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TO: Internet Address: rcra-docket@U.S.EPA.gov

RE: RCRA Docket #: EPA-HQ-OLEM-2017-0463

Increasing Recycling: Adding Aerosol Cans to the Universal Waste Regulations

DATE: May 14, 2018

RCRA DOCKET:

Please find enclosed the Ohio Environmental Protection Agency's comments on U.S. EPA's request for input and information regarding adding aerosol cans to the Universal Waste Regulations. This notice was issued March 16, 2018, in the *Federal Register* (Vol. 83 No. 52, pg. 11654).

Ohio EPA appreciates the opportunity to provide input on this rulemaking and requests that these comments be made an official part of the record. If you have any questions or need additional clarification regarding the enclosed comments, please do not hesitate to contact Karen Hale, Division of Environmental Response and Revitalization, at (614) 644-2927 or karen.hale@epa.state.oh.us

Sincerely,

A handwritten signature in blue ink, appearing to read "James C. Sferra".

James C. Sferra
Program Administrator, Hazardous Waste Program
Assistant Chief, Division of Environmental Response and Revitalization

1. General Comment

Ohio EPA adopted state-specific universal waste rules in December 2017 classifying non-empty aerosol containers as a universal waste. A copy of Ohio's universal waste aerosol container rules for large quantity handlers is attached for your review and consideration in developing U.S. EPA's universal waste rules for aerosol cans, Ohio Administrative Code rule 3745-273-33 (D).

2. 40 CFR 260.10 - Definition of Aerosol Can

Ohio EPA suggests that the term "can" be replaced with the term "container" to make it clear that products packaged in plastic aerosol containers are eligible to be managed as a universal waste. The term "can" strongly implies a metal container and therefore narrows the applicability of the definition and excludes plastic containers from being eligible to be managed as a universal waste.

Plastic aerosol containers are a rather new type of container and currently aren't as prevalent in the marketplace as metal aerosol containers. Plastic aerosol container can be used to package:

- Personal care – shaving gels & foams, hair care, body moisturizers
- Home care – air fresheners, cleaning applications, insecticides
- Food - oils, cooking mists, creams and sauces
- Industrial applications

In addition, the definition of aerosol can needs to be clarified to exclude compressed gas cylinders and to include aerosol gels such as shaving cream. Ohio EPA suggests the following definition:

"Aerosol container" means a non-opening, non-refillable container that holds a substance under pressure and that can release the substance as a spray, gel, or foam by means of a propellant gas.

3. 40 CFR 273.4 (b)(4) – Leaking or damaged aerosol cans

U.S. EPA proposes to exclude leaking or damaged aerosol cans from being classified and managed as universal wastes. Ohio EPA does not support this proposal. Ohio EPA supports that leaking or damaged aerosol cans be eligible to be classified and managed as universal wastes.

Excluding damaged or leaking aerosol cans from the universal waste program complicates implementation of the universal waste rule for the handler and makes the rule less understandable. Also, the exclusion of leaking/damaged cans it offers minimal additional environmental protection since the universal waste rules offer consistent and comparable environmental protection as compared to the hazardous waste generator rules. The universal waste rules are consistent to the hazardous waste generator rules in that a handler is required to:

- use an appropriate, structurally sound and compatible container;

- label the container regarding its contents;
- limit storage time of aerosol cans to one year;
- transport the cans according to U.S. DOT's applicable transportation rules;
- Maintain a spill cleanup procedure and equipment; and
- train personnel regarding the proper procedure to handle, puncture and drain aerosol cans, and respond to releases.

Further, under Ohio EPA's universal waste program, both leaking or damaged aerosol containers and punctured aerosol containers are still eligible to be managed as a universal waste. Ohio EPA specifically addressed the issue of a leaking or damaged aerosol container in its recently adopted universal waste rules for aerosol containers by requiring leaking or damaged aerosol containers to be overpacked with absorbent or immediately punctured to remove the contents of the container. Ohio EPA believes that allowing leaking, damaged and punctured aerosol containers to remain eligible to be managed as universal wastes promotes the proper treatment and disposal of the waste and provides for an easily understood regulatory system for aerosol containers.

