Ms. Tracy Atagi
Docket Control Office (5304P)
Office of Land and Emergency Management
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

May 15, 2018

Sent electronically to Docket No. EPA–HQ–OLEM–2017–0463

Re: ACC Comments on EPA's Proposal to Add Aerosol Cans to the Universal Waste Program

Dear Ms. Atagi:

The American Chemistry Council (ACC)[1] appreciates the opportunity to provide comments on the Environmental Protection Agency's (EPA) proposal, "Increasing Recycling: Adding Aerosol Cans to the Universal Waste Regulations," under the federal Resource Conservation and Recovery Act (RCRA). EPA states that it is proposing this action pursuant to its authority under the Solid Waste Disposal Act (SWDA) and RCRA amendments[2] in order to increase recycling and reduce disposal of aerosol can wastes, while also "providing a clear, practical system for handling discarded aerosol cans."[3]

[1] The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a $797 billion enterprise and a key element of the nation's economy. It is the nation's largest exporter, accounting for fourteen percent of all U.S. exports. Chemistry companies are among the largest investors in research and development. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation's critical infrastructure.

[2] EPA specifically recognizes its authority under "sections 2002(a), 3001, 3002, 3004, and 3006 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), and as amended by the Hazardous and Solid Waste Amendments (HSWA), 42 U.S.C. 6921(a), 6921, 6922, 6924, and 6926."

[3] 83 Fed. Reg. 11655.

I. Overview

ACC generally supports EPA's proposal to add aerosol cans to the universal waste program, as this would provide generators increased flexibility and encourage the continued responsible management of discarded aerosol cans, as well as reduce reliance on disposal in landfills and combustors. ACC agrees that aerosol cans fulfill the criteria identified by EPA upon establishing the universal waste program, and that adding these wastes to the program will help EPA achieve its stated goals: 1) encourage resource conservation while ensuring adequate protection of human health and the environment, 2) improve implementation of the current Subtitle C hazardous waste regulatory program, and 3) provide incentives that result in less of these wastes disposed in municipal landfills or combustors.

ACC has advocated[4] that EPA add aerosol cans to the RCRA universal waste program because the program is a proven method of streamlining federal and state regulatory waste management for certain kinds of commonly generated qualifying waste and reducing recordkeeping and notification requirements. ACC also supports the Agency's decision not to impose size limitations on aerosol cans, which if in place would diminish the likelihood that a generator would choose to follow the universal waste management program, as opposed to simply abiding by requirements under the full suite of hazardous waste regulations. By adding aerosol cans to the universal waste program, EPA would reduce the complexity of the waste management requirements for aerosol cans and incentivize recycling practices.

However, the Agency's proposal could be improved by addressing the following issues:

- EPA should clarify whether or to what extent aerosol cans exhibit the reactivity characteristic.
- EPA should clarify when an aerosol can is considered empty.
- EPA should allow aerosol cans that show evidence of leakage to be considered and managed as universal waste.
- EPA should adopt a flexible approach to accumulation of universal waste aerosol cans.
- EPA should ensure that limitations on puncturing and draining are reasonable and facilitate implementation of the universal waste program.

II. EPA should clarify or revise a number of assumptions and positions in the proposal

A. EPA should clarify whether and to what extent aerosol cans exhibit the reactivity characteristic.

EPA states in the proposed rule that aerosol cans that meet the RCRA empty definition may be recycled as scrap metal, and are not subject to hazardous waste regulation or included in the

[4] ACC comments to the EPA Regulatory Reform Task Force, May 15, 2017, Docket No. EPA-HQ-OA-2017-0190.

universal waste rule.[5] According to EPA, a discarded aerosol can may qualify as a universal waste if the can is not empty and contains a listed or characteristic waste. ACC notes, however, that a 1987 EPA memorandum suggested that "aerosol cans free of hazardous waste, but [that] … contained propellant … would be a RCRA hazardous waste because they demonstrate the hazardous waste characteristic of reactivity."[6] EPA has also recognized in the current proposal that aerosol cans may contain flammable propellants which may result in the aerosol can being designated as an ignitable waste, and may be "hazardous waste for other reasons when discarded."[7] EPA has recognized the importance to stakeholders of clarifying its position on whether "aerosol cans are considered reactive hazardous waste."[8] However, EPA has not clarified whether it has made a categorical determination that aerosol cans are by themselves D003 reactive wastes. Such a determination would run counter to at least one existing state regulatory program,[9] and as a consequence, if an aerosol can were to be discarded, generators would need to show that the can is empty and that the can itself is not reactive or other characteristic waste. EPA notes on page 11656 the following:

> "The can itself is typically a small steel or aluminum container, designed to be hand-held, which is sealed with its contents under pressure. The can's design is intended to prevent unwanted releases of the contents to the environment under normal handling and storage conditions. However, when aerosol cans are mismanaged, particularly when exposed to excessive heat, the resulting increase in internal pressure can reach a point beyond the design strength of the can, thereby causing it to burst and release its contents. At the point of bursting, the contents of the can have been heated to a temperature and pressure far above ambient environmental conditions, causing the contents to rapidly vaporize and be forcefully released. One or more of the following may occur when a can bursts as a result of over-heating: (1) If the propellant or product are ignitable, the contents of the can may readily catch fire as they are released and exposed to atmospheric oxygen, creating a rapidly burning vapor "fireball"; (2) the bottom of the can may detach as a result of a manufacturing defect or an external force, causing the upper part of the can to become a projectile; or (3) the can may fragment as it bursts, releasing metal shards."

