	Nitrogen Check Isol. to PORV's

Valve Number	Letter Symbol	T.S. Penet. Number	Minimum Test Pressu	Pipe Size	Line Number	Test Fluid	Leakage in cc/min or as Noted	Component Name
1234	RR	32	41	1"	Line 46	Gas (7)		From C.B. Rad. Monitor
1235	RR	32	41	1"	Line 66	Gas (7)		To C. B. Rad. Monitor
1236	RR	33	41	1"	Line 66	Gas (7)		To C. B. Rad. Monitor
1237	RR	33	41	1"	Line 66	Gas (7)		To C.B. Rad. Monitor
1170	EE	48	41	36"	Line 49	Gas (7)		Control Bldg. Purge Supply
1171	EE	48	41	36"	Line 49	Gas (7)	TOTAL	Control Bldg. Purge Supply
1190	PP	50	41	36"	Line 58	Gas (7)		Containment Pressure Relief
1191	PP	50	41	36"	Line 58	Gas (7)	8496	Containment Pressure Relief
1192	PP	50	41	36"	Line 58	Gas (7)		Containment Pressure Relief
PCV-1229	R	34	41	4"	Line 28	Gas (7)		From Steam Jet Air Ejectors
PCV-1230	R	34	41	4"		Gas (7)		From Steam Jet Air Ejectors
PS-7	LL	65	41	3"	Line 830	Gas (7)		Post Accident Vent System Iso.
PS-10	LL	65	41	3"	Line 830	Gas (7)		Post Accident Vent System Iso.
PS-8	LL	65	41	3"	Line 830	Gas (7)		Post Accident Vent System Iso.
PS-9	LL	65	41	3"	Line 830	Gas (7)		Post Accident Vent System Iso.
1172	FF	49	41	36"	Line 50	Gas (7)		Containment Bldg. Purge Exhaust
1173	FF	49	41	36"	Line 50	Gas (7)		
PCV-1224	W	38	45	1/2"	Line 365	Water (4)		#32 S/G Blowdown Sample Isolati
PCV-1224A	W	38	45	1/2"	Line 365	Water (4)	TOTAL .2	#32 S/G Blowdown Sample Isolati
PCV-1223	W	38	45	1/2"	Line 364	Water (4)		#31 S/G Blowdown Sample Isolati
PCV-1223A	W	38	45	1/2"	Line 364	Water (4)		#31 S/G Blowdown Sample Isolati
PCV-1225	W	38	45	1/2"	Line 366	Water (4)		#33 S/G Blowdown Sample Isolati
PCV-1225A	W	38	45	1/2"	Line 366	Water (4)		#33 S/G Blowdown Sample Isolati
PCV-1226	W	38	45	1/2"	Line 367	Water (4)		#34 S/G Blowdown Sample Isolati
PCV-1226A	W	38	45	1/2"	Line 367	Water (4)		#34 S/G Blowdown Sample Isolati
IA-39	Y	64	41	2"	Line 39	Gas	77.5	Instrument Air Isolation
PCV-1228	Y	64	41	2"	Line 39	Gas	< 10	Instrument Air Isolation
1814C	R	56	41	3/4"	Line 370	Gas	< 10	Containment Air Pres. Isolation
CB-3		69	41	3"		Gas (7)	115	Containment Personel Air Lock V.

