WATER BALANCE VOLUMES AND FLOW RATES BY PATH			
FLOW PATH NO.	PATH DESCRIPTION	FLOWRATES	
		ANNUALIZED CYCLEAVERAGE GPY* GPM*	MAXIMUM GPY* GPM*
1	MAKEUP SOURCE TO DTS R/O UNIT FILTER	11,722,395 22.30288	540
2	DTS R/O UNIT FILTER TO R/O UNIT	11,722,395 22.303	540
3	R/O UNIT TO EDI UNIT	8,249,093 15.6946	380
4	EDI UNIT TO DWST	7,814,930 14.8686	360
5	R/O UNIT REJECT WATER TO WWS	3,473,302 6.60826	160
6	EDI UNIT REJECT WATER TO WWS	434,163 0.82603	20
7	R/O & EDI REJECT WATER TO WWS	3,907,465 7.4343	180
8	DWST SUPPLY TO DW HEADER & CST	7,814,930 14.8686	360
9	DWST SUPPLY TO CST	2,886,630 5.492066	200
10	DWST SUPPLY TO DW HEADER	4,928,300 9.37652	150
11	CST MAKEUP TO CONDENSER	2,880,269 5.47996	
12	SG BLOWDOWN FROM SGS TO BDS	11,762,214 22.3786	280
13	RECYLCED BLOWDOWN TO CONDENSER	9,287,352 17.67	176.7
14	SG BLOWDOWN TO WASTE WATER SYSTEM (INCLUDES DRAINING)	2,474,862 4.70864	80
15	RADIOACTIVE BLOWDOWN DISCHARGED TO WLS	0	186
16	WASTE WTR TO TURB BLDG DRN TRENCH SUMP	2,443,165 4.64834	
17	TURB BLDG DRN SUMP TO OIL/WTR SEPARATOR	9,131,853 17.37415	200
18	OIL/WTR SEPARATOR TO WASTE WATR DISPOSITION	9,131,853 17.37415	200
19	SEC. DRN & WST WTR TO WW RETENTION	9,537,260 18.14547	200
20	CST TO AUX STM & STARTUP FW PUMPS	6,361 0.0121	
21	CST SUPPLY TO AUX STM SYS (ASS)	6,361 0.0121	285
22	AUX STM BOILER BLOWDOWN / DRN TO WWS	6,361 0.0121	
23	CST TO STARUP FEED FOR DEF-IN-DEPTH	0	760

WATER BALANCE VOLUMES AND FLOW RATES BY PATH			
FLOW PATH NO.	PATH DESCRIPTION	FLOWRATES	
		ANNUALIZED CYCLEAVERAGE GPY* GPM*	MAXIMUM GPY* GPM*
24	SFW PUMP TO SG FOR DEF-IN-DEPTH	0	760
25	SECONDARY EQUIP DRAINS / LOSSES	405,407 0.77132	
26	STEAM GENERATOR TO MAIN STEAM	INTERNAL	
27	STEAM VENTED TO ATM - CONSUMPTION LOSS	0	0
28	MAIN STEAM TO T/G & TURBINE BYPASS	INTERNAL	
29	T/G FLOW	INTERNAL	
30	TURBINE BYPASS	INTERNAL	
31	T/G EXHAUST TO MAIN CONDENSER	INTERNAL	
32	RETURN RINSE TO CONDENSER FROM COND POLISH	INTERNAL	
33	RINSE FROM CDS TO CONDENSATE POLISHER	INTERNAL	
34	MAKEUP SOURCE TO PWST	19,833,333 37.735	105
35	POTABLE WATER SUPPLY FROM PWST	19,833,333 37.735	105
36	PW TO SINK, SHOWERS, TOILETS, FOUNTAINS	19,760,333 37.596	105
37	PW TO DECONTAMINATION ROOMS	73,000 0.13889	
38	PW DISCHARGE TO SDS & CONSUMPTION	19,760,333 37.596	105
39	PW CONSUMPTION / EVAPORATION	0	0
40	PW TO SANITARY DRAIN SYS	19,760,333 37.596	105
41	DECON ROOM SINKS / SHWRS TO CHEM WST TK	73,000 0.13889	
42	SDS DISCH TO SANITARY WASTE TREATMENT	19,760,333 37.596	105
43	MAKEUP SUPPLY TO FIRE WTR STORAGE TANK	300,000 0.5708	650
44	NON-RADIOACTIVE FIRE TESTING DRAINS TO WWS	300,000 0.5708	
45	FIRE WTR BACKUP SUPPLY TO SPENT FUEL PIT	INTERMITTENT	
46	FIRE WTR BACKUP SUPPLY TO PCS	INTERMITTENT	

