

Reach for Unbleached!

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April 15, 1999

Graham Kissack,
Fletcher Challenge Crofton.
By Fax: 250-246-6369

Dear Graham:

I am writing to inform you that at the March 27th 1999 meeting of the Board of Directors of the Reach for Unbleached Foundation, I was instructed to focus on the possibility of developing standards and regulations for land spreading of sludge from mechanical Totally Chlorine Free mills. The implication of this is that we are unable to allocate staff time to participate in any meaningful way in a critique of your proposal to land spread lime grits, dregs and waste from the Crofton kraft mill on the Evansdale Farm.

Further, I have been instructed to inform the Crofton mill that we could not engage in any discussion of spreading lime dregs because, although the dregs are pre-bleach, in the real world of the kraft mill the dregs are known to have residual caustics in them. Frequently lime dregs are not strictly separated from green liquor dregs, and often in the dumping process they are mixed. This material is also known to be toxic and to burn workers. The lime kiln is also used to burn mill wastes which are not desirable for land application.

In terms of the testing structures of your proposal, I have a few comments in passing. I am encouraged to see that your proposal includes many of the factors which are routine concerns at Reach for Unbleached! You have tested for CSR (Contaminated Site Regulations) contaminants, and you plan to analyze drainage waters once a month.

As a matter of routine in cases like this, we would expect Crofton to go through the full range of controlled, independent testing that we'd expect of sludge proposals, as well as supplying schematics of your process that can be verified to tell the Ministry/public what is being routed through any process where you plan to spread the waste off the mill site.

However, I will note the following items:

- 1) The material you sent me compares heavy metal and contaminant levels with CSR levels for Schedules 4 & 5, soil concentration for agricultural site, groundwater not used.... However, it would be more appropriate and comprehensive to compare the values of the pulp solid waste with those in Schedule 7: Standards Triggering Contaminated Soil Relocation Agreements. In

this case, we would note that some values are glossed over in your discussion - For Example, your test results show values of 4.2, 5.5 and <2 for hot water soluble Boron, which is agriculturally significant, and has a CSR limit of 2. Similarly, the CSR limit for cadmium is 1.5 ppm; your results for dregs show 1.4 in the dregs from the Jan. 13, 1999 sample, .4 for the Nov. 2 1998 sample, and 2 ppm in June 1995. These results would indicate that some discussion and testing ought to be dedicated to the issue of variability and range of variability.

2) The analyses reports for heavy metals were the only ones included in the material from Dennis Lightfoot. I assume you have full lab reports for all compound analyses and that these will be submitted to the Ministry and interested members of the public for complete examination. .

3) Your submission states that levels of Petroleum hydrocarbons were "below detection and below CSR limits." In the appendix, measurements for these are given (for all three compounds) as: VPH's: <200 ppm; LEPH's:<1000 ppm; and HEPH's: 1000 ppm. Of course, the detection limit is lower than this by several orders of magnitude. Further, these reported values are at the very top of the levels under consideration in Draft Two of the Provincial Land application guidelines, especially for **agricultural soil**.

4) You are surely aware that Reach for Unbleached does not consider the appropriateness of the compounds regulated by the CSR to be proven for pulp mill wastes, and that therefore we believe all applications such as yours should be accompanied by full scan GS/MS analyses.

5) I believe that a control plot should include unlimed land, as well as land limed with commercial quick lime.

6) Your proposal notes that the 100 acre field in question is now well-drained because drain tile have been installed. This surely implies that the material will be moving off property through the water, and thus adequate analytic testing is essential before your study begins.

7) What compounds are the "odourous substances" you mention in the one page summary of chemical composition? As you are aware, "sulphides" can be very toxic, not only smelly.

To sum up, the concerns we would have with the land spreading of this material, especially on agricultural land which seems to be dairy cow pasture, as with all pulp mill solid wastes, centre around the following issues:

- Variability of the waste from day-to-day and indeed hour-to-hour,
- Appropriateness of sampling and
- Appropriateness of analyses,
- Worker safety and
- Community exposure to airborne toxics and odours, and
- Long-term impact on the environment. When agricultural soil is involved, this last concern is closely related to
- Potential issues of public health.

To my mind, the front end of your proposal does not address the first five concerns, and the

research plan as laid out does not yet adequately address the last two.

You can find more material about pulp mill solid wastes on the Reach for Unbleached web page at <http://www.rfu.org>.

Respectfully,

Delores Broten

Delores Broten,
Executive Director.

cc: Dave Brown, Pollution Prevention Manager, Vancouver Island Region
Phil Davis, PPWC National Environment Officer