Valve Number	Letter Symbol	T.S. Penet. Number	Minimum Test Pressure	Pipe Size	Line Number	Test Fluid	Leakage in cc/min or as Noted	Component Name
SWN-41	SS	39	45	10"	Line 11A	Water (6)		#31 Fan Cooler Unit SW
SWN-43	LA	39	45	1"	Line 468	Water (6)		#31 Fan Cooler Unit SW
SWN-42	LA	39	45	1 1/2"	Line 468	Water (6)	Total	#31 Fan Cooler Unit SW
SWN-44	MB	40	45	10"	Line 12B	Water (6)		#31 Fan Cooler Unit SW
SWN-51	MB	40	45	1"	Line 12	Water (6)	6.7	#31 Fan Cooler Unit SW
SWN-71	SS	40	45	2"	Line 497	Water (6)		#31 Fan Cooler Unit SW
SWN-41	LA	39	45	10"	Line 116	Water (6)		#32 Fan Cooler Unit Service Wat
SWN-43	LA	39	45	1"	Line 463	Water (6)	Total	#32 Fan Cooler Unit Service Wat
SWN-42	LA	39	45	1 1/2"	Line 463	Water (6)		#32 Fan Cooler Unit Service Wat
SWN-44	MB	39	45	10"	Line 120	Water (6)	560	#32 Fan Cooler Unit Service Wat
SWN-51	MB	40	45	1"	Line 12	Water (6)		#32 Fan Cooler Unit Service Wat
SWN-71	SS	40	45	2"	Line 498	Water (6)		#32 Fan Cooler Unit Service Wat
385A	∞	7	45	14"	Line 57	Water (5)	2.67	Containment Sump Isolation
385B	00	7	45	14"	Line 57	Water (5)	64.3	Containment Sump Isolation
CB-4		69	41	3"		Gas (7)	134.5	Containment Personel Air Lock Va
580A	RR	44	41	1/8"	Line 474	Gas	< 10	Dead Weight Calibrator Iso.
580B	RR	44	41	1/8"	Line 474	Gas	< 10	Dead Weight Calibrator Iso.
890D	R	57	41		Line 834	Gas		From FCU #33
890E	TT	57	41		Line 833	Gas	< 10	From FCU #34
890A	R	57	41	3/4"	Line 831	Gas		Post Accident Sampling Supply
890C	LL	57	41	3/4"	Line 833	Gas		Post Accident Sampling Supply
890F	O	57	41	3/4	Line 835	Gas		Post Accident Sampling Supply
890B	TT	57	41	3/4"	Line 832	Gas		Post Accident Sampling Supply
WN-41	LA	39	45	10"	Line 11E	Water (6)		#35 Fan Cooler Unit Service Wate
WN-43	LA	39	45	1"	Line 471	Water (6)		#35 Fan Cooler Unit Service Wate
WN-42	LA	39	45	1 1/2"	Line 471	Water (6)	Total	#35 Fan Cooler Unit Service Wate
WN-44	MB	40	45	10"	Line 12E	Water (6)		#35 Fan Cooler Unit Service Wate
WN-51	MB	40	45	1"	Line 12	Water (6)	0	#35 Fan Cooler Unit Service Wate
WN-71	SS	40	45	2"	Line 499	Water (6)		#35 Fan Cooler Unit Service Wate
WN-41	LA	39	45	10"	Line 11D	Water (6)		#34 Fan Cooler Unit Service Wate
WN-43	LA	39	45	1"	Line 470	Water (6)		#34 Fan Cooler Unit Service Wate
WN-42	LA	39	45	1 1/2"	Line 470	Water (6)	Total	#34 Fan Cooler Unit Service Wate
WN-44	MB	40	45	10"	Line 12G	Water (6)		#34 Fan Cooler Unit Service Wate
WN-51	MB	40	45	1"	Line 12	Water (6)	188.3	#34 Fan Cooler Unit Service Wate
WN-71	SS	40	45	2"	Line 495	Water (6)		#34 Fan Cooler Unit Service Wate

Valve Number	Letter Symbol	T.S. Penet. Number	Minimum Test Pressure	Pipe Size	Line Number	Test Fluid	Leakage in cc/min or as Noted	Component Name
SWN-41	LA	39	45	10"	Line 11B	Water (6)		#33 Fan Cooler Unit Service Wat
SWN-43	LA	39	45	1"	Line 469	Water (6)		#33 Fan Cooler Unit Service Wat
SWN-42	LA	39	45	1 1/2"	Line 469	Water (6)		#33 Fan Cooler Unit Service Wat
SWN-44	MB	40	45	10"	Line 12A	Water (6)	Total	#33 Fan Cooler Unit Service Wat
SWN-51	MB	40	45	1"	Line 12	Water (6)	153.3	#33 Fan Cooler Unit Service Wat
SWN-71	SS	40	45	2"	Line 496	Water (6)		#33 Fan Cooler Unit Service Wat

LOCAL LEAKAGE RATE (TYPE B AND C) TESTING

SEPTEMBER, 1981

The combined gaseous leakage was determined to be less than 3.57 SCFM which is below the acceptance limit of 4.11 SCFM. The total combined Type "B" and Type "C" leakage was derived from the leakage test results as follows:

1.918 SCFM	-	Air Lock Leakage Testing
1.493 SCFM	-	Sensitive Leakage Rate Testing
.160 SCFM	-	Containment Isolation Valve Testing
.003 SCFM	-	N_2 Leakage from the IVSW system testing
3.574 SCFM		TOTAL

The combined measured liquid leakage rate of the 5 (five) Isolation Valve Seal Water system zones was 9927.6 cc/hr which is below the acceptable limit as defined in the Unit's Technical Specification.

The results of the Containment Recirculation Fan Cooler Units Service Water in-leakage test is as follows:

Unit	Measured Leakage
#31 CRFCU	0.003 GPM *
#32 CRFCU	0.001 GPM *
#33 CRFCU	0.000 GPM *
#34 CRFCU	0.001 GPM *
#35 CRFCU	0.006 GPM*

*Note: The leakage measurment recorded is "As Left" Leakage. The SWN 41 valves and SWN 44 valves were removed from the system for repair at the beginning of the outage and no "As Found" Data was obtained.