NOTES

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AP1000 Water Balance Volumes and Flow Rates
FIGURE 3.3-1 (Sheet 1 of 3)
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WATER BALANCE VOLUMES AND FLOW RATES BY PATH			
FLOW PATH NO.	PATH DESCRIPTION	FLOWRATES	
		ANNUALIZED CYCLEAVERAGE GPY* GPM*	MAXIMUM GPY* GPM*
47	RADIOACTIVE FIRE TESTING DRAINS TO WRS	INTERMITTENT	
48	MAKEUP TO SERVICE WTR COOL TWR BASIN	169,246,720 322.01	800
49	SW CIRULATING WATER FLOW	INTERNAL	
50	NET CIRC WATER FLOW	INTERNAL	
51	SERVICE WATER BLOWDOWN TO DISPOSITION	83,224,320 158.34	250
52	SW COOL TWR EVAPORATION	85,198,080 162.096	650
53	SW COOL TWR DRIFT - CONSUMPTION LOSS	529,920 1.1008	2
54	MAKEUP TO CIRC WATER COOL TOWER BASIN	12,066,987,600 22,958.5	12,066,987,600 22,958.5
55	CWS CIRC WTR FLOW RATE	INTERNAL	
56	CWS CIRC WATER BLOWDOWN TO DISPOSITION	6,000,249,600 11,416	6,000,249,600 11,416
57	NET CWS CIRC WATER FLOWRATE	INTERNAL	
58	CWS COOL TWR EVAPORATION - CONSUMPTION	6,049,656,000 11,510	6,049,656,000 11,510
59	CWS COOL TWR DRIFT - CONSUMPTION	16,819,200 32	16,819,200 32
60	CIRC WATER DISCH TO TCS HEAT EAXCHANGERS	9,565,920,000 18,200	18,200
61	FROM TCS HEAT EXCH. TO CONDENSER OUTLET	9,565,920,00 18,200	18,200
62	CONDENSATE FLOW	INTERNAL	
63	FEEDWATER FLOW	INTERNAL	
64	DW SUPPLY TO COMP COOL SURGE TK	4,000 0.00761	150
65	COMP COOL SYS DRAINS TO WASTE WATER	4,000 0.00761	
66	DW TO CFS FOR BATCHING ASS CHEMICALS	240 0.0004566	
67	CHEM FEED SYS DRAINS TO WASTE WATER	240 0.0004566	
68	DW TO FILL CMS VAC BRK WATER SEALS	18,250 0.03472	5
69	CMS VAC BRKR WTR SEAL OV'FLOW TO WW	18,250 0.03472	5

WATER BALANCE VOLUMES AND FLOW RATES BY PATH			
FLOW PATH NO.	PATH DESCRIPTION	FLOWRATES	
		ANNUALIZED CYCLEAVERAGE GPY* GPM*	MAXIMUM GPY* GPM*
70	DW TO FILL / MAKEUP PCCWST / PCCAWST	31,867 0.06063	
71	PCS TESTING & DRAINS TO WASTE WATER	0	
72	DW FOR TCS SURGE TANK FILL / MAKEUP	800 0.001522	75
73	TURB IS CLOSED COOLING DRNS TO WASTE WATER	800 0.001522	
74	DW FOR VWS (CHILLER) FILL / MAKEUP	1020 0.0019406	
75	CHILLED WATER DRAINS TO WASTE WATER	1020 0.0019406	
76	DW FOR VYS (HOT WTR) SURGE TK FILL / MAKEUP	855 0.001627	25
77	HOT WTR HEATING DRAINS ECT. TO WASTE WATER	855 0.001627	
78	DW FOR CONDENSATE POLISHER FLUSH ECT.	2,418,000 4.6005	310
79	CONDENSATE POLISHER DRAINS TO WASTE WATER	2,418,000 4.6005	310
80	DW TO PSS EDUCTOR WATER STORAGE TANK	133,225 0.25347	10
81	PSS EFFLUENT TO LIQUID RADWASTE SYSTEM	133,225 0.25347	10
82	DW TO FLUSH RMS RADIATION MONITORS	1,051,200 2.0	2
83	RMS EFFLUENT TO LIQUID REDWASTE SYSTEM	1,051,200 2.0	2
84	DW TO WASHDOWN RNS PUMP CUBICLE	400 0.000761	10
85	RNS PUMP WASHDOWN TO LIQUID RADWASTE	400 0.000761	10
86	DW MAKEUP FOR SPENT FUEL PIT	42.692 0.081225	100
87	SFS EFFLUENT TO LIQUID RADWASTE SYSTEM	33,925 0.064545	20
88	SP FUEL RESIN SLUICE TO SOLID RADWASTE	4,800 0.0091324	75
89	SP FUEL PIT EVAPORATION - CONSUMPTION	3,967 0.007548	
90	DW FOR HVAC HUMIDIFICATION	474,100 0.90202	2.5
91	RADIOACTIVE HVAC CONDENSATION TO DRAINS	182,500 0.34722	0.3472
92	HUMIDIFICATION - CONSUMPTION LOSS TO ATM.	291,600 0.5548	291,600 0.5548

