

ATTACHMENT



1

AVERAGE CLIMATE
CONDITIONS
RESULTS

WATER BALANCE RESULTS SUMMARY
AVERAGE CLIMATE CONDITIONS

	Water in Conventional Tailings Discharged to Thickener	Water in Thickened Tailings Discharged to Cyclone	Water in Cyclone Tailings Used to Construct TSF Embankments	Water in Fine Tailings Discharged to TSFs	Freshwater Demand of Heap Leach Facility, Agglomerator, and Crusher	Freshwater Demand to Crusher and Flotation Plant	Water Contained in As-Mined Sulfide Ore	Water Lost at the Crusher	Water Discharged to the Reclaim Pond from the Thickener	Water Returned to the Flotation Plant from the Reclaim Pond	Water in Thickened Tailings Discharged to Cyclone	Decant and Seepage Water to PS Pond	Water Sent to Flotation Plant and Crusher from PS Pond	Runoff from TSF 1 and 2 Berm and Expansion Areas	Runoff from Pits (Excluding Rosemont Pit)	Process Plant Stormwater Pond Water use for Flotation Plant	PS Pond Water for Dust Control	Freshwater Used for Dust Control	Dewatering from the Pits Used for Dust Control	Rosemont Pit Dewatering and Runoff for Dust Control	Total Site Wide Freshwater Make up Water Required	Groundwater Available	Groundwater Used	Surface Water Available	Surface Water Used	Water Excess/Deficit (Positive=Excess, Negative = Deficit)		
Flow ID	N/A	N/A	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	N/A	N/A	N/A	N/A	N/A	N/A		
Year	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	ac-ft/yr	gpm	gpm	gpm	gpm	ac-ft/yr	
1	2431	1553	186	1366	801	1080	117	233	1044	1035	1553	477	506	84	21	18	75	55	20	0	1936	3125	3697	1936	1117	0	0	0
2	3646	2329	279	2050	1109	1678	175	350	1567	1557	2329	671	742	102	45	18	75	36	39	0	2823	4557	3678	2823	396	0	0	0
3	3646	2329	279	2050	1043	1635	175	350	1567	1557	2329	626	786	95	140	18	75	10	65	0	2688	4339	3652	2688	396	0	0	0
4	3646	2329	279	2050	1043	1677	175	350	1567	1557	2329	589	743	89	140	18	75	10	65	0	2730	4407	3652	2730	433	0	0	0
5	7292	4658	559	4099	1197	3328	350	699	3133	3124	4658	1407	1596	123	140	18	75	10	65	0	4536	7321	3652	3652	433	433	-451	-729
6	7292	4658	559	4099	1409	3381	350	699	3133	3124	4658	1362	1543	116	140	18	75	10	65	290	4800	7748	3652	3652	433	433	-716	-1156
7	7292	4658	559	4099	1409	3318	350	699	3133	3124	4658	1429	1606	112	140	18	75	10	65	290	4737	7647	3652	3652	586	586	-500	-806
8	7292	4658	559	4099	1409	3324	350	699	3133	3124	4658	1481	1600	110	84	18	75	45	30	290	4779	7713	3687	3687	586	586	-506	-816
9	7292	4658	559	4099	162	3344	350	699	3133	3124	4658	1463	1580	108	84	18	75	45	30	290	3551	5731	3687	3551	667	0	0	0
10	7292	4658	559	4099	0	3348	350	699	3133	3124	4658	1551	1584	106	1	18	75	71	4	290	3419	5519	3713	3419	667	0	0	0
11	7292	4658	559	4099	0	3355	350	699	3133	3124	4658	1546	1577	105	1	18	75	71	4	290	3426	5530	3713	3426	667	0	0	0
12	7292	4658	559	4099	0	3424	350	699	3133	3124	4658	1468	1500	107	1	18	75	71	4	290	3495	5641	3713	3495	667	0	0	0
13	7292	4658	559	4099	0	3556	350	699	3133	3124	4658	1331	1368	112	1	18	75	71	4	290	3627	5854	3713	3627	667	0	0	0
14	7292	4658	559	4099	0	3520	350	699	3133	3124	4658	1361	1404	117	1	18	75	71	4	290	3591	5796	3713	3591	667	0	0	0
15	6087	3888	467	3422	0	2812	292	584	2615	2606	3888	1236	1284	123	1	18	75	71	4	290	2883	4654	3713	2883	667	0	0	0

