## 2009 ENVIRONMENT SUMMARY

### Table 1. Effluent Discharges

| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YTD | 2008 | Permit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Flow** | (ML/d) | 73.6 | 75.3 | 74.2 | 76.5 | 71.0 | 67.9 | 77.2 | 63.8 | 66.2 | 63.5 | 67.5 | 72.2 | 70.7 | 72.3 | 106.5 |
| **BOD** | (kg/d) | 1,001 | 964 | 970 | 920 | 487 | 341 | 542 | 421 | 913 | 352 | 286 | 416 | 634 | 981 | |
| | (kg/t) | 0.5 | 0.5 | 0.5 | 0.5 | 0.3 | 0.2 | 0.3 | 0.2 | 0.5 | 0.2 | 0.1 | 0.2 | 0.3 | 0.5 | 3.95 |
| **TSS** | (kg/d) | 1,356 | 2,489 | 1,657 | 1,956 | 913 | 1,760 | 2,913 | 1,514 | 2,618 | 2,004 | 857 | 1,369 | 1,784 | 2,273 | |
| | (kg/t) | 0.7 | 1.3 | 0.9 | 1.0 | 0.5 | 0.9 | 1.5 | 0.8 | 1.4 | 1.0 | 0.4 | 0.7 | 0.9 | 1.2 | 6.1 |
| **AOX** | (kg/d) | 317 | 297 | 236 | 242 | 217 | 91 | 246 | 228 | 237 | 265 | 152 | 248 | 231 | 288 | |
| | (kg/t) | 0.26 | 0.24 | 0.19 | 0.24 | 0.18 | 0.08 | 0.20 | 0.19 | 0.19 | 0.22 | 0.13 | 0.20 | 0.19 | 0.24 | 0.48 |
| **COD** | (kg/d) | 43,657 | 48,706 | 35,796 | 48,441 | 42,709 | 29,601 | 43,634 | 44,136 | 32,679 | 37,969 | 39,387 | 49,941 | 41,388 | 51,008 | |
| | (kg/t) | 22.6 | 25.2 | 18.5 | 25.1 | 22.1 | 15.3 | 22.6 | 22.9 | 16.9 | 19.7 | 20.4 | 25.9 | 21.4 | 26.4 | |
| **Effluent** | No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 13 | |
| **Trout** | Pass | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 13 | 100% |
| **Effluent** | No. | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 51 | 52 | |
| **Daphnia** | Pass | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 51 | 50 | |
| **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% |
| **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 | |

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 | 2008 | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ash** | 1,803 | 2,720 | 2,573 | 2,028 | 2,067 | 1,345 | 1,443 | 1,111 | 1,014 | 604 | 1,072 | 2,223 | 1,667 | 2,198 | 37.6 |
| **Lime Mud/ Dregs/ Grits** | 1,713 | 1,311 | 2,023 | 1,775 | 981 | 1,115 | 1,239 | 877 | 1,497 | 2,075 | 1,651 | 919 | 1,431 | 1,930 | 32.3 |
| **Brown Fibre Rejects** | 178 | 557 | 413 | 545 | 223 | 70 | 289 | 211 | 227 | 190 | 144 | 301 | 279 | 271 | 6.3 |
| **Effluent Sludge** | 1,270 | 888 | 650 | 1,259 | 671 | 495 | 1,507 | 1,589 | 733 | 1,001 | 1,187 | 1,073 | 1,027 | 1,735 | 23.2 |
| **Other** | 0 | 0 | 186 | 0 | 0 | 31 | 10 | 0 | 0 | 0 | 72 | 31 | 28 | 10 | 0.6 |
| **Gravel** | 0 | 0 | 217 | 0 | 0 | 0 | 31 | 0 | 0 | 382 | 0 | 0 | 52 | 126 | |

### Table 3. Landfill Volumes (total cubic metres)

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YTD | Projected | 2008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TOTAL (excl. gravel)** | 4,964 | 5,476 | 5,845 | 5,607 | 3,941 | 3,057 | 4,488 | 3,789 | 3,470 | 3,870 | 4,127 | 4,547 | 4,432 | 53,180 | 73,735 |

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

## 2009 ENVIRONMENT SUMMARY

### Table 4. Air Emissions

| | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YTD | 2008 | Permit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Power Boiler** | **PM** | mg/m3 | 20 | | | | 119 | | | 16 | | | 24 | 0 | 45 | 79 | 115*** |
| | **SO2** | mg/m3 | 74 | 115 | 104 | 111 | 86 | 66 | 78 | 90 | 69 | 29 | 72 | 109 | 84 | 96 | 300 |
| | **NOx*** | mg/m3 | 154 | 170 | 234 | 154 | 178 | 133 | 113 | 119 | 110 | 98 | 154 | 145 | 147 | 139 | 300 |
| | **NOx**** | mg/m3 | 192 | 197 | 253 | 156 | 180 | 151 | 163 | 123 | 125 | 114 | 184 | 155 | 166 | 165 | 450 |
| **Recovery Boiler** | **TRS** | mg/m3 | 0.6 | 0.3 | 0.3 | 0.4 | 0.5 | 0.7 | 0.4 | 1.4 | 0.5 | 0.4 | 0.4 | 0.6 | 0.5 | 0.5 | 5.0 |
| | **PM** | mg/m3 | 47.6 | | | | 62.3 | | | 41 | | | 55.3 | | 52 | 41 | 150 |
| **Kiln** | **PM** | mg/m3 | 37.2 | | | | 34.8 | | | 20.5 | | | 19.5 | | 28 | 15 | 100 |
| **Smelt Tk.** | **PM** | mg/m3 | 99 | | | | 167 | | | 128 | | | 90 | | 121 | 122 | 200 |
| **Misc.** | **TRS** | g/adut | 35 | 10 | 26 | 13 | 13 | 11 | 15 | 14 | 2 | 1 | 3 | 5 | 12 | 53 | 110 |
| **CNCG** | **vent** | min | 21 | 8 | 73 | 139 | 41 | 17 | 220 | 2 | 3 | 138 | 4 | 0 | 666 | 824 | |
| **DNCG** | **vent** | min | 4,427 | 402 | 2,656 | 7,626 | 1,409 | 338 | 4,558 | 132 | 269 | 19,892 | 976 | 102 | 42,787 | 53,471 | |
| **Langdale** | **TRS** | hrs>A | 0 | 0 | 2 | 0 | 2 | 1 | 4 | 2 | 1 | 2 | 0 | 0 | 14 | 32 | |

* 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