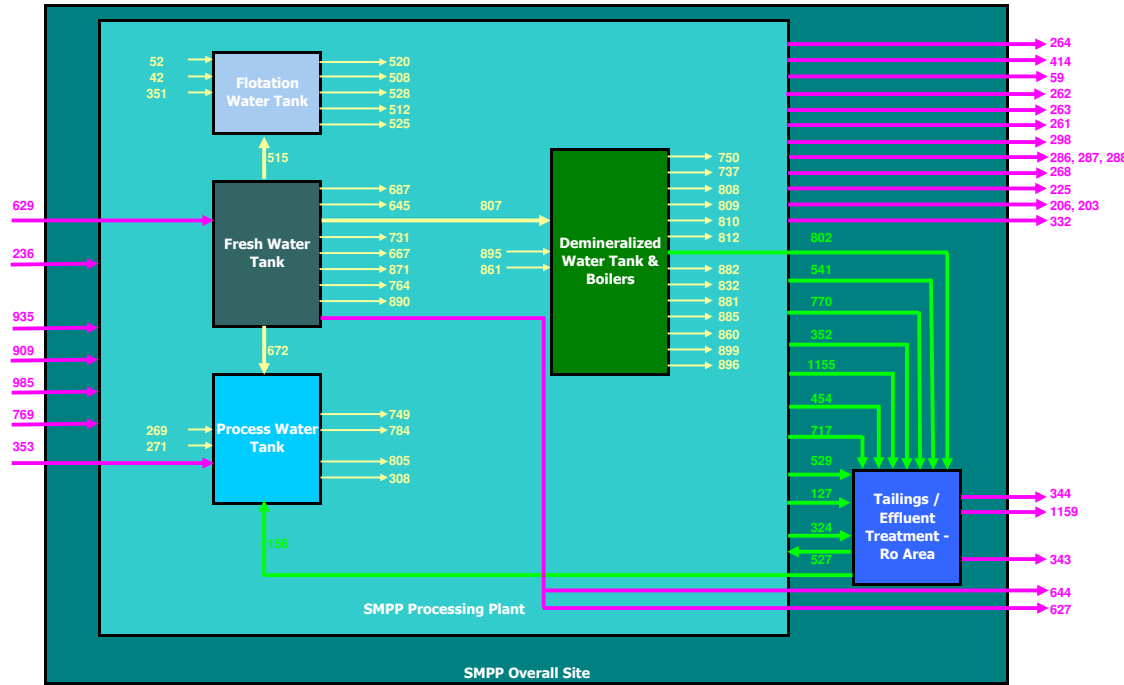


SMPP - OVERALL WATER BALANCE



REQUIRED FRESH WATER INTAKE SUMMARY (instantaneous flow):

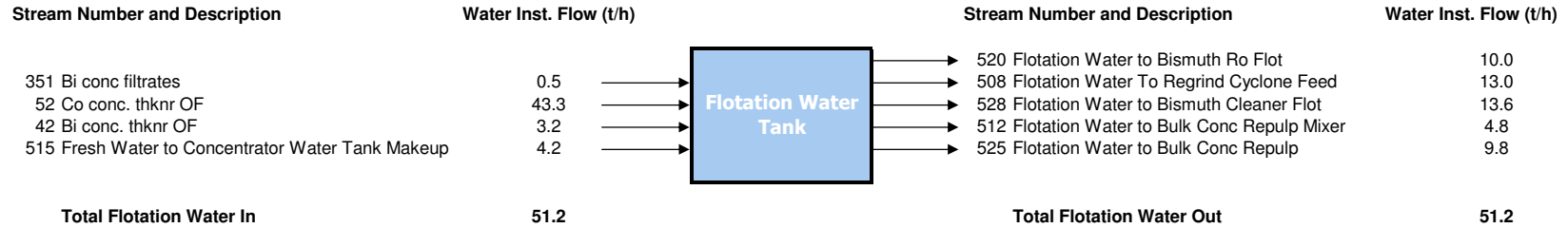
Mode	Flowrate (t/h)	Notes
1. STARTUP	80.6 t/h	(no RO product water for recirculation)
2. STEADY STATE	50.0 t/h	(includes RO water for recirculation - no precipitation, seepage etc. at ponds) (includes RO water for recirculation - includes precipitation, seepage etc. at ponds)
3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)

* Note - Flowrates do not include plant availability of 90%.