Notes:
ac-ft/yr - acre-feet per year
gpm - gallons per minute
TSF - Tailings Storage Facility
PS - Primary Settling
N/A - Not applicable and not shown in the flow diagram

WATER BALANCE RESULTS SUMMARY

AVERAGE CLIMATE CONDITIONS

	Precipitation Inflow to Reclaim Pond	Evaporation Loss from Relame Pond	Precipitation Inflow to Process Plant Stormwater Pond	Evaporation Loss from Process Plant Stormwater Pond	Precipitation Inflow to Primary Settling Pond	Evaporation Loss from Primary Settling Pond	Precipitation Inflow to Process Plant Area	Evaporation Loss from Ore Crusher	Evaporation Loss from HLF Ore Crusher	Precipitation Inflow to Pits (Excluding Rosemont Pit)	Precipitation Inflow to TSF1 and 2 Berm Areas	Precipitation Inflow to TSF1 and 2 Expansion Areas	Evaporation Loss from TSF Decant pool	Precipitation Inflow to HLF PLS Pond	Evaporation Loss from HLF PLS Pond	Precipitation Inflow to HLF Stormwater Ponds N and S	Evaporation Loss from HLF Stormwater Ponds N and S	Precipitation Inflow to HLF Raffinate Pond	Evaporation Loss from HLF Raffinate Pond	Precipitation Inflow to Heap Leach Pad	Evaporation Loss from Acid Capture/Addition	Precipitation Inflow to Heap Leach Pad Future Expansions
Year	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm
1	4	13	4	4	4	13	18	233	233	96	134	84	281	4	13	8	8	4	13	70	57	36
2	4	13	4	4	4	13	18	350	350	120	243	102	509	4	13	8	8	4	13	70	57	36
3	4	13	4	4	4	13	18	350	350	215	284	95	594	4	13	8	8	4	13	158	57	20
4	4	13	4	4	4	13	18	350	350	215	317	89	663	4	13	8	8	4	13	158	57	20
5	4	13	4	4	4	13	18	699	408	215	430	123	899	4	13	8	8	4	13	158	57	20
6	4	13	4	4	4	13	18	699	524	215	470	116	984	4	13	8	8	4	13	273	57	0
7	4	13	4	4	4	13	18	699	524	215	495	112	940	4	13	8	8	4	13	273	57	0
8	4	13	4	4	4	13	18	699	524	159	506	110	897	4	13	8	8	4	13	273	57	0
9	4	13	4	4	4	13	18	699	52	159	516	108	923	4	13	8	8	4	13	273	57	0
10	4	13	4	4	4	13	18	699	0	76	526	106	852	0	0	0	0	0	0	0	0	0
11	4	13	4	4	4	13	18	699	0	76	536	105	867	0	0	0	0	0	0	0	0	0
12	4	13	4	4	4	13	18	699	0	76	526	107	927	0	0	0	0	0	0	0	0	0
13	4	13	4	4	4	13	18	699	0	76	495	112	1034	0	0	0	0	0	0	0	0	0
14	4	13	4	4	4	13	18	699	0	76	465	117	973	0	0	0	0	0	0	0	0	0
15	4	13	4	4	4	13	18	584	0	76	435	123	756	0	0	0	0	0	0	0	0	0