NOTES

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FIGURE 3.3-1 (Sheet 2 of 3)

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WATER BALANCE VOLUMES AND FLOW RATES BY PATH			
FLOW PATH NO.	PATH DESCRIPTION	FLOWRATES	
		ANNUALIZED CYCLEAVERAGE GPY* GPM*	MAXIMUM GPY* GPM*
93	DW FOR CVS OPERATIONS	230,432 0.4384	135
94	CVS EFFLUENTS TO LIQUID RADWASTE WLS	225,921 0.42983	100
95	CVS EFFLUENTS TO RADIOACTIVE DRAINS WRS	INTERMITTENT	
96	CVS RESIN SLUICE TO SOLID RADWASTE WSS	4,511 0.00858	
97	CHARING / LETDOWN BETWEEN RCS & CVS	INTERNAL	
98	REACTOR COOL DRN TK TO CVS LETDOWN PATH	INTERNAL	
99	RCS EFFLUENT TO REACTOR COOL DRN TK WLS	INTERNAL	
100	COMBINED LIQ RADWASTE STREAM TO WL HUT	1,499,084 2.85214	75
101	COMBINRD RADIOACT DRN TO AUX BLDG SUMP	182,500 0.3472	
102	COMBINED SOLID RADWASTE TO SRST (WSS)	9,311 0.017715	
103	AUX BLDG RCA SUMP TO WLS HUT	443,475 0.84375	
104	WLS DISCHARGE TO WASTE WATER , ECT.	2,156,971 4.1038	75
105	WLS RESIN SLURRY TO SOLID RADWASTE WSS	1,795 0.003415	70
106	EXCESS WATER SOLID RADWASTE TO WLS	12,706 0.024174	
107	OFFSITE RESIN DISPOSAL	0	0
108	OFFSITE CHEMICAL DISPOSAL	73.730 0.14028	75
109	DW TO USERS DISCHARGING TO WASTE WATER	2,475,032 4.70896	
110	DW TO USERS ALIGNED TO WLS, WSS, WRS	2,453,268 4.667557	
111	DW TO USERS ALIGNED TO WLS, WSS, WRS	1,987,192 3.7808	
112	NOT USED		
113	DW TO SRST	1,600 0.003044	120
114	DW TO WLS HUT	203,501 0.38718	70
115	R/O UNIT FILTER DRAIN	INTERMITTENT	

WATER BALANCE VOLUMES AND FLOW RATES BY PATH			
FLOW PATH NO.	PATH DESCRIPTION	FLOWRATES	
		ANNUALIZED CYCLEAVERAGE GPY* GPM*	MAXIMUM GPY* GPM*
116	OIL / WATER SEPARATOR DRAIN TO WASTE WATER DISPOSITION	9,131,853 17.37415	200
117	AUX BLDG SUMP TO TURB BLDG SUMP	INTERMITTENT	
118	ANNEX BLDG SUMP TO TURB BLDG SUMP	INTERMITTENT	
119	DIESEL GEN BLDG SUMP TO TURB BLDG SUMP	INTERMITTENT	
120	BYPASS AROUND OIL / WATER SEPARATOR	0	0
121	DIESEL FUEL SUMP TO OIL / WATER SEPARATOR	INTERMITTENT	
122	TURB BLDG & DIESEL FUEL SUMPS TO OIL / WATER SEPARATOR	9,131,853 17.37415	200
123	TURB BLDG & DIESEL FUEL SUMPS TO OIL / WATER SEPARATOR & BYPASS	9,131,853 17.37415	200
124	WASTE WATER RETENTION BASIN TO ONSITE DISPOS.	9,831,660 18.70559	400
125	OIL WATER SEPARATOR TO OIL STORAGE / DISPOSAL	INTERMITTENT	
126	RAD CHEM LAB TO CHEM WASTE TANK	730 0.0013889	
127	SERVICE WATER STRAINER BACKWASH TO WASTE WATER RETENTION BASIN	294,400 0.56012	800
128	PCS EVAPORATIVE LOSSES	15,934 0.0303	
129	PCS LOSSES TO STORM DRAINS	15,933 0.0303	
130	EQUIP/AREA DECON DRAINS TO WLS	14,600 0.02778	100
131	EQUIP/FLOOR DRAINS WASHDOWN	246,375 0.46875	100
132	DW MAKEUP TO PXS	54,413 0.10353	40
133	PXS DRAINS TO WLS	54,413 0.10353	
134	DW MAKEUP TO WLS & WSS	205,101 0.39022	
135	DW TO WLS, WSS, EQUIP & DRAIN WASHDOWN	451,476 0.85897	
136	DW TO WLS, WSS, EQUIP & AREA DECON & FLOOR DRAIN WASHDOWN	466,076 0.88675	
137	COMBINED SGBD & AUX BOILER BD / DRAIN	2,481,223 4.72074	
138	CIRCULATING WATER SYSTEM LEAKAGE	262,800 0.5	

NOTES

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