Stream No.	Stream Description	Inst. Flow (t/h)
42	Bi conc. Thknr OF	3.2
52	Co conc. Thknr OF	43.3
59	Co Scrubber Gas to Atm	6.5
127	W/As cake to Waste Storage	0.0
156	RO Product to Hydromet Process Water Tank	30.5
203	Cold EW Filtrates, Losses & Evaporation	0.0
206	Gold Furnace Evaporates	0.0
225	Co EW Vent	0.0
236	Bulk Concentrate to SMPP	0.7
261	Fe/As Precip. Thickener Vent	0.2
262	Co Residue Thickener Vent	0.9
263	Clarifier Vent	0.2
264	Co conc. thickener vent	0.1
268	CoCO3 Thickener Vent	0.0
269	Zn Precipitation Filtrates	0.0
271	Ni Precipitation Filtrates	0.3
286	E1 Losses (Crud)	0.0
287	E2 Losses (Crud)	0.0
288	Strip Losses (Crud)	0.0
298	Cu EW Evaporation	0.0
308	Process Water to Filter Wash	3.3
324	Bi CLER Reject to Tails	1.4
332	Bi residue Cyanidation EW vent	0.0
343	Sediments Thknr Vent	0.0
344	Total Tails Discharge to Injection	26.7
351	Bi conc filtrates	0.5
352	CoCO3 Thknr OF to RO	49.9
353	Langham Sewage Pond Water	0.0
454	NaOH to Effluent Treatment	0.0
508	Flotation Water To Reagind Cyclone Feed	3.0
512	Flotation Water to Bulk Conc Repulp Mixer	4.8
515	Fresh Water to Concentrator Water Tank Makeup	4.2
520	Flotation Water to Bismuth Ro Flot	10.0
525	Flotation Water to Bulk Conc Repulp	9.8
527	Effluent Treatment Sludge to Solution Collection Tank	0.2
528	Flotation Water to Bismuth Cleaner Flot	13.6
529	Co Residue Cyanidation 1 Filter Cake	2.2
541	Excess Gold Barren Solution	4.6
627	Fresh Water to Potable Water Treatment	3.0
629	Total Fresh Water Intake (Aquifer)	30.0
644	Make up Fresh Water to Cooling/HVAC Loops	2.0
645	Fresh Water to Bi CLER Circuit	3.5
667	Fresh Water to Floc Mixing	0.3
672	Fresh Water to Hydromet PW Tank Makeup	22.4
687	Fresh Water to Island Water Tank	0.5
717	Floc to Effluent Treatment	0.0
731	Fresh Water to Na2S2O5 Mixing	0.0
737	Demn Water to Ni API	0.2
743	Process Water to Cyanide Mixing	0.2
750	Demn Water to Zn API	0.0
764	Fresh Water to Na2CO3 Mixing	4.4
769	Total H2O2	0.0
770	H2O2 to Cyanide Destruction	0.0
784	Choke Solution to Autoclave Choke Valve	3.1
802	Boiler Blowdown	1.3
805	Co PDX Cooling Water	46.7
807	Total Demin Water	6.7
808	Demn Water to Zn IX Rinse	0.1
809	Demn Water to Zn IX Elution	0.0
810	Demn Water to Ni IX Rinse	1.5
812	Demn Water to Ni IX Elution #1	5.0
832	LP Steam to Co EW Heating	0.0
860	LP Steam to Cu HX	0.1
861	Cu HX Condensate	0.1
871	Fresh Water makeup to Cu EW	0.0
881	LP Steam to Co 1st Precipitation	0.0
882	LP Steam to Co 2nd Precipitation	0.1
885	LP Steam to Bi CLER Circuit	0.9
890	Fresh Water to Centrifuge Wash	0.5
895	IX HX Condensate	0.1
896	IX Steam to IX HX	0.1
899	LP Steam to Co Dissolution	0.0
909	Total Concentrated H2SO4	0.0
935	Total NaOH	0.1
985	Total Lignosol	0.0
1155	Excess Co Barren Solution	0.3
1159	Solids Tails	5.9