CONTAINMENT ISOLATION VALVES SUBJECT
TO GAS OR NITROGEN PRESSURE TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN)	AS LEFT LEAKAGE (CC/MIN)
867B 878B	#32 Cont. Spray Pump Disch. #32 Recirc. Isolation	P(14) P(14)	41	Air	< 34.6	< 34.6
867A 878A	#31 Cont. Spray Pump Disch. #31 Recirc. Isolation	BB(14) BB(14)	41	Air	< 34.6	< 34.6
518	PRT N2 Supply Isolation	Y(2)	41	N2	< 35.2	< 35.2
550	PRT N2 Supply Isolation	Y(2)	41	N2	< 34.6	< 34.6
IA-39	Instrument Air Isolation	Y(64)	41	Air	56.0	56.0
PCV-1228	Instrument Air Isolation	Y(64)	41	Air	< 34.6	< 34.6
1610	N2 to RCDT Isolation	V(19)	41	N2	< 35.2	< 35.2
1616	N2 to RCDT Isolation	V(19)	41	N2	41.2	41.2
863	N2 to Accumulator Isolation	RR(17)	41	N2	1436.8	1436.8
891A	Accumulator N2 to #31 Tank	RR(17)	41	N2	< 33.7	< 33.7
891B	Accumulator N2 to #32 Tank	RR(17)	41	N2	< 33.7	< 33.7
891C	Accumulator N2 to #33 Tank	RR(17)	41	N2	< 33.7	< 33.7
891D	Accumulator N2 to #34 Tank	RR(17)	41	N2	< 33.7	< 33.7
1814A	Containment Air Press. Isol.	RR(55)	41	Air	< 33.1	< 33.1
1814B	Containment Air Press. Isol.	LL(55)	41	Air	< 33.1	< 33.1
1814C	Containment Air Press. Isol.	R(56)	41	Air	< 33.1	< 33.1
580A	Dead Weight Calibrator Isol.	RR(44)	41	Air	< 34.6	< 34.6
580B	Dead Weight Calibrator Isol.	RR(44)	41	Air	< 34.6	< 34.6
1882A IV-2A IV-2B	O_2 Supply to Containment	O(58)	41	N_2	< 35.2	< 35.2
1876B IV-5B	H_2 Supply to 32 Combuster	TT(62)	41	N_2	< 35.2	< 35.2
1875B IV-3B	H_2 Supply to 32 Combuster	TT(61)	41	N_2	< 35.2	< 35.2
1876A IV-5A	H_2 Supply to 31 Combuster	SS(60	41	N_2	< 35.2	< 35.2
1875A IV-3A	H_2 Supply to 31 Combuster	SS(59)	41	N_2	< 35.2	< 35.2

CONTAINMENT ISOLATION VALVES SUBJECT
GAS OR NITROGEN PRESSURE TEST

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN) *1	AS LEFT LEAKAGE (CC/MIN) *1
1890A	Post Accident Air Sampling Supply	R(57)	41	Air		
1890B	Post Accicent Air Sampling Supply	TT(57)	41	Air		
1890C	Post Accident Air Sampling Supply	LL(57)	41	Air	-33.1	-33.1
1890D	Post Accident Air Sampling Supply	R(57)	41	Air		
1890E	Post Accident Air Sampling Supply	TT(57)	41	Air		
1890F	Post Accident Air Sampling Supply	O(57)	41	Air		
1890G	Post Accident Air Sampling Return	R(57)	41	Air		
1890H	Post Accident Air Sampling Return	R(57)	41	Air	2021.6	< 33.1
1890J	Post Accident Air Sampling Return	O(57)	41	Air		
CB-3	Personnel Air Lock Valve	-(69)	41	Air	< 34.6	< 34.6
CB-4	Personnel Air Lock Valve	-(69)	41	Air	51.72	51.72
CB-1 CB-2	Personnel Air Lock Check Valves	-(69)	41	Air	< 34.6	< 34.6
CB-7	Equipment Air Lock Valve	—	41	Air	< 34.6	< 34.6
CB-8	Equipment Air Lock Valve	—	41	Air	< 34.6	< 34.6
CB-5 CB-6	Equipment Air Lock Check Valves		41	Air	< 34.6	< 34.6
8406	N_2 to Power OP Relief Check Valve	RR(-)	41	N_2	< 34.6	< 34.6
PCV-1229 PCV-1230	Air Ejector Discharge to Containment	R(34)	41	Air	427.8	427.8
PCV-1236	Cont. Building Rad. Monitor Supply	RR(33)	41	Air	< 34.6	< 34.6
PCV-1237	Cont. Building Rad. Monitor Supply	RR(33)	41	Air		
PCV-1234	Cont. Building Rad. Monitor Return	RR(32)	41	Air	< 34.6	< 34.6
PCV-1235	Cont. Building Rad. Monitor Return	RR(32)	41	Air		
PS-7						
PS-8	Post Accident Vent System	LL(65)	41	Air	< 33.1	< 33.1
PS-9	Isolation Valves					
PS-10						
PCV-1170 PCV-1171	Cont. Building Purge Supply Valves	EE(48)	41	Air	*2 10,631.6	10658
PCV-1172 PCV-1173	Cont. Building Purge Exhaust Valves	FF(49)	41	Air	*2 10,631.6	< 2,743