Notes:

ac-ft/yr - acre-feet per year

gpm - gallons per minute

TSF - Tailings Storage Facility

PS - Primary Settling

N/A - Not applicable and not shown in the flow diagram

ATTACHMENT



2

WET CLIMATE
CONDITIONS
RESULTS

WATER BALANCE RESULTS SUMMARY
WET CLIMATE CONDITIONS

	Water in Conventional Tailings Discharged to Thickener	Water in Thickened Tailings Discharged to Cyclone	Water in Cyclone Tailings Used to Construct TSF Embankments	Water in Fine Tailings Discharged to TSFs	Freshwater Demand of Heap Leach Facility, Agglomerator, and Crusher	Freshwater Demand to Crusher and Flotation Plant	Water Contained in As-Mined Sulfide Ore	Water Lost at the Crusher	Water Discharged to the Reclaim Pond from the Thickener	Water Returned to the Flotation Plant from the Reclaim Pond	Water in Thickened Tailings Discharged to Cyclone	Decant and Seepage Water to PS Pond	Water Sent to Flotation Plant and Crusher from PS Pond	Runoff from TSF 1 and 2 Berm and Expansion Areas	Runoff from Pits (Excluding Rosemont Pit)	Process Plant Stormwater Pond Water use for Flotation Plant	PS Pond Water for Dust Control	Freshwater Used for Dust Control	Dewatering from the Pits Used for Dust Control	Rosemont Pit Dewatering and Runoff for Dust Control	Total Site Wide Freshwater Make up Water Required	Groundwater Available	Groundwater Used	Surface Water Available	Surface Water Used	Water Excess/Deficit (Positive=Excess, Negative = Deficit)		
Flow ID	N/A	N/A	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	N/A	N/A	N/A	N/A	N/A	N/A		
Year	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	ac-ft/yr	gpm	gpm	gpm	gpm	ac-ft/yr	
1	2431	1553	186	1366	768	979	117	233	1044	1036	1553	517	600	109	49	23	75	55	20	0	1802	2908	3697	1802	1452	0	0	0
2	3646	2329	279	2050	1076	1532	175	350	1567	1559	2329	744	882	132	81	23	75	36	39	0	2643	4267	3678	2643	515	0	0	0
3	3646	2329	279	2050	990	1450	175	350	1567	1559	2329	711	964	123	205	23	75	10	65	0	2450	3954	3652	2450	515	0	0	0
4	3646	2329	279	2050	990	1484	175	350	1567	1559	2329	684	930	116	205	23	75	10	65	0	2484	4009	3652	2484	562	0	0	0
5	7292	4658	559	4099	1144	3091	350	699	3133	3125	4658	1536	1826	160	205	23	75	10	65	0	4245	6852	3652	3652	562	562	-31	-50
6	7292	4658	559	4099	1331	3134	350	699	3133	3125	4658	1503	1783	151	205	23	75	10	65	378	4475	7223	3652	3652	562	562	-261	-421
7	7292	4658	559	4099	1331	3098	350	699	3133	3125	4658	1545	1820	145	205	23	75	10	65	378	4438	7164	3652	3652	762	762	-25	-40
8	7292	4658	559	4099	1331	3119	350	699	3133	3125	4658	1599	1798	143	131	23	75	45	30	378	4495	7255	3687	3687	762	762	-46	-74
9	7292	4658	559	4099	83	3137	350	699	3133	3125	4658	1583	1780	141	131	23	75	45	30	378	3265	5271	3687	3265	867	0	0	0
10	7292	4658	559	4099	0	3139	350	699	3133	3125	4658	1692	1779	138	24	23	75	71	4	378	3210	5181	3713	3210	867	0	0	0
11	7292	4658	559	4099	0	3134	350	699	3133	3125	4658	1707	1792	136	24	23	75	71	4	378	3204	5172	3713	3204	867	0	0	0
12	7292	4658	559	4099	0	3245	350	699	3133	3125	4658	1585	1672	138	24	23	75	71	4	378	3316	5353	3713	3316	867	0	0	0
13	7292	4658	559	4099	0	3347	350	699	3133	3125	4658	1477	1571	145	24	23	75	71	4	378	3417	5516	3713	3417	867	0	0	0
14	7292	4658	559	4099	0	3316	350	699	3133	3125	4658	1501	1602	152	24	23	75	71	4	378	3387	5466	3713	3387	867	0	0	0
15	6087	3888	467	3422	0	2649	292	584	2615	2607	3888	1333	1441	159	24	23	75	71	4	378	2720	4391	3713	2720	867	0	0	0