SMPP Water Balance

Water Balance - Fresh Water



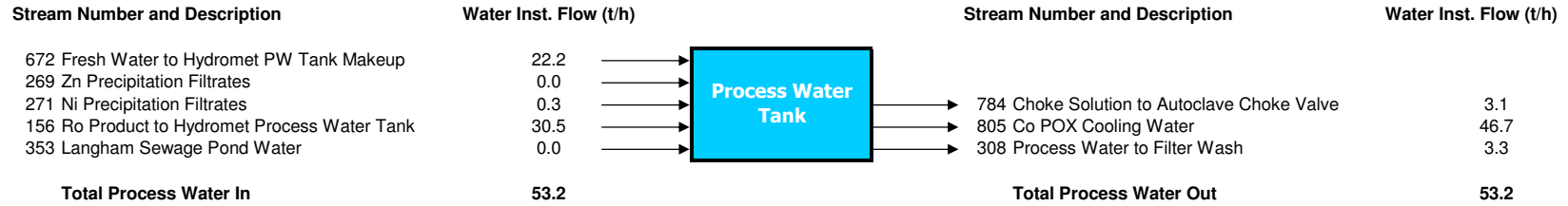
* Note - Flowrates do not include plant availability of 90%.

REQUIRED FRESH WATER INTAKE SUMMARY (instantaneous flow):

1. STARTUP	80.6 t/h	(no RO product water for recirculation)
2. STEADY STATE	50.0 t/h t/h	(includes RO water for recirculation - no precipitation, seepage etc at ponds) (includes RO water for recirculation - includes precipitation, seepage etc. at ponds)
3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)

SMPP Water Balance

Water Balance - Process Water



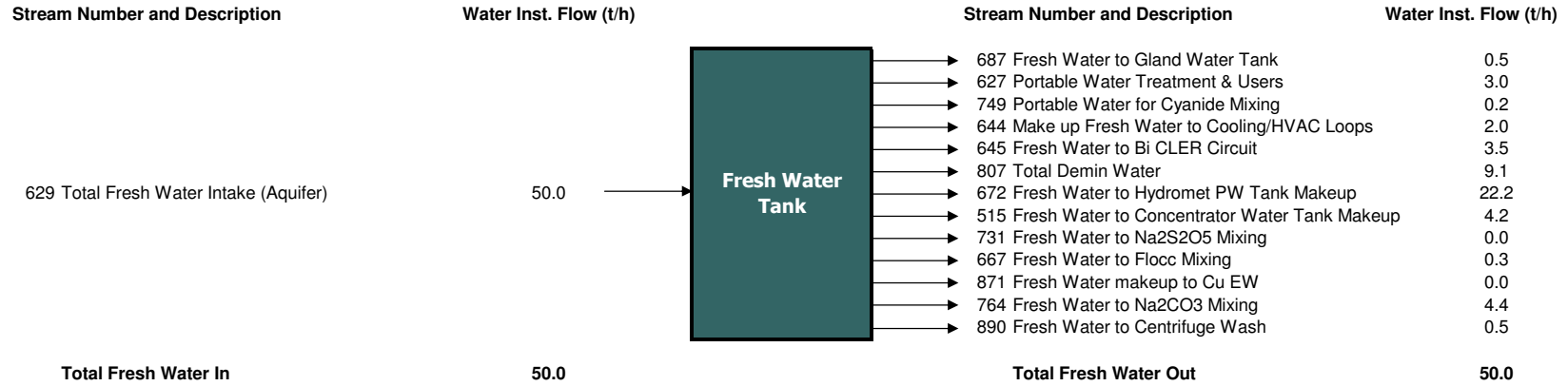
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3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)

