

Thiel Engineering

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December 12, 2005

Mr. Larry Fulcher
Weyerhaeuser
MRF and Landfill Manager
PO Box 188
Longview, WA 98632

Re: Weyerhaeuser SW Regional Landfill Waste Composition

Dear Larry:

You have requested my opinion regarding the optimal waste composition for the referenced landfill, also called the "Headquarters" Landfill. As the lead designer for the landfill since its inception, I am very familiar with the site, the nature of the landfill operations, and the geologic setting.

From a technical perspective, waste composition has a primary impact on the internal drainage of the landfill, and on its slope stability. Generally speaking, the more permeable and structural the waste is, the greater the benefit will be for internal drainage and slope stability.

Improved internal drainage will improve slope stability, reduce the post-closure period for collecting leachate at the end of the landfill life, and reduce the magnitude and duration of long-term settlement, which can affect post-closure maintenance. Increased structural integrity will improve the static and dynamic stability of the landfill. Having a higher static factor of safety will increase the site's reliability, and reduce potential movement that would occur in a seismic event.

The landfill was originally designed to accept forest-products industrial wastes, primarily those derived from paper making. Many of those waste types are low in permeability and not highly structural. My recommendation is that this facility always strive to accept as much high-permeability and structural waste, such as construction and demolition debris, as possible. There is no down side to accepting such waste in the landfill, and there are strong technical benefits.

If there are any specific questions regarding this recommendation, please call me at 530-692-9114.

Sincerely,
Thiel Engineering



Richard Thiel, P.E.