Notes:
ac-ft/yr - acre-feet per year
gpm - gallons per minute
TSF ' Tailings Storage Facility
PS - Primary Settling
N/A - Not applicable and not shown in the flow diagram

WATER BALANCE RESULTS SUMMARY

WET CLIMATE CONDITIONS

	Precipitation Inflow to Reclaim Pond	Evaporation Loss from Relame Pond	Precipitation Inflow to Process Plant Stormwater Pond	Evaporation Loss from Process Plant Stormwater Pond	Precipitation Inflow to Primary Settling Pond	Evaporation Loss from Primary Settling Pond	Precipitation Inflow to Process Plant Area	Evaporation Loss from Ore Crusher	Evaporation Loss from HLF Ore Crusher	Precipitation Inflow to Pits (Excluding Rosemont Pit)	Precipitation Inflow to TSF1 and 2 Berm Areas	Precipitation Inflow to TSF1 and 2 Expansion Areas	Evaporation Loss from TSF Decant pool	Precipitation Inflow to HLF PLS Pond	Evaporation Loss from HLF PLS Pond	Precipitation Inflow to HLF Stormwater Ponds N and S	Evaporation Loss from HLF Stormwater Ponds N and S	Precipitation Inflow to HLF Raffinate Pond	Evaporation Loss from HLF Raffinate Pond	Precipitation Inflow to Heap Leach Pad	Evaporation Loss from Acid Capture/Addition	Precipitation Inflow to Heap Leach Pad Future Expansions
Year	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm
1	5	13	5	5	5	13	23	233	233	124	175	109	281	5	13	11	11	5	13	91	57	46
2	5	13	5	5	5	13	23	350	350	156	316	132	509	5	13	11	11	5	13	91	57	46
3	5	13	5	5	5	13	23	350	350	280	369	123	594	5	13	11	11	5	13	205	57	26
4	5	13	5	5	5	13	23	350	350	280	412	116	663	5	13	11	11	5	13	205	57	26
5	5	13	5	5	5	13	23	699	408	280	559	160	899	5	13	11	11	5	13	205	57	26
6	5	13	5	5	5	13	23	699	524	280	612	151	984	5	13	11	11	5	13	355	57	0
7	5	13	5	5	5	13	23	699	524	280	644	145	973	5	13	11	11	5	13	355	57	0
8	5	13	5	5	5	13	23	699	524	206	657	143	930	5	13	11	11	5	13	355	57	0
9	5	13	5	5	5	13	23	699	52	206	670	141	958	5	13	11	11	5	13	355	57	0
10	5	13	5	5	5	13	23	699	0	99	684	138	862	0	0	0	0	0	0	0	0	0
11	5	13	5	5	5	13	23	699	0	99	697	136	867	0	0	0	0	0	0	0	0	0
12	5	13	5	5	5	13	23	699	0	99	683	138	967	0	0	0	0	0	0	0	0	0
13	5	13	5	5	5	13	23	699	0	99	644	145	1036	0	0	0	0	0	0	0	0	0
14	5	13	5	5	5	13	23	699	0	99	605	152	973	0	0	0	0	0	0	0	0	0
15	5	13	5	5	5	13	23	584	0	99	565	159	789	0	0	0	0	0	0	0	0	0