SMPP Water Balance

Water Balance - Process Water



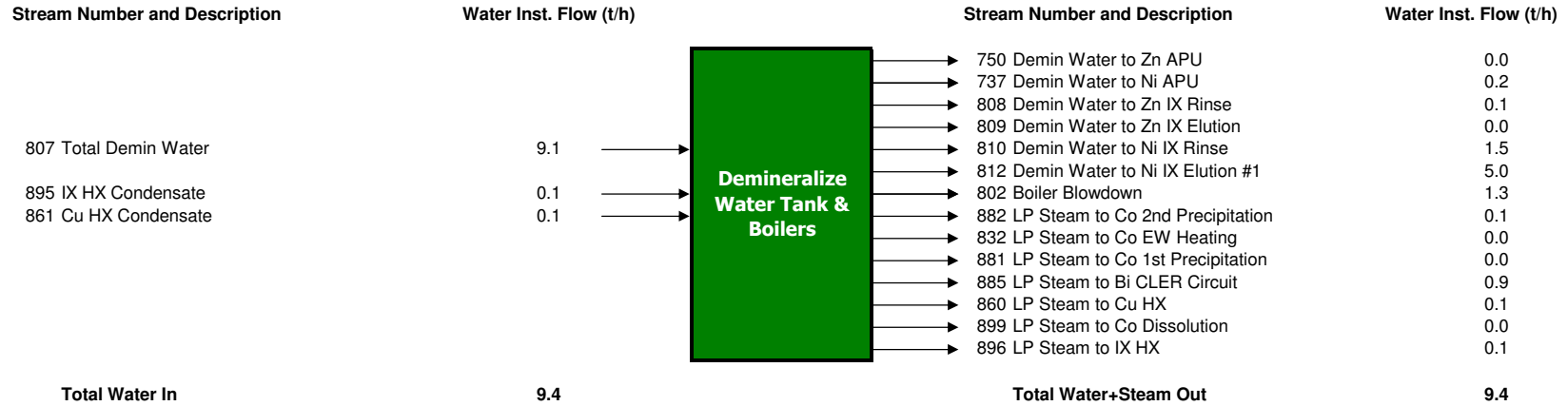
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2. STEADY STATE	50.0 t/h	(includes RO water for recirculation - no precipitation, seepage etc at ponds)
	t/h	(includes RO water for recirculation - includes precipitation, seepage etc. at ponds)
3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)

SMPP Water Balance

Water Balance - Process Water



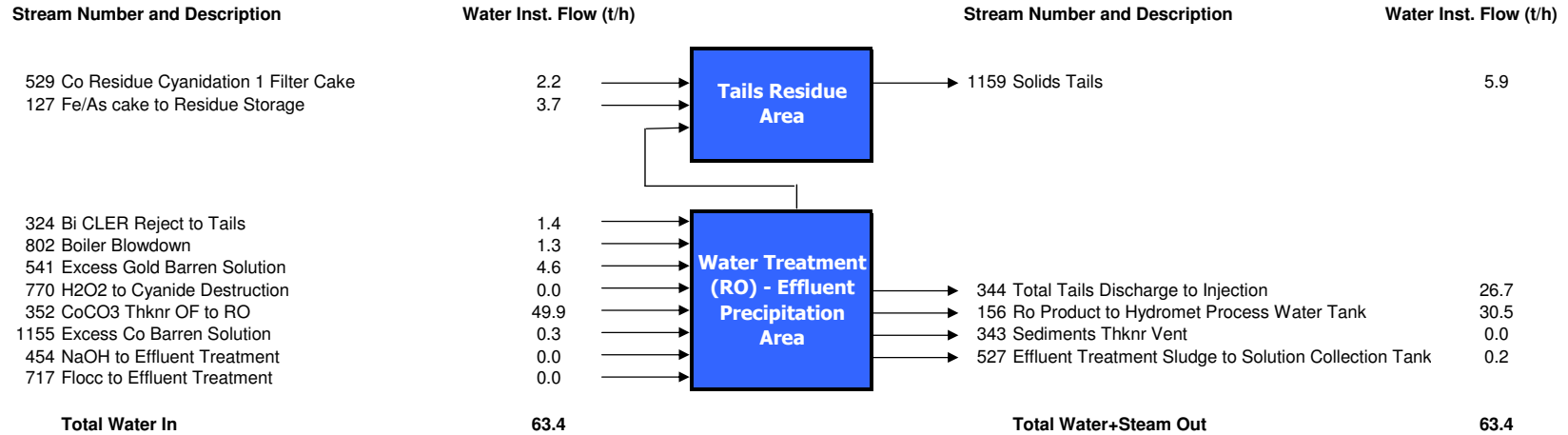
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REQUIRED FRESH WATER INTAKE SUMMARY (instantaneous flow):