CONTAINMENT ISOLATION VALVES, PENETRATIONS, AND DOUBLE GASKETED SEALS SUBJECT TO GAS OR NITORGEN PRESSURE TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN) *1	AS LEFT LEAKAGE (CC/MIN) *1
Rack #10	WCCP Supply to Piping Penetrations	Various	41	Air	< 33.1	< 33.1
Rack #11	WCCP Supply to Piping Penetrations	Various	41	Air	374.9	374.9
Rack #12	WCCP Supply to Electrical Penetrations	Various	41	Air	< 33.1	< 33.1
Rack #13	WCCP Supply to Electrical Penetrations	Various	41	Air		
Rack #15	WCCP Supply to FW & MS Penetrations	Various	41	Air	14,424.6	14,424.6
PC-1321S	WCCP Supply to Fuel Transfer Tube	HH(-)	41	Air	< 33.1	< 33.1
	WCCP Supply to Mini-Containment	OO(-)	41	Air	3019	3019
PCV-1190 PCV-1191	Pressure Relief Valves	PP(-)	41	Air	1043.5	1043.5
PCV-1191 PCV-1192	Pressure Relief Valves	PP(-)	41	Air	1410.0	1410.0
PC-1318S	WCCP Supply to 95' Equipment Hatch Seal	—(-)	41	Air	< 33.1	< 33.1
888A 888B	RHR to SIS System Valves	QQ(5)	41	N_2		
990A 990B	Recirc. pump sample line	TT(51)	41	N2	IVSW N_2 Injection Station	
958						
959 990C	RHR loop sample valves	-(5)	41	N2	85.5	85.5
744	RHR Supply Valve	J(4)	41	N2		
732	RHR Return Valve	K(6)	41	N2		
1870 743	RHR Mini Flow Isolation	-(5)	41	N2		
1835A	SIS to Bit Tank Isolation	Q(15)	41	N2		
1835B	SIS to Bit Tank Isolation	Q(15)	41	N2		
				TOTAL LEAKAGE	46819.3	36968.6
				LATEST AIR LOCK LEAKAGE	54312.0	54312.0
				COMBINED LEAKAGE TOTAL	101,131.3	91,280.6

CONTAINMENT ISOLATION VALVES PRESSURIZED BY THE ISOLATION VALVE SEAL WATER SYSTEM SUBJECT TO PRESSURIZED WATER TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/HR)	AS LEFT LEAKAGE (CC/HR)
956A 956B	PZR Steam Space Isolation PZR Steam Space Isolation	W(52)	45	Water		
956C 956D	PZR Liquid Space Isolation PZR Liquid Space Isolation	W(53)	45	Water		
956E 956F	RCS Sample Isolation RCS Sample Isolation	W(12)	45	Water		
1786 1787	RCDT & PRT to Vent Header RCDT & PRT to Vent Header	V(19)	45	Water	IVSW Station 1 Total	IVSW Station 1 Total
1788 1789	RCDT to Gas Analyzer RCDT to Gas Analyzer	V(20)	45	Water	1604	1604
548 549	PRT to Gas Analyzer PRT to Gas Analyzer	Y(1) Y(1)	45	Water		
PCV-1214 PCV-1214A	#31 S/G Blowdown Isolation #31 S/G Blowdown Isolation	BB(37)	45	Water		
PCV-1215 PCV-1215A	#32 S/G Blowdown Isolation #32 S/G Blowdown Isolation	AA(37)	45	Water		
PCV-1216 PCV-1216A	#33 S/G Blowdown Isolation #33 S/G Blowdown Isolation	CC(37)	45	Water		
PCV-1217 PCV-1217A	#34 S/G Blowdown Isolation #34 S/G Blowdown Isolation	DD(37)	45	Water		
1833A 1833B	SIS Bit Tank Isolation Valves	Q(15)	45	Water		
SA-24 SA-24	Station Air Isolation Valves	Y(41)	45	Water		
859A 859C	SIS Pump Test Line Isolation Valves	Y(16)	45	Water	IVSW Station II Total	IVSW Station II Total
519 552	Primary Water To PRT Valves	Y(3)	45	Water	< 573.9	< 573.9
1723 1728	Cont. Sump Pump Discharge valves	Y(31)	45	Water		
DW-1 DW-2	Demin Water Isolation Valves	(-)	45	Water		

CONTAINMENT ISOLATION VALVES PRESSURIZED BY THE ISOLATION VALVE SEAL WATER SYSTEM SUBJECT TO PRESSURIZED WATER TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/HR) *1	AS LEFT LEAKAGE (CC/HR) *1
956G 956H	Accumulator Sample	RR(18)	45	Water		
1702 1705	RCDT Pump Discharge to Holdup Tanks	Z(21)	45	Water	IVSW Station III Total	IVSW Station III Total
793 796	Excess letdown heat exchanger Cooling water return	R(30) U(30)	45	Water		
201 202	Letdown Isolation Valves	X(8)	45	Water	< 354.8	< 354.8
791 798	Excess Letdown Heat Exchanger Cooling Water Supply	U(29)	45	Water		
241A 250A	#31 RCP Seal Water Supply Isolations	Z(10)	45	Water		
241B 250B	#32 RCP Seal Water Supply Isolations	Z(10)	45	Water		
241C 250C	#33 RCP Seal Water Supply Isolations	Z(10)	45	Water		
241D 250D	#34 RCP Seal Water Supply Isolations	Z(10)	45	Water	IVSW Station IV Total	IVSW Station IV Total
205 226 227	Charging Water Supply Isolation Valves	R(9)	45	Water	6947.9	1947.9
869A	#31 Containment Spray Header Isol.	GG(14)	45	Water		
869B	#32 Containment Spray Header Isol.	P(14)	45	Water		
222	RCP Seal Water return	R(10)	45	Water		
FCV-625 789	RCP Seal Water return Valves	C(24)	45	Water		
850A	SIS from pump Isolation	NN(15)	45	Water		
851A	SIS from pump Isolation	NN(15)	45	Water		
797 769	RCP Cooling water supply Isolation	N(22)	45	Water		
784 786	RCP Cooling Water Return Isolation	O(23)	45	Water		
UH-37	Auxiliary Steam Supply	S(45)	45	Water		
UH-38	Auxiliary steam condensate return	T(46)	45	Water		