Notes:

ac-ft/yr - acre-feet per year

gpm - gallons per minute

TSF - Tailings Storage Facility

PS - Primary Settling

N/A - Not applicable and not shown in the flow diagram

ATTACHMENT



3

DRY CLIMATE
CONDITIONS
RESULTS

WATER BALANCE RESULTS SUMMARY
DRY CLIMATE CONDITIONS

	Water in Conventional Tailings Discharged to Thickener	Water in Thickened Tailings Discharged to Cyclone	Water in Cyclone Tailings Used to Construct TSF Embankments	Water in Fine Tailings Discharged to TSFs	Freshwater Demand of Heap Leach Facility, Agglomerator, and Crusher	Freshwater Demand to Crusher and Flotation Plant	Water Contained in As-Mined Sulfide Ore	Water Lost at the Crusher	Water Discharged to the Reclaim Pond from the Thickener	Water Returned to the Flotation Plant from the Reclaim Pond	Water in Thickened Tailings Discharged to Cyclone	Decant and Seepage Water to PS Pond	Water Sent to Flotation Plant and Crusher from PS Pond	Runoff from TSF 1 and 2 Berm and Expansion Areas	Runoff from Pits (Excluding Rosemont Pit)	Process Plant Stormwater Pond Water use for Flotation Plant	PS Pond Water for Dust Control	Freshwater Used for Dust Control	Dewatering from the Pits Used for Dust Control	Rosemont Pit Dewatering and Runoff for Dust Control	Total Site Wide Freshwater Make up Water Required	Groundwater Available	Groundwater Used	Surface Water Available	Surface Water Used	Water Excess/Deficit (Positive=Excess, Negative = Deficit)		
Flow ID	N/A	N/A	N/A	N/A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	N/A	N/A	N/A	N/A	N/A	N/A		
Year	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	ac-ft/yr	gpm	gpm	gpm	gpm	gpm	ac-ft/yr
1	2431	1553	186	1366	835	1172	117	233	1044	1034	1553	436	428	59	0	12	67	55	20	0	2063	3329	3697	2063	782	0	0	0
2	3646	2329	279	2050	1143	1824	175	350	1567	1556	2329	598	603	71	9	12	75	36	39	0	3003	4848	3678	3003	277	0	0	0
3	3646	2329	279	2050	1097	1819	175	350	1567	1556	2329	541	607	66	75	12	75	10	65	0	2926	4723	3652	2926	277	0	0	0
4	3646	2329	279	2050	1097	1860	175	350	1567	1556	2329	504	567	62	75	12	75	10	65	0	2967	4789	3652	2967	303	0	0	0
5	7292	4658	559	4099	1251	3565	350	699	3133	3123	4658	1278	1365	86	75	12	75	10	65	0	4827	7791	3652	3652	303	303	-872	-1407
6	7292	4658	559	4099	1488	3628	350	699	3133	3123	4658	1220	1302	81	75	12	75	10	65	202	5126	8274	3652	3652	303	303	-1171	-1891
7	7292	4658	559	4099	1488	3539	350	699	3133	3123	4658	1313	1392	78	75	12	75	10	65	202	5037	8129	3652	3652	410	410	-974	-1573
8	7292	4658	559	4099	1488	3530	350	699	3133	3123	4658	1363	1401	77	36	12	75	45	30	202	5062	8171	3687	3687	410	410	-965	-1558
9	7292	4658	559	4099	240	3551	350	699	3133	3123	4658	1343	1380	76	36	12	75	45	30	202	3836	6192	3687	3687	467	149	0	0
10	7292	4658	559	4099	0	3546	350	699	3133	3123	4658	1394	1415	75	0	12	53	71	4	202	3616	5837	3713	3616	467	0	0	0
11	7292	4658	559	4099	0	3555	350	699	3133	3123	4658	1386	1406	73	0	12	53	71	4	202	3626	5852	3713	3626	467	0	0	0
12	7292	4658	559	4099	0	3581	350	699	3133	3123	4658	1350	1372	75	0	12	53	71	4	202	3652	5895	3713	3652	467	0	0	0
13	7292	4658	559	4099	0	3708	350	699	3133	3123	4658	1220	1245	78	0	12	53	71	4	202	3779	6099	3713	3713	467	66	0	0
14	7292	4658	559	4099	0	3702	350	699	3133	3123	4658	1222	1251	82	0	12	53	71	4	202	3773	6089	3713	3713	467	60	0	0
15	6087	3888	467	3422	0	2954	292	584	2615	2605	3888	1138	1171	86	0	12	53	71	4	202	3025	4882	3713	3025	467	0	0	0