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2. STEADY STATE	50.0 t/h t/h	(includes RO water for recirculation - no precipitation, seepage etc at ponds) (includes RO water for recirculation - includes precipitation, seepage etc. at ponds)
3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)

SMPP Water Balance

Water Balance - Tailings Area



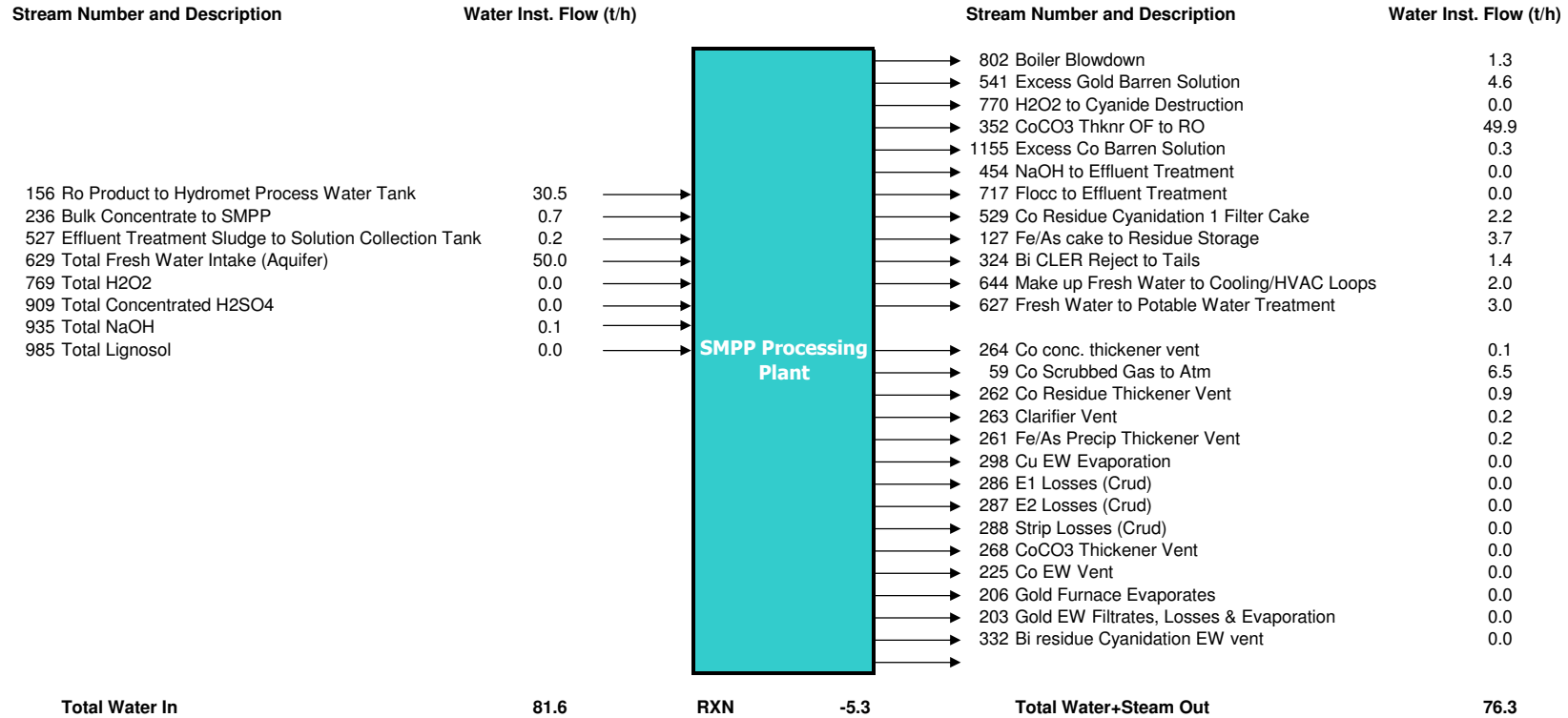
* Note - Flowrates do not include plant availability of 90%.

