

The Painted Landfill: Daily Cover and the Beneficial Reuse of Waste Latex Paint

If in the last two decades you've worked at a landfill then you've heard the term "daily cover". Daily cover is the six (6) inches of soil which all landfills are required to place on their working face at the end of *each* day. While daily cover reduces odors, windblown trash, landfill fires, and vermin it also consumes vast amounts of time, personnel, equipment, and air space.

A landfill utilizing soil for daily cover stands to lose 15% of the available airspace that could otherwise be utilized for waste disposal and the resulting tipping fee revenue. Additional financial losses accrue when heavy equipment, typically a scraper, is making multiple trips from the soil borrow area to the working face. From an environmental standpoint this activity is not only tough on the equipment, but also on our environment; requiring large amounts of energy and producing air emissions through vehicle exhaust and fugitive dust.

The EPA has approved some alternative materials for use as daily cover. When selecting an alternative daily cover (ADC) material the first thing to consider is regionally available materials. Using indigenous materials for daily cover is often the most cost effective approach; however, if there is no viable alternative to soil, a landfill may look to a commercial product.

The Mesa County Landfill, located in Grand Junction, Colorado, receives, on average, 500 tons of waste each day. Utilizing soil from the facility for daily, intermediate, and final cover has left the landfill facing a soil deficit of 3.2 million cubic yards. In an attempt to reduce the soil deficit and operating costs associated with using soil for daily cover, the facility sought approval from the Colorado Department of Public Health and Environment (CDPHE) to utilize an ADC. After a 90 day demonstration period, during which time the landfill "tested" several commercially available ADC products, the facility opted for a mineral mortar spray slurry blended with waste latex paint, 10% by volume. The spray slurry is purchased from an outside vendor but the added latex is a waste material collected at the landfill's own Hazardous Waste Collection Facility (HWCF).

The HWCF collects 9,000 gallons of waste latex paint from Mesa County residents each year. Residential paint in good condition is made available free to the public for reuse; all other waste latex is shipped via a certified vendor for disposal at an annual cost of \$24,500 per year. In 2014 the landfill's request to utilize waste latex paint as an additive to the commercial spray slurry was approved. After five (5) months of use the landfill beneficially reused more than 3,500 gallons of paint, saving the landfill \$10,255 in disposal fees.

The latex paint has proven to be an excellent additive to the spray slurry. It enhances the adhesion qualities of the slurry to the waste and has shown to provide greater durability in adverse weather conditions. Additionally, the mineral mortar spray slurry itself contains a fire suppressant which reduces the threat of landfill fires. Another advantage to using the spray-on slurry is the ease in which the process is executed. The only equipment required for application is a standard hydro-seeding unit and a tractor to tow the unit to the face. The entire process of mixing and spraying the latex slurry takes one

(1) hour to complete. The additional air space gained from using an ADC has extended the life of the landfill, and increased revenue for a fixed amount of space. The additional revenue plus the savings accrued from reduced labor and equipment hours and decreased waste latex disposal fees has allowed the landfill to save money.



For more information on Mesa County Landfill's use of waste latex paint in their daily cover operations please join us for a free webinar sponsored by SWANA. The webinar will be held on Friday July 17 from 1:45–2:15 PM (ET). Information on this free event can be found at:

<https://swana.org/Events/EventDetail.aspx?ec=WEB150717>

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