CONTAINMENT ISOLATION VALVES PRESSURIZED BY THE ISOLATION VALVE SEAL WATER SYSTEM SUBJECT TO PRESSURIZED WATER TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/hr)	AS LEFT LEAKAGE (CC/hr)
PCV-1223	#31 S/G Blowdown Sample	W(38)	45	Water	IVSW S/G Blowdown sample Total 447	IVSW S/G Blowdown sample Total 447
PCV-1223A	Isolations					
PCV-1224	32 S/G Blowdown Sample	W(38)	45	Water		
PCV-1224A	Isolations					
PCV-1225	33 S/G Blowdown Sample	W(38)	45	Water		
PCV-1225A	Isolation					
PCV-1226	34 S/G Blowdown Sample	W(38)	45	Water		
PCV-1226A	Isolation					
				IVSW TOTAL WATER LEAKAGE	9927.6	4927.6

CONTAINMENT ISOLATION VALVES
SEALED WITH SERVICE WATER

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN)	AS LEFT LEAKAGE (CC/MIN)
SWN-41		LA(39)			*3	
SWN-42	#3 Fan Cooler Unit	LA(39)			6.67	
SWN-43	Service Water Isolation	LA(39)	45	Water		
SWN-44	Valves	MB(40)				12.6
SWN-51		MB(40)			(.002) gpm	
SWN-71		SS(40)				(.003) gpm
SWN-41		LA(39)			*3	
SWN-42	#32 Fan Cooler Unit	LA(39)				
SWN-43	Service Water Isolation	LA(39)				
SWN-44	Valves	MB(40)	45	Water		4.3
SWN-51		MB(40)			560	
SWN-71		SS(40)			(.148gpm	(.001gpm)
SWN-41		LA(39)			*3	
SWN-42		LA(39)				
SWN-43	#33 Fan Cooler Unit	LA(39)			153.3	
SWN-44	Service Water Isolation	MB(40)	45	Water		0
SWN-51	Valves	MB(40)			.041	
SWN-71		SS(40)			gpm	
SWN-41		LA(39)			*3	
SWN-42	#34 Fan Cooler Unit	LA(39)				
SWN-43	Service Water Isolation	LA(39)			188.3	2.3
SWN-44	Valves	MB(40)	45	Water		
SWN-51		MB(40)			(.050) gpm	(.0006) gpm
SWN-71		SS(40)				
SWN-41		LA(39)			*3	
SWN-42	#35 Fan Cooler Unit	LA(39)				
SWN-43	Service Water Isolation	LA(39)				
SWN-44	Valves	MB(40)	45	Water	0.0	24.5
SWN-51		MB(40)				
SWN-71		SS(40)				.006 gpm

CONTAINMENT ISOLATION VALVES SUBJECT
TO RHR SYSTEM PRESSURE

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN)	AS LEFT LEAKAGE (CC/MIN)
741	RHR pump disch check valve	J(4)	45	Water	26.33	26.33
885A 885B	Containment sump to RHR System Isolation Valve	OO(7)	45	Water	.17	.17

*1 Valves preceded by < (less than sign) denotes minimum calibrated reading on flow meter. In all cases the flow meter reading was 0.0 (zero).

*2 Valve "As Found" Data was estimated using daily log readings on WCCP. Valves were removed for repair prior to as found testing.

*3 Valves indicated are as left valves from previous testing conducted 12/79. Valves were removed for repair prior to "As Found" testing being accomplished.

LOCAL LEAKAGE RATE (TYPE B AND C) TESTING

AUGUST, 1982

August, 1982

The combined gaseous leakage was determined to be less than 1.12 SCFM which is below the acceptance limit of 4.11 SCFM. The total combined type "B" and type "C" leakage was derived from the leakage test results as follows:

0.395 SCFM - Air Lock Leakage Testing

0.608 SCFM - Sensitive Leakage Rate Testing

0.103 SCFM - Containment Isolation Valve Testing

0.013 SCFM - N_2 Leakage from the IVSW System Testing

1.119 SCFM - TOTAL

The combined measured liquid leakage rate of the 5 (five) Isolation Valve Seal Water System zones was 2243.7 cc/hr which is well below the acceptable limit as defined in the Unit's Technical Specification.

The results of the Containment Recirculation Fan Cooler Service Water In-Leakage test is as follows:

Unit	Measured Leakage
#31 CRFCU	* GPM
#32 CRFCU	* GPM
#33 CRFCU	* GPM
#34 CRFCU	* GPM
#35 CRFCU	* GPM

*Note: Due to containment recirculation fan cooler cooling coil modification service water valves have not yet been tested.

August, 1982

The combined gaseous leakage was determined to be less than *1.12 SCFM which is below the acceptance limit of 4.11 SCFM. The total combined type "B" and type "C" leakage was derived from the leakage test results as follows:

0.395 SCFM - Air Lock Leakage Testing

0.608 SCFM - Sensitive Leakage Rate Testing

0.103 SCFM - Containment Isolation Valve Testing

0.013 SCFM - N_2 Leakage from the ICSW System Testing

1.119 SCFM - TOTAL

The combined measured liquid leakage rate of the 5 (five) Isolation Valve Seal Water System zones was 2243.7 cc/hr which is well below the acceptable limit as defined in the Unit's Technical Specification.