REQUIRED FRESH WATER INTAKE SUMMARY (instantaneous flow):

1. STARTUP	80.6 t/h	(no RO product water for recirculation)
2. STEADY STATE	50.0 t/h	(includes RO water for recirculation - no precipitation, seepage etc at ponds)
	t/h	(includes RO water for recirculation - includes precipitation, seepage etc. at ponds)
3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)

SMPP Water Balance

Water Balance - SMPP



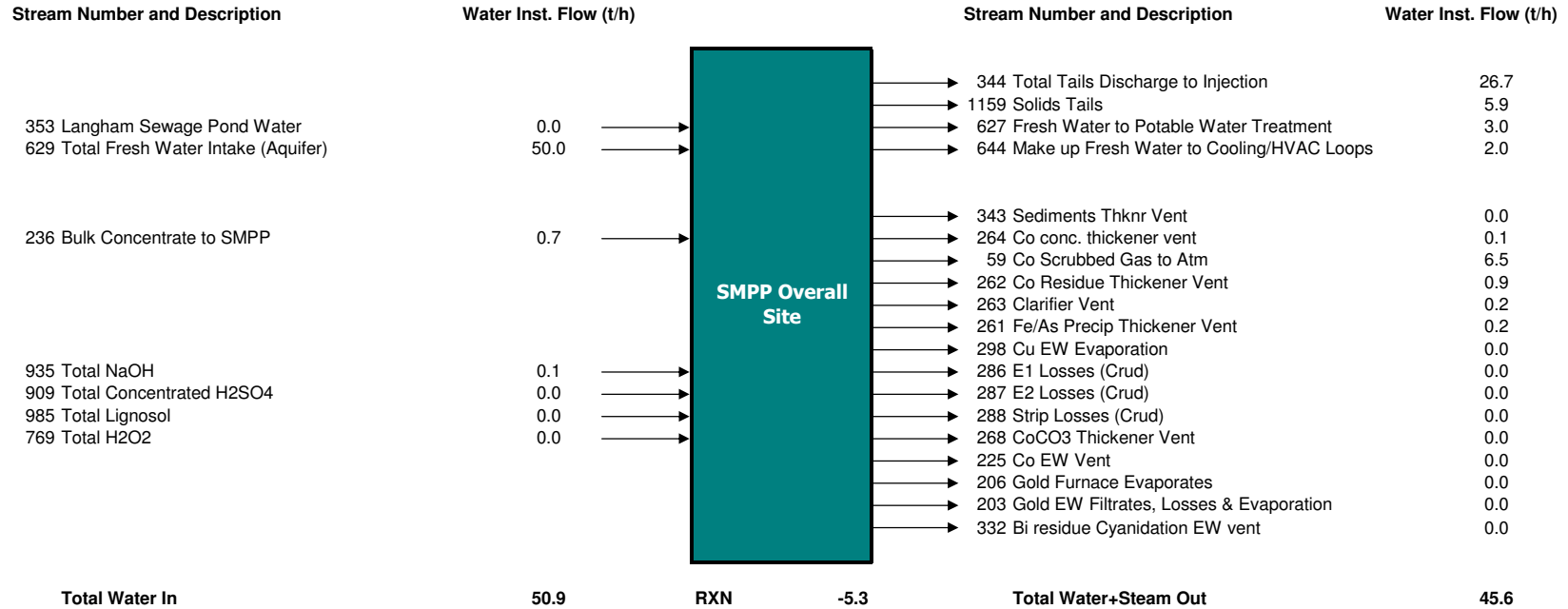
* Note - Flowrates do not include plant availability of 90%.

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2. STEADY STATE	50.0 t/h	(includes RO water for recirculation - no precipitation, seepage etc at ponds)
3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)

SMPP Water Balance

Water Balance - Overall NICO Site



* Note - Flowrates do not include plant availability of 90%.

REQUIRED FRESH WATER INTAKE SUMMARY (instantaneous flow):

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3. SHUTDOWN	7.5 t/h	(no plant feed, plant-wide shutdown)