



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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BOSTON, MASSACHUSETTS 02114-2023

March 18, 2008

Mr. Steve Wood
John W. Furrh Associates, Inc.
135 Washington Street
Taunton, MA 02780

Dear Mr. Wood:

This letter is in response to your letter to me dated February 1, 2008. This letter as clarified by our telephone conversation on February 29, 2008 seeks to confirm the hazardous waste determination requirements that must be met for a range of solid wastes (paint cans, aerosols, gel-coat, resin epoxy, roller covers, paint brushes, pan liners, and masking paper) generated by marina operations.

As raised in your letter, a key consideration is whether a product container being disposed is empty. Hazardous waste residues in an "empty" container are not subject to hazardous waste regulations. Under 40 CFR §261.7 a container that has held hazardous waste that is not an acute hazardous listed waste or a compressed gas is considered to be "empty" when less than 2.5 cm (1 inch) of residue remains at the bottom of the container or less than 3% by weight of the hazardous waste remains in a container of less than 119 gallons capacity¹.

Paint, epoxies, resins, etc. being disposed, that remain in containers and are more than the allowable residue in an empty container, or that are poured out of containers, remain subject to a hazardous waste determination and to regulation if they are a hazardous waste. Likewise any materials which acquire a hazardous waste characteristic through use (e.g. a used brush coated in dried zinc chromate containing paint which exhibits the characteristic of toxicity for chromium after use) will be subject to hazardous waste regulations when disposed.

¹ Containers of hazardous waste of less than 119 gallons capacity are the most likely situation to be encountered at a marina. Containers of greater than 119 gallons capacity must contain no more than 0.3% of the container capacity to be considered "empty". Containers that have held an acute hazardous waste must be triple rinsed using a solvent capable of removing the material to be considered "empty." Containers of compressed gas must approach atmospheric pressure to be considered "empty". Determining when an aerosol can has been rendered empty and whether the empty can itself is potentially a reactive hazardous waste is a unique problem. I have enclosed a copy of an October 7, 1993 letter from Jeffrey Denit to Gregory Crawford that speaks to this issue.

How much and what kind of information is an adequate basis for a hazardous waste determination for these materials is a case specific question and would need to be addressed with respect to specific waste streams. Certainly, as you discussed with Mr. Piligian of our enforcement program and outlined in your letter, generator knowledge supported by the Material Safety Data Sheet can be an adequate basis to determine the status of many commercial chemical products upon disposal. So, for example, a generator knowledge based determination that a dried (no longer ignitable) paint which is not a listed waste and contains no metals tested by the Toxicity Characteristic Leaching Procedure (TCLP) is not a hazardous waste is reasonable. Other wastes, such as a brush coated with zinc chromate containing paint might require testing to demonstrate it is not a hazardous waste, but a generator may, of course, use knowledge alone to support a decision to manage it as a hazardous waste on the presumption it is likely to fail (or might fail) the TCLP.

Please note that authorized states implement the RCRA program in lieu of the federal government and that state regulations may be more stringent than the federal regulations. You should check with the appropriate state environmental agency to determine if more stringent requirements not outlined in this letter will apply in a given state.

Sincerely,



Ernest Waterman, Chief
Hazardous Waste Unit

cc: D.Brown, Chief RCRA Enforcement Unit, EPA
L. Wells, OES
J. Fowley, Atty., ORC-EPA
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J. Miller, Chief, Waste Branch, MADEP
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L. Grandchamp, Chief, Waste Management, RIDEM
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S. Simoes, Hazardous Materials Management Division, VTDEC
J. Duclos, Hazardous Waste Management Bureau, NHDES

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United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

October 7, 1993

Mr. Gregory L. Crawford
Vice President, Recycling Operations
Steel Recycling Institute
Foster Plaza X
680 Anderson Drive
Pittsburgh, Pennsylvania 15220

Dear Mr. Crawford:

Over the past several years we have received numerous questions concerning the regulatory status of used aerosol cans under the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations. I understand that confusion about these issues may be hindering your efforts to increase steel aerosol can recycling in this country. As environmentally protective recycling is an important part of the Agency's waste management goals, I hope that this letter will help to answer some of these questions.