Notes:
ac-ft/yr - acre-feet per year
gpm - gallons per minute
TSF - Tailings Storage Facility
PS - Primary Settling
N/A - Not applicable and not shown in the flow diagram

WATER BALANCE RESULTS SUMMARY

DRY CLIMATE CONDITIONS

	Precipitation Inflow to Reclaim Pond	Evaporation Loss from Relame Pond	Precipitation Inflow to Process Plant Stormwater Pond	Evaporation Loss from Process Plant Stormwater Pond	Precipitation Inflow to Primary Settling Pond	Evaporation Loss from Primary Settling Pond	Precipitation Inflow to Process Plant Area	Evaporation Loss from Ore Crusher	Evaporation Loss from HLF Ore Crusher	Precipitation Inflow to Pits (Excluding Rosemont Pit)	Precipitation Inflow to TSF1 and 2 Berm Areas	Precipitation Inflow to TSF1 and 2 Expansion Areas	Evaporation Loss from TSF Decant pool	Precipitation Inflow to HLF PLS Pond	Evaporation Loss from HLF PLS Pond	Precipitation Inflow to HLF Stormwater Ponds N and S	Evaporation Loss from HLF Stormwater Ponds N and S	Precipitation Inflow to HLF Raffinate Pond	Evaporation Loss from HLF Raffinate Pond	Precipitation Inflow to Heap Leach Pad	Evaporation Loss from Acid Capture/Addition	Precipitation Inflow to Heap Leach Pad Future Expansions
Year	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm	gpm
1	3	13	3	3	3	13	12	233	233	67	94	59	281	3	13	6	6	3	13	49	57	25
2	3	13	3	3	3	13	12	350	350	84	170	71	509	3	13	6	6	3	13	49	57	25
3	3	13	3	3	3	13	12	350	350	150	199	66	594	3	13	6	6	3	13	110	57	14
4	3	13	3	3	3	13	12	350	350	150	222	62	653	3	13	6	6	3	13	110	57	14
5	3	13	3	3	3	13	12	699	408	150	301	86	899	3	13	6	6	3	13	110	57	14
6	3	13	3	3	3	13	12	699	524	150	329	81	984	3	13	6	6	3	13	191	57	0
7	3	13	3	3	3	13	12	699	524	150	347	78	907	3	13	6	6	3	13	191	57	0
8	3	13	3	3	3	13	12	699	524	111	354	77	863	3	13	6	6	3	13	191	57	0
9	3	13	3	3	3	13	12	699	52	111	361	76	889	3	13	6	6	3	13	191	57	0
10	3	13	3	3	3	13	12	699	0	53	368	75	852	0	0	0	0	0	0	0	0	0
11	3	13	3	3	3	13	12	699	0	53	375	73	867	0	0	0	0	0	0	0	0	0
12	3	13	3	3	3	13	12	699	0	53	368	75	887	0	0	0	0	0	0	0	0	0
13	3	13	3	3	3	13	12	699	0	53	347	78	996	0	0	0	0	0	0	0	0	0
14	3	13	3	3	3	13	12	699	0	53	326	82	973	0	0	0	0	0	0	0	0	0
15	3	13	3	3	3	13	12	584	0	53	304	86	723	0	0	0	0	0	0	0	0	0

Notes:

ac-ft/yr - acre-feet per year

gpm - gallons per minute

TSF - Tailings Storage Facility

PS - Primary Settling

N/A - Not applicable and not shown in the flow diagram