The results of the Containment Recirculation Fan Cooler Service Water In-Leakage test is as follows:

Unit	Measured Leakage
#31 CRFCU	* GPM
#32 CRFCU	* GPM
#33 CRFCU	* GPM
#34 CRFCU	* GPM
#35 CRFCU	* GPM

*Note: Due to containment recirculation fan cooler cooling coil modification service water valves have not yet been tested.

CONTAINMENT ISOLATION VALVES SUBJECT
TO GAS OR NITROGEN PRESSURE TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN) *1	AS LEFT LEAKAGE (CC/MIN) *1
867B 878B	#32 Cont. Spray Pump Disch. #32 Recirc. Isolation	P(14) P(14)	41	Air	< 33.1	< 33.1
867A 878A	#31 Cont. Spray Pump Disch. #31 Recirc. Isolation	BB(14) BB(14)	41	Air	< 33.1	< 33.1
518	PRT N2 Supply Isolation	Y(2)	41	N2	65.6	65.6
550	PRT N2 Supply Isolation	Y(2)	41	N2	< 33.1	< 33.1
IA-39	Instrument Air Isolation	Y(64)	41	Air	< 34.6	< 34.6
PCV-1228	Instrument Air Isolation	Y(64)	41	Air	< 34.6	< 34.6
1610	N2 to RCDT Isolation	V(19)	41	N2	< 35.2	< 35.2
1616	N2 to RCDT Isolation	V(19)	41	N2	407.8	71.9
863	N2 to Accumulator Isolation	RR(17)	41	N2	1473.0	< 33.7
891A	Accumulator N2 to #31 Tank	RR(17)	41	N2	< 33.7	< 33.7
891B	Accumulator N2 to #32 Tank	RR(17)	41	N2	< 33.7	< 33.7
891C	Accumulator N2 to #33 Tank	RR(17)	41	N2	< 33.7	< 33.7
891D	Accumulator N2 to #34 Tank	RR(17)	41	N2	< 33.7	< 33.7
1814A	Containment Air Press. Isol.	RR(55)	41	Air	< 33.1	< 33.1
1814B	Containment Air Press. Isol.	LL(55)	41	Air	< 33.1	< 33.1
1814C	Containment Air Press. Isol.	R(56)	41	Air	< 33.1	< 33.1
580A	Dead Weight Calibrator Isol.	RR(44)	41	Air	< 33.1	< 33.1
580B	Dead Weight Calibrator Isol.	RR(44)	41	Air	< 33.1	< 33.1
1882A IV-2A IV-2B	O_2 Supply to Containment	O(58)	41	N_2	< 35.2	< 35.2
1876B IV-5B	H_2 Supply to 32 Combuster	TT(62)	41	N_2	< 35.2	< 35.2
1875B IV-3B	H_2 Supply to 32 Combuster	TT(61)	41	N_2	< 35.2	< 35.2
1876A IV-5A	H_2 Supply to 31 Combuster	SS(60	41	N_2	< 35.2	< 35.2
1875A IV-3A	H_2 Supply to 31 Combuster	SS(59)	41	N_2	< 35.2	< 35.2

CONTAINMENT ISOLATION VALVES SUBJECT TO GAS OR NITROGEN PRESSURE TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN) *1	AS LEFT LEAKAGE (CC/MIN) *1
1890A	Post Accident Air Sampling Supply	R(57)	41	Air		
1890B	Post Accicent Air Sampling Supply	TT(57)	41	Air		
1890C	Post Accident Air Sampling Supply	LL(57)	41	Air	< 33.1	< 33.1
1890D	Post Accident Air Sampling Supply	R(57)	41	Air		
1890E	Post Accident Air Sampling Supply	TT(57)	41	Air		
1890F	Post Accident Air Sampling Supply	O(57)	41	Air		
1890G	Post Accident Air Sampling Return	R(57)	41	Air		
1890H	Post Accident Air Sampling Return	R(57)	41	Air	< 33.1	< 33.1
1890J	Post Accident Air Sampling Return	O(57)	41	Air		
CB-3	Personnel Air Lock Valve	-(69)	41	Air	< 33.1	< 33.1
CB-4	Personnel Air Lock Valve	-(69)	41	Air	< 33.1	< 33.1
CB-1 CB-2	Personnel Air Lock Check Valves	-(69)	41	Air	< 33.1	< 33.1
CB-7	Equipment Air Lock Valve	—	41	Air	< 33.1	< 33.1
CB-8	Equipment Air Lock Valve	—	41	Air	< 33.1	< 33.1
CB-5 CB-6	Equipment Air Lock Check Valves	—	41	Air	< 33.1	< 33.1
8406	N_2 to Power OP Relief Check Valve	RR(-)	41	N_2	< 33.7	< 33.7
CV-1229 CV-1230	Air Ejector Discharge to Containment	R(34)	41	Air	543.8	543.8
CV-1236	Cont. Building Rad. Monitor Supply	RR(33)	41	Air	< 34.6	< 34.6
CV-1237	Cont. Building Rad. Monitor Supply	RR(33)	41	Air		
CV-1234	Cont. Building Rad. Monitor Return	RR(32)	41	Air	34.9	34.9
CV-1235	Cont. Building Rad. Monitor Return	RR(32)	41	Air		
PS-7						
PS-8 PS-9	Post Accident Vent System Isolation Valves	LL(65)	41	Air	< 34.6	< 34.6
PS-10						
CV-1170 CV-1171	Cont. Building Purge Supply Valves	EE(48)	41	Air	1256.7	1256.7
CV-1172 CV-1173	Cont. Building Purge Exhaust Valves	FF(49)	41	Air	< 59.9	< 59.9

