



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

MAY 21 2007

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

Mr. Addison D. Davis, IV  
Deputy Assistant Secretary of the Army  
Installations and Environment  
Department of the Army  
110 Army Pentagon  
Washington, D.C. 20310-0600

Dear Mr. Davis:

Thank you for your letter of March 30, 2007, requesting that the Environmental Protection Agency (EPA) provide guidance on the applicability of Resource Conservation and Recovery Act (RCRA) hazardous waste regulations to the disposal of Unified Group Ration – Express (UGR-E).

My staff has reviewed the Material Safety Data Sheet (MSDS) prepared by the manufacturer of the flameless heaters contained in UGR-E, Truetech, Inc., and the data provided by the Research, Development, and Engineering Command (RDECOM). Based on this information, EPA believes that the October 29, 2004, guidance regarding the management of Flameless Ration Heaters supplied with individual Meals, Ready to Eat, is applicable to the UGR-E flameless heaters. I have enclosed this guidance for your information.

Your request for guidance included two disposal scenarios. In the case of the disposal of expired UGR-E (which include food products and four individually packaged chemical heaters) the Agency believes that it is unlikely that intact UGR-Es would be RCRA hazardous waste when disposed. The four chemical heaters in the UGR-E are designed to raise the temperature of the food from 40°F to 140°F, and the heaters do not exceed 212°F. Because the temperature elevation that would be caused by UGR-E reacting with water in a landfill is not great enough to cause a landfill fire or otherwise cause a significant hazard, EPA believes the heaters, when packaged as part of the UGR-E, do not "react violently with water" as described in 40 CFR § 261.23(a)(2). Based on the information you provided, the rate of the reaction of the chemical heater when reacted with non-saline water is much slower than the rate of the reaction when the


heaters are activated with the 1.5 % salt water included in the UGR-E, reducing the possibility that any hydrogen that is generated could reach high enough concentrations to become explosive. Therefore, EPA believes the rate of gas generation under plausible UGR-E waste management circumstances indicates that no potentially explosive mixtures would be generated (see reactivity criteria at 40 CFR § 261.23(a)(3)).

The other scenario described in your letter was the disposal of unused, individual chemical heaters; that is, heaters without the food products and other UGR-E components, used for the UGR-E. EPA believes an unused individual chemical heater taken from an UGR-E issued for use in the field and being disposed of by a unit is excluded from RCRA Subtitle C regulation, under the household waste exclusion in 40 CFR § 261.4(b)(1). There are four heaters in each UGR-E, so it is plausible and even likely that multiple unused chemical heaters, which are not packaged with the food products and other UGR-E components, could be disposed of at the same time. The total amount of hydrogen gas and heat generated by multiple chemical heaters would be substantially more than the amount generated by a single heater. Although in this situation the individual unused heaters are excluded from RCRA Subtitle C regulation as household wastes, they may exhibit the hazardous characteristic of reactivity (see 40 CFR § 261.23(a)(3)). Accordingly, EPA urges generators and handlers to manage the unused UGR-E chemical heaters carefully. The Agency appreciates the Army's efforts to find an environmentally protective solution to the management of UGR-E. Whenever possible, we encourage recycling of unused chemical heaters, either by returning them to the manufacturer or through consignment to surplus.

In general, states are authorized by EPA to implement the RCRA hazardous waste program. An authorized state's hazardous waste regulations are applicable within the state in lieu of the Federal regulations, and states' regulations may be more stringent than the Federal regulations. Thus, you should also check with the appropriate state agency or, if the state is not authorized, the EPA regional office, to confirm the requirements applicable to your UGR-E management activities.

I hope this letter clarifies EPA's views regarding the disposal of UGR-E. As you know, the conclusions expressed here rely significantly on your representations of results from tests performed on the UGR-E chemical heaters. Should you have questions about EPA's guidance or views on this matter, you may contact my office or Greg Helms at [helms.greg@epa.gov](mailto:helms.greg@epa.gov) or 703-308-8845.

Sincerely,

  
Susan Parker Bodine  
Assistant Administrator

Enclosure