RESIDENTIAL AEROSOL CANS

First, I would like to emphasize that under the federal RCRA regulations, household waste (including aerosol cans) is excluded from the definition of hazardous waste (40 CFR 261.4(b)(1)). Thus, any aerosol cans generated by households are not regulated as hazardous waste. Because this exclusion attaches at the point of generation (i.e., the household) and combines to apply throughout the waste management cycle, household aerosol cans collected in municipal recycling programs and subsequently managed in recycling programs continue to be excluded from the hazardous waste management regulations.

The data you submitted (see footnote 1) appear to confirm that the majority of used residential aerosol cans contain very little residual product or propellant. Along with your experience working with many of the 600 or more communities currently recycling these

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cans, the data suggest that aerosol cans can be effectively recycled. The Agency does recommend that communities running residential steel recycling programs educate their participants to recycle only empty steel aerosol cans. Participants could also be educated to: 1) purchase only the amount of consumer products that they need to minimize the quantities of unused products, 2) give unused products to someone else who can use them, 3) take unused or partially full containers to a household hazardous waste collection program if available, or 4) dispose of the partially full containers as directed on the label.

COMMERCIAL/INDUSTRIAL AEROSOL CANS

I understand that you are also interested in facilitating the recycling of aerosol cans generated by commercial or industrial generators. The remainder of this letter discusses only these non-household waste items.

We have been asked whether aerosol cans exhibit the characteristic of reactivity. At this time, the Agency is not able to determine whether various types of cans that may have contained a wide range of products are reactive. However, a steel aerosol can that does not contain a significant amount of liquid would clearly meet the definition of scrap metal (40 CFR 261.1(c)(6)), and thus would be exempt from RCRA regulation under 40 CFR 261.6(a)(3)(iv) if it were to be recycled. Therefore, a determination of reactivity or any other characteristic would not be relevant. Aerosol cans that have been punctured so that most of any liquid remaining in the can may flow from the can (e.g., at either end of the can), and drained (e.g., with punctures end down), would not contain significant liquids.

It should be noted that since the process of emptying the aerosol cans is part of a recycling process (i.e., scrap steel recycling), this activity would be exempt from RCRA regulation under 40 CFR 261.6(c) (except as specified in 40 CFR 261.6(d)). The Agency recommends that these activities be conducted in a safe and environmentally protective manner and that care be taken to properly manage any contents removed from the container (both liquids and gases). Any liquids or contained gases removed from aerosol cans may be subject to regulation as hazardous wastes if they are listed in Subpart D of 40 CFR Part 261 or if they exhibit any characteristics of hazardous waste as described in Subpart C of

40 CFR Part 261.

We have also been asked to determine whether used aerosol cans would meet the definition of "empty" under 40 CFR 261.7. Again, if the steel cans are being recycled, it is not necessary to determine whether they are "empty" under the criteria listed in 40 CFR 261.7. As long as an aerosol can being recycled does not contain significant liquids, the can is exempt as scrap metal. However, in order to dispose of a can as non-hazardous waste (rather than recycle it), a generator would have to determine that the can is empty under 40 CFR 261.7 (or that the product it contained was not hazardous), and that the can itself is not hazardous. If a can is to be disposed of, and either contains or is hazardous waste, it must be managed under all applicable regulations.

Please be aware that this letter addresses only the federal hazardous waste regulations. Authorized State agencies implement the RCRA program in their states (although some parts of the program may be implemented by the U.S. EPA Regions), and that state regulations may be more stringent than the federal regulations. Anyone managing aerosol cans should contact the appropriate state environmental agency or U.S. EPA Regional Office to determine how the regulations of that particular state will apply to their activities.

I hope this information is useful in your efforts to increase steel recycling. Thank you for the assistance that you and the Steel Recycling Institute have provided my staff in researching these issues. If you have any further questions, please call Charlotte Mooney of my staff at (202) 260-8551.

Sincerely,
Jeffrey D. Denit
Acting Director
Office of Solid Waste

cc: Waste Management Division Directors,
U.S. EPA Regions I - X

1 Texas Steel Aerosol Can Recycling Program, Final Report;
Steel Can Recycling Institute (now Steel Recycling
Institute), December 7, 1992.

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