

2013 ENVIRONMENT SUMMARY

Table 1. Effluent Discharges

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	2012	2011	Target	Permit
Flow	(ML/d)	72.3	75.3	76.0	70.8	71.1	58.7	75.2	64.1	63.9	67.6	64.8	65.3	68.8	71.6	72.5		106.5
BOD	(kg/d)	2,936	2,267	1,818	1,122	1,424	1,413	1,401	1,236	1,098	1,092	1,069	1,304	1,515	780	548		
	(kg/t)	1.1	1.1	0.9	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.6	0.7	0.4	0.3	<1.0	3.95
TSS	(kg/d)	4,772	6,075	6,358	3,538	4,614	4,778	5,416	2,677	2,008	1,956	2,379	2,466	3,920	3,496	2,920		
	(kg/t)	2.4	3.0	3.1	1.7	2.3	2.4	2.7	1.3	1.0	1.0	1.2	1.2	1.9	1.8	1.5	<2.0	6.1
AOX	(kg/d)	310	308	361	373	331	140	262	366	324	277	366	319	311	308	286		
	(kg/t)	0.2	0.2	0.3	0.3	0.3	0.1	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	<0.40	0.48
COD	(kg/d)	68,606	54,504	51,169	41,257	42,319	51,008	35,273	32,338	32,837	29,143	32,189	40,637	42,607	51,172	54,956		
	(kg/t)	33.9	26.9	25.3	20.4	20.9	25.2	17.4	16.0	16.2	14.4	15.9	20.1	21.1	26.5	28.1		
Effluent Trout	No.	1	3	5	3	3	1	2	1	2	2	4	1	28	19	16		
	Pass	1	3	4	3	3	1	2	1	2	2	3	1	26	17	15	100%	100%
Effluent Daphnia	No.	5	5	6	5	4	4	5	4	5	4	4	5	56	56	52		
	Pass	4	3	1	4	2	3	4	3	2	3	2	4	35	51	49	100%	100%
CWS Trout	No.	1	1	1	1	1	1	1	1	1	1	1	1	12	12	12		
	Pass	1	1	1	1	1	1	1	1	1	1	1	1	12	12	12	100%	100%
CWS Daphnia	No.	1	1	1	1	1	1	1	1	1	1	1	1	12	12	12		
	Pass	1	1	1	1	1	1	1	1	1	1	1	1	12	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	%	2012	2011
Ash	3,662	2,840	2,657	2,571	2,389	837	2,171	2,324	2,140	2,357	2,504	2,480	2,411	49.5	3,234	3,566
Lime Mud/ Dregs/ Grits	1,796	950	1,610	650	888	867	619	557	950	1,156	372	970	949	19.5	1,456	1,789
Brown Fibre Rejects	1,466	1,063	1,600	1,187	857	392	692	1,063	950	733	1,011	764	981	20.2	1,665	719
Effluent Sludge	186	93	83	258	413	1,662	258	155	970	661	650	382	481	9.9	570	655
Other	52	175	134	0	0	0	0	0	0	0	62	134	46	1.0	446	85
Gravel	0	0	0	0	0	0	0	0	0	0	0	0	0		16	91

Table 3. Landfill Volumes (total cubic metres)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	Projected	Permit	2012
TOTAL (excl. gravel)	7,161	5,121	6,084	4,666	4,547	3,758	3,740	4,099	5,010	4,907	4,599	4,730	4,869	58,422	91,250/y	88,468

TARGET: <80,000 cubic metres/year PERMIT: <92,500 cubic metres/year

2013 ENVIRONMENT SUMMARY

Table 4. Air Emissions

			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	2011	2011	Target	Permit
Power Boiler	PM	mg/m3	17			3			12					11	11	15	19	<100	115***
	SO2	mg/m3	168	141	193	122	137	27	161	76	121	226	122	156	138	127	111	<200	300
	NOx*	mg/m3	205	232	206	204	195	132	227	129	161	245	219	229	199	201	167		300
	NOx**	mg/m3	254	285	272	221	208	156	237	131	170	324	257	243	230	239	185		450
Recovery Boiler	TRS	mg/m3	0.8	0.9	1.1	1.4	0.9	2	1.3	1.5	3.4	1.5	0.9	0.7	1.4	0.6	0.34167	<1.0	5.0
	PM	mg/m3	61.3			33.1			45.6					68.9	52.2	44.5	29	<50	150
Kiln	PM	mg/m3	17			15			15.1					40.4	21.9	26.8	24.275	<20	100
Smelt Tk.	PM	mg/m3	131			152			115					82	120	101	108	<125	200
Misc.	TRS	g/adut	0.0	9.3	2.6	2.5	3.7	0.5	0.5	2.1	2.4	26.5	1.0	0.3	4.3	5.5	9.03738	<75	110
CNCG	vent	min	0	23	0	70	119	40	49	0	2	1	15	401	720	1,073	253		
DNCG	vent	min	935	346	166	595	3,179	11,271	1,974	221	4,452	2,344	1,698	236	27,417	114,295	42,099		
Langdale	TRS	hrs>A	3	1	6	0	0	8	0	0	0	16	0	0	34	57	27		

* 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