Ohio EPA's universal waste, Ohio Administrative Code (OAC) rules 3745-273-13 and 3745-273-33 state:

"A large quantity handler of universal waste shall immediately empty a leaking aerosol container of the container's contents in accordance with paragraph (E) (4) of this rule or shall individually overpack the leaking aerosol container in a container having enough absorbent material to absorb the leaking contents of the aerosol container."

4. 40 CFR 273.6 (b)(1) – Grammar check

Please check grammar; change second use of the term "cans" to "can."

5. 40 CFR 273.6 (b)(2) – Aerosol cans are not categorically reactive hazardous wastes

Ohio EPA suggests that U.S. EPA add a phrase or a comment to this provision to make it clear to the regulated community that aerosol cans are not categorically defined as reactive hazardous wastes. Some regulators and stakeholders have a misconception that because an aerosol can may burst when overheated resulting in the release of the contents from the can that the aerosol can is a reactive hazardous waste. However, such an occurrence does not meet the definition of a reactive hazardous waste. Any material in a sealed container, be it a container of milk or a drum of waste, will burst if overheated. U.S. EPA provides a good explanation of this physical phenomenon in the preamble but needs to go further and specifically state, preferably in the rule, that aerosol cans are not reactive hazardous waste unless the contents of the container actually meets the definition of reactivity in 40 CFR 261.23.

Ohio EPA addressed the issue of reactivity in OAC rule 3745-273-89 as follows:

"Aerosol containers that are not a hazardous waste. An aerosol container is a hazardous waste if the contents of the container exhibit one or more of the characteristics identified in rules 3745-51-20 to 3745-51-24 of the Administrative Code, or if the contents of the container are listed in rules 3745-51-30 to 3745-51-35 of the Administrative Code. An aerosol container is not a reactive hazardous waste unless the contents meet the description of "reactivity" in rule 3745-51-23 of the Administrative Code."

In addition, the definition of reactivity states "a waste exhibits the characteristic or reactivity. . .if it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement." Detonation is defined in 40 CFR 265.382. It is important to note that detonation and explosive reactions are chemical reactions. An explosive reaction is a chemical reaction in which extremely rapid decomposition of a substance occurs thereby releasing hot gases which exert great pressure on the surroundings. Detonation is also an explosive reaction in which chemical transformation passes through the material faster than the speed of sound. An overheated container that bursts is not a chemical reaction; it is physical phenomenon where the structural limits of the container have been exceeded by the pressure exerted by the heated contents in the container.

Further, the definition of reactivity was "intended to identify wastes, that because of their extreme instability and tendency to react violently or explode, pose a problem at all stages of the waste management process, 45 FR 33109. It is evident that aerosol cans do not pose this type of hazard. A potential hazard an aerosol container can pose is when its ignitable content is released (even during normal use) and an ignition source is present.

6. 40 CFR 273.6 (b)(2)

Please check this rule for clarity. It appears that the words "contents of the" should appear before "aerosol can" otherwise, only the metal can is subject to evaluation to determine if it is a characteristic hazardous waste and not the contents of the can.

7. Page 11660 – Empty container

U.S. EPA states that aerosol containers that meet the definition of empty in 40 CFR 261.7 are not subject to hazardous waste regulation and may be recycled as scrap metal. This is a misleading and not entirely correct statement. Yes, a container that meets the definition of empty is not subject to the hazardous waste regulations. What is misleading about the statement is that the aerosol can must be RCRA empty, per 40 261.7, to be classified as scrap metal.

The scrap metal exclusion is found in 40 CFR 261.6. Scrap metal is a "recyclable material" and "recyclable material" is defined as a hazardous waste that will be recycled. Therefore, an aerosol container does not need to completely empty or triple rinsed (if it held a P-listed waste) to be classified and recycled as scrap metal. However, it is a good management practice to remove as much of the waste from the aerosol can as possible. U.S. EPA should clarify this point.

Also, this rulemaking is a perfect opportunity for U.S. EPA to define that a punctured and drained aerosol can is a “RCRA empty” container. Such a provision will reduce regulatory burden and provide clarity to generators and inspectors as to the regulatory status of a punctured and drained aerosol can.

