



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

November 12, 2004

To: RCRA Division Directors (Regions I-X)  
Superfund Division Directors (Regions I-X)  
OSWER Office Directors

From: Matt Hale, Director /s/  
Office of Solid Waste

Subject: Clarification and Revision of April 6, 2004, Memorandum on Recommended Interim Practices for Disposal of Potentially Contaminated Chronic Wasting Disease (CWD) Carcasses and Wastes

As indicated in the April 6, 2004, subject memorandum, we are continuing to work with interested parties to refine and revise the interim recommendations for CWD carcass disposal addressed in that memorandum. Today's memorandum provides certain clarifications and revisions based on continuing discussions and replaces the April 6, 2004, memorandum on recommended interim practices for disposal of potentially contaminated chronic wasting disease carcasses and wastes. These practices are particularly appropriate for landfills facing a relatively large number of carcasses from a particular culling or other event. We recognize that many landfills receive occasional carcasses, e.g., from individual hunters and from road kill, that may or may not be potentially infected with CWD. EPA has no reason to believe that the current practice of landfilling these carcasses is inappropriate.

In addition to the clarifications provided in today's memorandum, we made four revisions to the attached recommended interim practices: We revised the language in paragraph 2 on leachate at the request of the EPA's Office of Water; we revised the language in paragraph 4 on splaying; we deleted the recommendation for placement in a macro-vault; and, we revised the last bullet in paragraph 5 on record keeping.

We recognize that several States and Regions have dealt with the disposal of potentially contaminated CWD carcasses and wastes, occasionally in relatively large quantities, and that there are several options available for the disposal of these materials, one being disposal in a Part 258-compliant municipal solid waste landfill (MSWLF). The purpose of this memorandum is to provide States with interim practices for consideration when a decision is made to dispose of these wastes in a MSWLF. As a prudent measure, we believe it is

appropriate

2

and reasonable for EPA to encourage that the land disposal of this material takes place in a manner that minimizes any possibility of releases. We are providing these interim practices now recognizing that many of you must deal with these issues today. However, we will continue to work with you and the States to refine and revise these interim practices. We want to reiterate that disposing of potentially contaminated CWD carcasses and wastes in MSWLFs that are compliant with 40 CFR 258 standards is and remains an acceptable option.

Several states (CO, IL, KS, MT, MN, NE, NM, OK, SD, UT, WI, WY) and EPA Regions (5, 6, 7, 8) have dealt with the disposal of elk and deer contaminated with CWD. Some States have even developed their own practices for such disposal. In some cases, high-temperature incineration or alkaline hydrolysis tissue digestion have been used to dispose of contaminated CWD carcasses and other CWD contaminated wastes, as these methods are thought to destroy prions, the theorized disease-causing agent. Other States with large numbers of carcasses and heads that need to be handled and a lack of available disposal options (such as alkaline digestion and high temperature incineration) have used MSWLFs to dispose of potentially contaminated CWD waste derived from deer or elk herds in areas where CWD is known to occur. Since CWD is transmitted horizontally between deer and elk, containing the infectious agent in MSWLFs would help reduce the spread of the disease. Given the exigencies of particular situations, we recognize that this is often the most reasonable option, and we believe it is prudent to manage the material in a manner that minimizes the potential for releases to the environment. Therefore, EPA, with input from several states, the U.S. Department of Agriculture, and the Food and Drug Administration of the U.S. Department of Health and Human Services, has developed the attached recommended interim practices that a State may consider when addressing disposal of CWD contaminated wastes in MSWLFs. States should consider local characteristics (e.g., depth to groundwater, soil type) when applying these interim recommendations to a specific facility and situation.

These interim practices capture issues such as: segregation of carcasses, management of leachate, daily cover considerations, and compliance with Part 258. Note that these interim practices are specific to CWD. The interim practices provide recommendations and do not impose any legally binding requirements nor do they change or substitute for any State, federal, or local statutory or regulatory provision or guidelines. Should you have any questions on these interim practices, please contact Thea McManus, Associate Director of the Municipal and Industrial Solid Waste Division at (703) 308-8738, or have your staff contact Dave Bartenfelder at (703) 308-8629. Thank you for your assistance in promoting the prudent management of these materials.

#### Attachment

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## **Attachment**

### **Recommended Interim Practices for Large-Scale Disposal of Potentially Contaminated Chronic Wasting Disease (CWD) Carcasses and Wastes**

Where no State requirements or guidelines have been developed for large-scale disposal of potentially contaminated chronic wasting disease carcasses and wastes, we recommend that the following interim practices be considered.

- (1) The municipal solid waste landfill should be 40 CFR Part 258 compliant and have no uncontrolled release from the receiving landfill disposal cell.
- (2) If a MSWLF that accepts potentially contaminated CWD carcasses and wastes has a leachate collection system, it is preferable that leachate be re-circulated within the landfill and not discharged to a POTW or through a direct discharge (NPDES) permit.
- (3) To minimize migration of leachate, animal carcasses and other CWD contaminated wastes could be placed on a substantial base of municipal solid waste (e.g., a 20-foot base), overlain by absorbent material sufficient to contain liquids (e.g., 12 inches of material). The absorbent material should be placed immediately prior to the disposal of the animal carcasses or other contaminated wastes.
- (4) To minimize gas formation and carcass bloating, carcasses may be punctured once in the rumen and once in the peritoneal cavity and placed on top of the absorbent material. Generally, we would expect waste layers that are no more than two-carcasses thick. To fill voids and minimize excessive subsidence and gas production, many landfill operators at this point add lime, cement kiln dust, or other similar high-pH material. Immediately following placement of carcasses/contaminated wastes, a cover layer of municipal solid waste at least 3 feet thick could be applied. At the end of the operating day, earthen material or alternative cover material should be applied to meet the daily cover performance standard.

As an alternative, carcasses may be punctured once in the rumen and once in the peritoneal cavity and disposed of in a geomembrane-lined trench within the MSWLF. These carcasses and other contaminated wastes in this case are placed in the trench not exceeding a two carcass-layer thickness. After placement of the carcasses or other contaminated wastes, lime, cement kiln dust, or other similar high-pH material is often added to fill the voids and to minimize gas production and excessive subsidence. After filling the voids, the operator overlaps the sides of the geomembrane by perhaps three feet to create a secure trench. After sealing the geomembrane or at the end of the operating day, the operator should apply earthen material or alternative cover that meets the daily cover performance standard.

- (5) In addition, the state/local regulatory agency should consider:

- Taking into account potential settlement and future surface water ponding when determining the number of carcass layers.

- Segregating CWD animal carcass/other CWD contaminated waste disposal areas to the extent possible and identifying the boundaries of the disposal area using GPS or other methods.
- Providing advanced notification to the MSWLF when large numbers of CWD carcasses or other CWD contaminated wastes are being brought to the landfill to allow landfill mobilization and preparation time.
- Disposing of any disposable materials derived from these operations concurrently with CWD animal carcasses/other contaminated wastes.
- Maintaining an official record of where CWD animal carcass/other CWD contaminated wastes have been placed in the landfill.