HOWE SOUND
PULP & PAPER CORPORATION
A PAPER EXCELLENCE COMPANY

2014 ENVIRONMENT SUMMARY

Table 1. Effluent Discharges

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	2013	Target	Permit
Flow	(ML/d)	71.0	69.1	72.8	69.3	54.3	69.5	67.0	67.0	72.8	71.1	67.9	71.3	68.6	68.8		106.5
BOD	(kg/d)	1,529	1,503	1,785	1,489	842	1,294	1,074	720	920	950	881	1,120	1,176	1,515		
	(kg/t)	0.7	0.7	0.9	0.7	0.4	0.6	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.7	<1.0	3.95
TSS	(kg/d)	3,127	5,111	3,495	3,499	1,749	5,073	2,808	1,564	2,440	2,166	2,861	2,792	3,057	3,920		
	(kg/t)	1.5	2.5	1.7	1.7	0.9	2.5	1.4	0.8	1.2	1.1	1.4	1.4	1.5	1.9	<2.0	6.1
AOX	(kg/d)	458	438	406	348	106	349	554	285	364	284	271	350	351	311		
	(kg/t)	0.3	0.3	0.3	0.3	0.1	0.3	0.4	0.2	0.3	0.2	0.2	0.3	0.3	0.2	<0.40	0.48
COD	(kg/d)	37,154	41,655	36,144	32,312	15,408	44,082	37,747	--	41,792	41,105	41,800	41,847	37,368	42,607		
	(kg/t)	18.1	20.3	17.6	15.7	7.5	21.5	18.4	--	20.4	20.0	20.4	20.4	18.2	21.1		
Effluent	No.	2	1	2	1	1	1	1	1	1	1	1	1	14	28		
Trout	Pass	2	1	2	1	1	1	1	1	1	1	1	1	14	26	100%	100%
Effluent	No.	4	4	5	4	4	4	5	4	5	4	4	5	52	56		
Daphnia	Pass	2	2	4	4	4	4	5	4	5	4	4	5	47	35	100%	100%
CWS	No.	1	1	1	1	1	1	1	1	1	1	1	1	12	12		
Trout	Pass	1	1	1	1	1	1	1	1	1	1	1	1	12	12	100%	100%
CWS	No.	1	1	1	1	1	1	1	1	1	1	1	1	12	12		
Daphnia	Pass	1	1	1	1	1	1	1	1	1	1	1	1	12	12	100%	100%

TSS, BOD, AOX and Flow are averages; Toxicities are totals

Table 2. Landfill Volumes (average cubic metres)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	2013	%
Ash	3,473	2,590	3,962	3,153	2,032	3,280	2,909	4,263	3,983	3,834	4,093	2,813	3,365	2,411	57.4
Lime Mud/ Dregs/ Grits	372	733	1,156	1,166	1,342	877	568	1,858	1,218	258	403	712	889	949	15.2
Brown Fibre Rejects	764	650	1,022	702	330	661	836	661	1,011	692	609	619	713	981	12.2
Effluent Sludge	671	1,239	1,084	1,146	1,022	1,424	1,755	826	671	557	83	217	891	481	15.2
Other	0	0	41	0	0	21	0	0	0	0	0	0	5	46	0.1
Gravel	0	0	0	0	0	0	0	0	0	10	10	0	2	0	

Table 3. Landfill Volumes (total cubic metres)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	Projected	2013
TOTAL (excl. gravel)	5,279	5,211	7,265	6,166	4,726	6,263	6,068	7,607	6,883	5,341	5,187	4,361	5,863	70,358	58,422

TARGET: <80,000 cubic metres/year PERMIT: <91,250 cubic metres/year

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Table 4. Air Emissions

			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	2013	Target	Permit
Power Boiler	PM	mg/m3		17				8			9		15		12	11	<100	115***
	SO2	mg/m3	137	115	169	150	30	136	185	191	175	133	154	177	146	138	<200	300
	NOx*	mg/m3	222	146	201	185	125	121	182	205	226	217	228	215	189	199		300
	NOx**	mg/m3	235	160	237	255	175	133	200	231	242	249	244	233	216	230		450
Recovery Boiler	TRS	mg/m3	0.9	1.4	0.9	0.8	0.9	2.4	1.8	1.8	2.4	2.3	0.9	1.7	1.5	1.4	<1.0	5.0
	PM	mg/m3		55				55			55		75		60.1	52.2	<50	150
Kiln	PM	mg/m3		27				9			35		74		36.1	21.9	<20	100
Smelt Tk.	PM	mg/m3		73				75			75		54		69	120	<125	200
Misc.	TRS	g/adut	0.3	0.3	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.3	<75	110
CNCG	vent	min	0	1	1	100	76	17	199	25	257	279	9	0	964	720		
DNCG	vent	min	507	7,060	1,722	2,222	4,118	3,958	######	395	2,865	4,586	2,760	1,287	46,342	27,417		
Langdale	TRS	hrs>A	2	2	5	0	0	1	1	0	8	4	0	0	23	34		

* excluding time when >60 t/h steam from gas

**all time

12 month rolling average, single test not to be > 230

All data are averages, except NCG venting and hours >A Level, which are totals