Currently, the management of aerosol cans is quite confusing for generators and inspectors. To properly manage an aerosol can, a person needs to know: 1) the contents of the can and whether the contents is a listed or characteristic hazardous waste; 2) whether there is “significant” liquids remaining in the can (which is a very subjective determination); 3) will the metal can be recycled; 4) will the contents of the can be recycled and 5) how will be the contents of the can be recycled or treated. To further confuse the situation, if the can held a P-listed substance, then the can, under current rules, is not empty until it is triple rinsed which may only be accomplished by cutting the can open and rinsing it. Hence, determining the proper waste classification of an aerosol can and its contents is involved, complicated and confusing.

Perhaps, a provision can be added to 40 CFR 261.7 that states that an aerosol can is empty when it has been punctured and drained. Such a provision will help reduce the regulatory burden associated with the management of aerosol cans; in addition to, classifying aerosol cans as a universal waste. This provision should apply to cans that hold characteristic or listed hazardous wastes. Suggested rule language to add to 40 CFR 261.7 is provided below.

A container that is an aerosol container as defined in 40 CFR 273.09 that has held acute, listed or characteristic hazardous waste is empty when the container has been punctured and drained.

8. *Page 11660, 40 CFR 260.10, 40 CFR 273.6(b)(3) - Point of generation*

By declaring the punctured can a new point of waste generation thus requiring the container to be evaluated to determine whether it still contains a hazardous waste or whether the container itself is a hazardous waste negates the regulatory streamlining offered by classifying aerosol cans as a universal waste and needlessly makes the rule complicated and confusing to implement. Further, no additional environmental protection is realized or gained by imposing that each emptied aerosol can be evaluated.

Handlers should be able to continue to classify their punctured aerosol cans as a universal waste if they want and send them to another handler or destination facility. In Ohio, there is a commercial incinerator that treats aerosol cans, in addition to other wastes such as drummed waste, and reclaims the metal from the ash for metal recovery.

U.S. EPA can restore the regulatory flexibility and burden reduction component of the universal waste aerosol can rule by removing the term “intact” from the definition of aerosol can so that the definition will be inclusive of punctured aerosol cans or U.S. EPA can include the term “punctured aerosol cans” in the definition.

The liquid contents removed from the aerosol container is a new point of waste generation because the definition of aerosol container no longer applies to the liquid contents. The container contents need to be evaluated to determine if it is a hazardous waste.

9. 40 CFR 273.13 and 273.33 – Specifically designed puncturing device

Ohio EPA suggests that the type of device used to puncture aerosol cans be revised to also allow the use of puncturing devices that are custom designed or retrofitted to puncture aerosol cans. During Ohio EPA's public comment period we were informed that industries often need to design equipment or alter existing equipment to meet design specifications of their processes. Ohio EPA addressed this issue in its final rule; the rule language is provided below.

“. . . a handler of universal waste shall use commercially available equipment, or equipment specifically custom designed or retrofitted according to accepted engineering practices based on established codes, standards, published technical reports, or similar peer reviewed documents, to puncture or crush and empty aerosol containers within an enclosed compartment.”

10. Satellite Accumulation area for aerosol containers

Ohio EPA suggests that a provision to allow the use of aerosol can satellite accumulation areas be added to the rule. Ohio added such a provision to reduce the burden associated with tracking the universal waste storage time limit for large facilities that have multiple area areas where aerosol cans are generated. In addition, the provision also accommodates large facilities that have specific waste pickup schedules within their facilities where a certain type of waste is picked up on an assigned day throughout the facility and taken to a central waste collection area.

Ohio EPA's satellite provision allows the handler to have satellite accumulation areas in the work area where aerosol cans are initially generated and collected. The collection container shall not have a capacity greater than 55 gallons and once the container is full it needs to be moved the universal waste storage area. Once in the storage are, the one-year storage time limit begins for the aerosol cans. This provision is intended to provide additional streamlining of the tracking requirements with no reduced protection. Below is Ohio EPA's definition of “universal waste satellite accumulation area”:

“Universal waste satellite accumulation area” means a designated container or other unit with a capacity not to exceed fifty-five gallons or a designated cabinet where universal waste aerosol containers are initially collected in the work area prior to being moved to the specified accumulation area for storage, puncturing, or preparation of the universal waste aerosol containers for shipment to another universal waste handler or destination facility.

