

## **Wood Ash as a Potential Source for Construction Materials**

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### **ABSTRACT**

Weyerhaeuser Company's wood ashes have considerable potential for many applications. However, the performance of these ashes needs to be established for individual applications. The following are some of the high-volume applications that would require further evaluation. Flowable Materials have up to 1200 psi compressive strength, have flowing mud-type of consistency and fluidity, contain very little portland cement and a lot of water, and consist mostly of ash or similar materials. It is believed that concrete Bricks, Blocks, and Paving Stones can be made with the wood ashes tested. Additionally these three wood ashes should be useful for replacement of clay in clay bricks manufacturing. The test data collected also indicate that these wood ashes can be used as a partial replacement of aggregates and/or cement in Low-Strength Concrete. It is also concluded that there is a potential for high-value use of these wood ashes in manufacturing Blended Cements. Soil Stabilization or Site Remediation is another significant potential use of the wood ashes. For example, for log-yard paving (Roller Compacted Concrete Pavement) these wood ashes can function as a soil stabilizing or strengthening medium as well as significantly improving the performance of log-yards and reducing cost of handling logs and minimizing waste of logs. A significant new opportunity also exists in using these wood ashes with dredged materials containing PAH. The wood ash for such use acts as a desiccant, deodorizer, and chemical activator to manufacture topsoil for dredged material. In working with UWM-CBU, US-EPA and US Army Corps of Engineers are developing topsoil from dredged materials.