CONTAINMENT ISOLATION VALVES, PENETRATIONS, AND DOUBLE GASKETED SEALS SUBJECT TO GAS OR NITORGEN PRESSURE TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN) *1	AS LEFT LEAKAGE (CC/MIN) *1
Rack #10	WCCP Supply to Piping Penetrations	Various	41	Air	< 33.7	< 33.7
Rack #11	WCCP Supply to Piping Penetrations	Various	41	Air	101.9	101.9
Rack #12	WCCP Supply to Electrical Penetrations	Various	41	Air	< 33.7	< 33.7
Rack #13	WCCP Supply to Electrical Penetrations	Various	41	Air	< 33.7	< 33.7
Rack #15	WCCP Supply to FW & MS Penetrations	Various	41	Air	5897.7	< 33.7
PC-1321S	WCCP Supply to Fuel Transfer Tube	HH(-)	41	Air	< 33.1	< 33.1
	WCCP Supply to Mini-Containment	OO(-)	41	Air	5919.4	< 33.1
PCV-1190 PCV-1191	Pressure Relief Valves	PP(-)	41	Air	2426.2	~~207.6~~
PCV-1191 PCV-1192	Pressure Relief Valves	PP(-)	41	Air	734.4	234.1
PC-1318S	WCCP Supply to 95' Equipment Hatch Seal	—(-)	41	Air	43.5	43.5
888A 888B	RHR to SIS System Valves	QQ(5)	41	N_2		
990A 990B	Recirc. pump sample line	TT(51)	41	N_2		
958 959 990C	RHR loop sample valves	-(5)	41	N_2	IVSW — N_2 Injection Station Total 354.1	~~IVSW~~ N_2 Injection Station Total 354.1
744	RHR Supply Valve	J(4)	41	N_2		
732	RHR Return Valve	K(6)	41	N_2		
1870 743	RHR Mini Flow Isolation	-(5)	41	N_2		
1835A	SIS to Bit Tank Isolation	Q(15)	41	N_2		
1835B	SIS to Bit Tank Isolation	Q(15)	41	N_2		
				TOTAL LEAKAGE	20505.8	4261.4
				LATEST AIR LOCK LEAKAGE	11195.7	11195.7
				COMBINED LEAKAGE TOTAL	31701.5	15457.1

CONTAINMENT ISOLATION VALVES PRESSURIZED BY
THE ISOLATION VALVE SEAL WATER SYSTEM SUBJECT
TO PRESSURIZED WATER TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/HR)	AS LEFT LEAKAGE (CC/HR)
956A 956B	PZR Steam Space Isolation PZR Steam Space Isolation	W(52)	45	Water		
956C 956D	PZR Liquid Space Isolation PZR Liquid Space Isolation	W(53)	45	Water		
956E 956F	RCS Sample Isolation RCS Sample Isolation	W(12)	45	Water	IVSW Station 1 Total	IVSW Station 1 Total
1786 1787	RCDT & PRT to Vent Header RCDT & PRT to Vent Header	V(19)	45	Water		
1788 1789	RCDT to Gas Analyzer RCDT to Gas Analyzer	V(20)	45	Water	948.6	948.6
548 549	PRT to Gas Analyzer PRT to Gas Analyzer	Y(1) Y(1)	45	Water		
CV-1214 CV-1214A	#31 S/G Blowdown Isolation #31 S/G Blowdown Isolation	BB(37)	45	Water		
CV-1215 CV-1215A	#32 S/G Blowdown Isolation #32 S/G Blowdown Isolation	AA(37)	45	Water		
CV-1216 CV-1216A	#33 S/G Blowdown Isolation #33 S/G Blowdown Isolation	CC(37)	45	Water		
CV-1217 CV-1217A	#34 S/G Blowdown Isolation #34 S/G Blowdown Isolation	DD(37)	45	Water		
1833A 1833B	SIS Bit Tank Isolation Valves	Q(15)	45	Water		
SA-24 SA-24	Station Air Isolation Valves	Y(41)	45	Water	IVSW Station II Total	IVSW Station II Total
859A 859C	SIS Pump Test Line Isolation Valves	Y(16)	45	Water	229.6	229.6
519 552	Primary Water To PRT Valves	Y(3)	45	Water		
1723 1728	Cont. Sump Pump Discharge valves	Y(31)	45	Water		
DW-1 DW-2	Demin Water Isolation Valves	(-)	45	Water		