11. *Allow the puncturing and crushing of aerosol containers.*

A number of aerosol can units crush the aerosol container after the container has been punctured. The preamble or rule should clarify that this activity is allowed under the universal waste rules. Crushing of aerosol cans provides for efficient and consolidated storage of the aerosol cans in addition to reducing the cost of transportation of the cans to a handler or destination facility since one 55-gallon drum of crushed cans would be approximately four drums of crushed cans.

12. *Page 11662 - Limit puncturing of aerosol cans to entities that do not charge for the service*

Ohio EPA supports the puncturing of aerosol cans by any universal handler of aerosol cans even if the handler charges for the service. Generators who produce many aerosol cans should have the option to hire a mobile service to come to their facility and puncture and drain the cans on the handler's site. This operation would be similar to the manner in which mobile paper shredding services work.

In addition, many municipal solid waste districts often hire a commercial waste company to oversee and operate household hazardous waste collection centers. Since the operator is paid to oversee the facility, these centers could not operate as a universal waste handler of aerosol cans and accept and puncture cans from commercial and industrial facilities. Thereby resulting in a missed opportunity to provide increased accessibility to services where aerosol cans may be properly managed, treated, recycled or disposed.

13. *Puncturing of aerosol containers should not be limited to only those cans that will be recycled.*

Ohio EPA encourages U.S. EPA to allow the puncturing of universal waste aerosol cans regardless whether the cans are sent for metal recovery or not. The cost of treating a drum of aerosol cans by incineration is estimated to be three times the cost of treating combustible liquids by energy recovery. This cost differential may prompt generators of aerosol cans to improperly dispose of the undrained cans in the normal trash. Therefore, allowing the puncturing of cans even though the can may not be reclaimed will encourage the collection, proper manage and recycling of the can contents.

In addition, U.S. EPA does not need to require that the metal can be reclaimed in order to allow a handler to puncture aerosol cans. Under the universal waste rules, U.S. EPA or a State has the ability to adopt provisions to allow certain waste treatment or recycling activities in order to further encourage the proper management, treatment and disposal of the waste.

14. *40 CFR 273.13(e)(3)(iv) and 40 CFR 273.33(e)(3)(iv) – Provision should be removed*

Paragraphs 40 CFR 273.13(e)(3)(iv) through 273.13(e)(3)(vii) and 40 CFR 273.33(e)(3)(iv) through 273.33(e)(3)(vii) are confusing and somewhat redundant. The intent of the rules can be clarified by deleting paragraphs 40 CFR 273.13(e)(3)(iv) and 40 CFR 273.33(e)(3)(iv).

Paragraph (e)(3)(iv) requires that the contents of the aerosol cans be contained in a container or tank that meets the hazardous waste generator requirement regardless whether the waste is hazardous or not. However, paragraph (e)(3)(vii) contradicts paragraph (e)(3)(iv) by stating that if the contents of the aerosol can are nonhazardous, the handler may manage the waste in any manner that is in compliance with applicable rules.

15. Applicability of ABBCC air emissions to aerosol can puncturing and draining operation

Ohio EPA suggests that, in the preamble to the final rule, U.S.EPA provide a clarification that the ABBCC air emission requirements do not apply to units used to puncture and drain aerosol cans.

Ohio EPA understands that a universal waste aerosol can puncturing facility that is also a large quantity generator of hazardous waste is subject to the ABBCC air emissions requirements for volatile organic hazardous wastes stored in tanks and containers but not including satellite accumulations units. However, 40 CFR 261.9 exempts aerosol cans from regulation under 40 CFR part 262 through 40 CFR part 270 of this chapter except as specified 40 CFR part 273. Therefore, since the puncturing of aerosol cans is an activity allowed under the universal waste rules, air emissions generated from the puncturing unit are not regulated under the hazardous waste program. Air emission requirements imposed under the Clean Air Act would be applicable.

