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Guidance for Alternative Daily Cover Demonstrations

This document provides guidance for those facilities interested in utilizing an alternative daily cover (ADC). [Title 132 -Integrated Solid Waste Management Regulations](#), Chapter 3, states that an owner or operator of a solid waste disposal area accepting municipal solid waste must cover waste with six inches of earthen material (e.g. "soil") at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging. Chapter 3 also allows the Department to approve an alternative material of an alternative thickness as daily cover provided the owner or operator demonstrates the alternative material and thickness control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health or the environment. The demonstration period generally lasts 180 days. The 180-day period allows for evaluation of the proposed ADC under differing climatic conditions.

A plan for conducting an ADC demonstration must be submitted to the Department for review and approval prior to initiating the demonstration. Although there are no specific requirements on how to conduct the demonstration, it must provide meaningful and comparable results that allow the owner/operator to make an informed decision regarding the effectiveness of the ADC. The EPA's Solid Waste Disposal Facility Criteria, Technical Manual (EPA530-R-93-017) suggests a demonstration may consist of:

- *A side by side (six inches of soil and alternative cover) test pad;*
- *A full scale demonstration; or*
- *A short-term full-scale test.*

In general, the plan for an ADC demonstration should not only address the operational practices to be followed when using the ADC (how the ADC will be deployed and removed, wet and cold weather operations, high wind operations, run-off control, special filling methods), but it should also include a detailed description of how the proposed ADC will be evaluated. For instance, the plan might include pass/fail criteria.

Specifically, the plan for the demonstration should address the following criteria:

1. *Disease vectors and scavenging* - Evaluation of the ADC's effectiveness against disease vectors and scavenging is likely to rely on visual observations made by the owner/operator. Observations should note the ADC's effectiveness against rodents, flies, mosquitoes, as well as other animals and insects looking for food and shelter.

2. *Fires* - The ADC should be non-flammable. In addition, the ADC should minimize potential fire hazards by impeding the spread of fire and limiting the movement of atmospheric oxygen into the waste. The plan should also include a description of the actions to be taken if a fire does occur.
3. *Odors* - The ADC should be capable of preventing the escape of odors to the atmosphere.
4. *Blowing litter and dust* - The proposed ADC should be capable of controlling blowing litter by keeping it in place and protecting it from the wind. The evaluation of the ADC's ability to control blowing litter is likely to rely on visual observations made by the owner/operator. High winds may cause the owner/operator to temporarily discontinue the use of the ADC. To be effective, the ADC should be capable of staying in-place under anticipated wind conditions. If plastic or fabric panels or other geosynthetic products are to be used, the plan should be specific regarding how the ADC is to be held in place to prevent blowup. The ADC itself must not create a dust problem.
5. In addition, consideration should be given to the ADC's impact on moisture infiltration. The ADC's potential to improve site aesthetics, the potential for the proposed ADC to react with waste and/or water, as well as the effect of the ADC on leachate quality/quantity and the controlled movement of leachate and methane gas also should be discussed.

For the criteria identified above, the manufacturers of commercially available products can typically provide quantitative data on their product's flammability, reactivity with waste/water, effect on leachate, as well as their product's ability to control odors and prevent moisture infiltration. Owner/operators who propose to use waste-like materials (such as ash-based material, compost-based material, automobile recycling fluff, contaminated soils and foundry sand) should be prepared to provide analytical data immediately. Other information will not likely be readily available so the demonstration plan should focus on collecting this information. A form should be used to record the ADC's performance with regard to the criteria previously described. The form should be completed daily and may also include additional information such as weather conditions, special operational practices used, as well as problems encountered using the ADC. During the course of the demonstration, a monthly report should be submitted to the Department. The monthly report should summarize the performance of the ADC and evaluate its effectiveness. The monthly report should also include copies of the completed forms used to make daily evaluations. Photographs may be used to further document the ADC's performance. Upon completion of the demonstration period, the Department will evaluate the information submitted and either approve or deny the continued use of the proposed ADC. The Department may also perform on-site inspections during the demonstration period in order to gather additional information on the ADC's performance.

Finally, there are times when a proposed ADC may be physically, but not chemically, similar to the kinds of earthen material used at a landfill (e.g. contaminated soils). If that's the case, it may not be necessary to require a full 180 day field demonstration. In fact, there may not be enough material to perform a field demonstration. If you are considering using such a material as ADC, there must be a chemical analysis to not only show that it's not a regulated hazardous waste, but also that the material will not be a threat to human health or the environment. If such an ADC is approved for use, it will often be temporary and only apply to an individual project or site. It will likely be necessary to impose conditions on the use of such a material such as limited storage, dust suppression and the application of clean soils within a certain number of days. Contact the Department if you are considering using this type of material as ADC.

RESOURCES:

- NDEE Home Page <http://dee.ne.gov/>

Contacts:

- NDEE Waste Management Section (402) 471-4210
- NDEE Toll Free Number (877) 253-2603
- NDEE Hazardous Waste Compliance Assistant (402) 471-8308
- Email questions to: NDEE.moreinfo@nebraska.gov

NDEE Publications:

- [Title 132 – Integrated Solid Waste Management Regulations](#)

Titles are available on the NDEE Home Page under “Laws/Regs & EQC”, “Rules & Regulations”

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