CONTAINMENT ISOLATION VALVES PRESSURIZED BY THE ISOLATION VALVE SEAL WATER SYSTEM SUBJECT TO PRESSURIZED WATER TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/HR)	AS LEFT LEAKAGE (CC/HR)
956G 956H	Accumulator Sample	RR(18)	45	Water		
1702 1705	RCDT Pump Discharge to Holdup Tanks	Z(21)	45	Water	IVSW Station III Total	IVSW Station III Total
793 796	Excess letdown heat exchanger Cooling water return	R(30) U(30)	45	Water		
201 202	Letdown Isolation Valves	X(8)	45	Water	410.9	410.9
791 798	Excess Letdown Heat Exchanger Cooling Water Supply	U(29)	45	Water		
241A 250A	#31 RCP Seal Water Supply Isolations	Z(10)	45	Water		
241B 250B	#32 RCP Seal Water Supply Isolations	Z(10)	45	Water		
241C 250C	#33 RCP Seal Water Supply Isolations	Z(10)	45	Water		
241D 250D	#34 RCP Seal Water Supply Isolations	Z(10)	45	Water		
205 226 227	Charging Water Supply Isolation Valves	R(9)	45	Water	IVSW Station IV Total	IVSW Station IV Total
869A	#31 Containment Spray Header Isol.	GG(14)	45	Water		
869B	#32 Containment Spray Header Isol.	P(14)	45	Water	422.3	422.3
222	RCP Seal Water return	R(10)	45	Water		
FCV-625 789	RCP Seal Water return Valves	C(24)	45	Water		
850A	SIS from pump Isolation	NN(15)	45	Water		
851A	SIS from pump Isolation	NN(15)	45	Water		
797 769	RCP Cooling water supply Isolation	N(22)	45	Water		
784 786	RCP Cooling Water Return Isolation	O(23)	45	Water		
UH-37	Auxiliary Steam Supply	S(45)	45	Water		
UH-38	Auxiliary steam condensate return	T(46)	45	Water		

CONTAINMENT ISOLATION VALVES PRESSURIZED BY THE ISOLATION VALVE SEAL WATER SYSTEM SUBJECT TO PRESSURIZED WATER TESTING

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/HR) *1	AS LEFT LEAKAGE (CC/HR.) *1
PCV-1223	#31 S/G Blowdown Sample	W(38)	45	Water	IVSW S/G Blowdown Sample Total 232.3	IVSW S/G Blowdown Sample Total 232.3
CV-1223A	Isolations					
PCV-1224	32 S/G Blowdown Sample	W(38)	45	Water		
CV-1224A	Isolations					
PCV-1225	33 S/G Blowdown Sample	W(38)	45	Water		
CV-1225A	Isolation					
PCV-1226	34 S/G Blowdown Sample	W(38)	45	Water		
CV-1226A	Isolation					
				IVSW TOTAL WATER LEAKAGE	2243.7	2243.7

CONTAINMENT ISOLATION VALVES
SEALED WITH SERVICE WATER

VALVE NUMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN)	AS LEFT LEAKAGE (CC/MIN)
SWN-41		LA(39)				
SWN-42	#32 Fan Cooler Unit	LA(39)				
SWN-43	Service Water Isolation	LA(39)	45	Water	*2	*3
SWN-44	Valves	MB(40)				
SWN-51		MB(40)				
SWN-71		SS(40)				
SWN-41		LA(39)				
SWN-42	#32 Fan Cooler Unit	LA(39)				
SWN-43	Service Water Isolation	LA(39)				
SWN-44	Valves	MB(40)	45	Water	*2	*3
SWN-51		MB(40)				
SWN-71		SS(40)				
SWN-41		LA(39)				
SWN-42		LA(39)				
SWN-43	#33 Fan Cooler Unit	LA(39)				
SWN-44	Service Water Isolation	MB(40)	45	Water	*2	*3
SWN-51	Valves	MB(40)				
SWN-71		SS(40)				
SWN-41		LA(39)				
SWN-42	#34 Fan Cooler Unit	LA(39)				
SWN-43	Service Water Isolation	LA(39)				
SWN-44	Valves	MB(40)	45	Water	*2	*3
SWN-51		MB(40)				
SWN-71		SS(40)				
SWN-41		LA(39)				
SWN-42	#35 Fan Cooler Unit	LA(39)				
SWN-43	Service Water Isolation	LA(39)				
SWN-44	Valves	MB(40)	45	Water	*2	*3
SWN-51		MB(40)				
SWN-71		SS(40)				

CONTAINMENT ISOLATION VALVES SUBJECT
TO RHR SYSTEM PRESSURE

ALVE UMBER	COMPONENT DESCRIPTION	PENET. SYMBOL (Number)	MINIMUM TEST PRESS.	TEST MEDIUM	AS FOUND LEAKAGE (CC/MIN)	AS LEFT LEAKAGE (CC/MIN)
741	RHR pump disch check valve	J(4)	45	Water	7.3	7.3
885A 885B	Containment sump to RHR System Isolation Valve	OO(7)	45	Water	-0.0	-0.0

*1 Valves preceded by (less than) denotes minimum calibrated reading on flow meter. In all cases the flow meter reading was 0.0 (zero).

*2 No "As Found" data obtained. Setup time and testing of SW valves to FCU's interfered with scheduled modification/repairs.

*3 No "As Left" data obtained. At the time of writing FCU modification/repairs still in progress. Testing will be performed upon completion of modification and prior to achieving criticality.