

Woods-run Chips as a Filter Sock Matrix¹

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Abstract: The use of filter socks for controlling sediment movement has become a standard BMP associated with oil and gas site development activities. One of the sediment and erosion control products to come into wide use in oil and gas development is the filter sock. Filter socks are a type of contained filter berm typically constructed of a biodegradable mesh tube filled with a filtering media. Federal standards specify composted filter media that has been certified using the U.S. Composting Council's Test Methods and Parameters (USCC 2010).

The specified use of composted materials during the construction of filter socks has created inefficiencies during well site construction. Typically, during clearing and grubbing of a well pad site, discarded trees and tree tops are chipped on site and temporarily stockpiled. Then, composted chips are hauled on to well sites and used to fill filter socks during erosion and sediment control measures installation. The use of the woods-run chips created on site, instead of hauling composted chips from supply yards, could reduce energy/capital costs, truck traffic, and disposal costs for woody material generated on site.

The primary objective of this research project is to compare the effectiveness of woods-run material versus traditionally composted wood chips in controlling sediment transport as well as other chemical and biological parameters. Preliminary results indicate minimal difference in the moisture content or piece size distribution of composted versus woods-run material or in K, Ca, Mg, P, pH, and NO₃⁻ levels between matrix types. Moreover, both woods-run and seasoned wood chips both filter >90% of total suspended solids during preliminary testing. These results suggest that the use of composted wood chips as a filter medium may not be necessary during oil and gas site development activities.

Additional Key Words: Compost, Sediment, Oil, Gas, Development.

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