Ohio Administrative Code rule 3745-273-33(D)

(D) Universal waste aerosol containers. A large quantity handler of universal waste shall manage universal waste aerosol containers in a way that prevents releases of any universal waste or any component of a universal waste to the environment, as follows:

- (1) A large quantity handler of universal waste shall store aerosol containers in a cabinet, hopper, container or other unit such as a table top or shelving unit that is structurally sound and compatible with the contents of the containers and that lacks evidence of leakage.
- (2) A large quantity handler of universal waste who initially collects aerosol containers at a universal waste satellite accumulation area prior to moving the aerosol containers to a specified accumulation area for storage, puncturing, or shipment off-site shall move the satellite accumulation container to the specified accumulation area prior to the capacity of the satellite accumulation area being exceeded.
- (3) A large quantity handler of universal waste shall immediately empty a leaking aerosol container of the container's contents in accordance with paragraph (E) (4) of this rule or shall individually overpack the leaking aerosol container in a container having enough absorbent material to absorb the leaking contents of the aerosol container.
- (4) A large quantity handler of universal waste may puncture or crush an aerosol container to remove and collect the contents of the aerosol container rendering the container empty provided the handler does the following:
 - (a) The large quantity handler of universal waste shall use commercially available equipment, or equipment specifically custom designed or retrofitted according to accepted engineering practices based on established codes, standards, published technical reports, or similar peer reviewed documents, to puncture or crush and empty aerosol containers within an enclosed compartment.
 - (b) The large quantity handler of universal waste shall use puncturing or crushing equipment that has sufficient processing capacity to puncture or crush the quantity of aerosol containers received or generated within one year.
 - (c) The large quantity handler of universal waste shall ensure that puncturing or crushing equipment meets the following conditions:
 - (i) The equipment shall be located in a well-ventilated area.
 - (ii) The equipment shall be protected from an ignition source.
 - (iii) The equipment shall be connected to a container or tank to collect liquids released from the aerosol container.

(d) The large quantity handler of universal waste shall maintain the puncturing or crushing equipment and replace air filters according to the manufacturer's specifications.

(e) The large quantity handler of universal waste shall determine if the collected liquids, except for liquids consisting solely of paint, and air filters meet the definition of "hazardous waste" according to Chapter 3745-51 of the Administrative Code. If the collected liquids or air filters meet the definition of hazardous waste, the handler is the generator of the hazardous waste and is subject to Chapter 3745-52 of the Administrative Code. The collected liquids, except for liquids consisting solely of paint, and air filters are not classified as universal waste for the purposes of this rule, the empty containers may be recycled.

[Comment: Liquids consisting solely of paint from aerosol containers are eligible to be classified and managed as a universal waste paint in accordance with Chapter 3745-273 of the Administrative Code.]

(f) The large quantity handler of universal waste shall train each operator of the aerosol container puncturing or crushing equipment regarding the safe and proper operation of the puncturing or crushing equipment, the maintenance of the unit, the segregation of incompatible wastes and the identification of aerosol containers for which puncturing or crushing may not be appropriate.

[Comment: Large quantity handlers of universal waste who use aerosol container puncturing or crushing units may be subject to requirements of the Clean Air Act or the Occupational Health and Safety Act.]

(5) A large quantity handler of universal waste shall manage aerosol containers that are ignitable or reactive in accordance with the following:

(a) Rule 3745-66-76 of the Administrative Code or obtain written approval from the authority having jurisdiction over the local fire code allowing alternative aerosol container storage less than fifty feet from the facility's property line. The written approval shall be maintained on-site for as long as ignitable or reactive aerosol containers are managed on-site.

(b) Rule 3745-65-17 of the Administrative Code.

(6) A large quantity handler of universal waste shall manage aerosol containers that are incompatible in accordance with rule 3745-66-77 of the Administrative Code.

(7) The large quantity handler of universal waste shall design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or unplanned sudden or non-sudden release of universal waste or hazardous constituents to air, soil, or surface water which could threaten human health or the environment.