EPA's proposal should not leave open the possibility that all unpunctured aerosol cans could be considered D003 reactive waste, preventing the discard of those cans into, for example, scrap metal hoppers. Solid waste generators are required by law to make an accurate determination as to whether a waste is hazardous waste,[10] and the Agency needs to address this issue to facilitate accurate waste determinations.

Ohio's universal waste program, however, recognizes that the contents of the container control whether or not the aerosol can will be considered reactive: "[a]n aerosol container is not a

[5] 83 Fed. Reg. 11660.
[6] RCRA/Superfund Hotline Monthly Summary RO 13027, Waste Identification, 9441.1987(77), September 1987.
[7] 83 Fed. Reg. 11656.
[8] Strategy for Addressing the Retail Sector under RCRA's Regulatory Framework, September 12, 2016.
[9] Ohio Administrative Code (OAC) rule 3745-51-23 (A)(6).
[10] 40 CFR §262.11.

reactive hazardous waste unless the contents meet the description of "reactivity" in rule 3745-51-23 of the Administrative Code."[11] Ohio's guidance adds that "it is not DHWM's position that empty or non-empty aerosol cans categorically exhibit the reactivity characteristic simply because they are sealed containers which can burst when heated."[12] The Ohio guidance further notes that any sealed container of liquid contents will burst when sufficiently heated regardless of its chemical composition.[13] Reactivity, therefore, is demonstrated by whether the contents are capable of detonations and explosive reactions.[14] Indeed, "the potential of a container to rupture when heated" does not on its own demonstrate the characteristic of reactivity.[15]

EPA should adopt a position consistent with Ohio, to clarify that intact (not punctured and drained) aerosol cans do not by default exhibit the reactivity characteristic and may be considered scrap metal or disposed of as nonhazardous waste if the contents of the container do not meet the reactivity characteristic.[16] Finally, EPA should also clarify that where handlers that do not puncture cans on-site, but collect both empty and non-empty cans, they are authorized to commingle RCRA empty aerosol cans and non-empty aerosol cans in the same container without negating the containers status as universal waste.

B. EPA's final rule should clarify when an aerosol can is considered empty

EPA's definition of aerosol can is further complicated by a lack of clarity on when an aerosol can is considered "empty." ACC suggests that EPA harmonize this definition with existing state programs in order to more practically apply the RCRA empty rule to aerosol cans. For example, Minnesota guidance currently recognizes an aerosol can as "empty" when the can: 1) contains no compressed ignitable gas propellant or product; 2) all liquid product that can be dispensed through the valve has been; and 3) less than 3% of the product capacity of the container remains.[17] Minnesota's guidance also recognizes that documenting that an aerosol can meets this standard can be impractical and therefore provides that aerosol cans may be assumed empty when both of the following criteria are satisfied: 1) "no liquid is felt or heard when the can is shaken by hand;" and 2) when "no gas or liquid is released when the spray/discharge valve is activated and the container is rotated through all directions, as long as the valve is not observably or known to be clogged."[18] Minnesota's practical guidance provides clarity on how to make "empty" determinations for aerosol cans. Together with clarifications in the final rule that aerosol cans themselves do not categorically exhibit the characteristic of reactivity, EPA's final

[11] OAC Rule 3745-273-89(A)(2)(b).
[12] Ohio's guidance also states "A non-empty aerosol can must be managed as a reactive hazardous waste if the contents exhibit the reactivity characteristic." Non-empty aerosol cans and reactivity, AnswerID: 478, September 29, 2006, *available at* http://ohioepa.custhelp.com/app/answers/detail/a_id/478/~/non-empty-aerosol-cans-and-reactivity.
[13] *Id.*
[14] *Id.*, pointing out that these are chemical reactions.
[15] *Id.*
[16] If such a can is not recycled, the generator would need to make a hazardous waste determination, and would determine whether the can met the reactivity characteristic based on the contents of the can.
[17] Minnesota Pollution Control Agency, Waste aerosols and compressed gas cylinders, *Guidance for generators and collection sites*, December 31, 2017, available at https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf.
[18] *Id.*

rule should also adopt the Minnesota clarifying language for determining when an aerosol can qualifies as "empty."

C. EPA's final rule should allow aerosol cans that show evidence of leakage to be considered and managed as universal waste

EPA's proposal limits universal waste aerosol cans to only those that are "discarded, intact, non-empty hazardous waste." [19] However, EPA's current universal waste program for batteries, as well as other state programs, allow for the management of universal wastes that show evidence of leakage, spillage, or damage. For example, while EPA states that "universal waste batteries are intended to be intact," the Agency "recognizes that batteries may become damaged or broken during handling."[20] EPA therefore requires that universal waste handlers contain universal waste batteries in a closed, structurally sound container if the battery shows "evidence of leakage, spillage, or damages that could cause leakage under reasonable foreseeable conditions in a container."[21]

EPA should adopt a position consistent with Colorado's program. While the Colorado program defines batteries as "intact and unbroken,"[22] the program does not define aerosol cans in the same manner. Moreover, the Colorado program, similar to EPA's guidance, simply requires handlers to contain universal waste aerosol cans that show evidence of "leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a separate individual container."[23] ACC therefore encourages EPA to finalize a rule whereby all discarded aerosol cans qualify as universal waste, consistent with the approach the Agency and Colorado have already taken with respect to other universal wastes as well as aerosol cans that show evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

D. EPA should adopt a flexible approach to accumulation

EPA's final rule should provide for a universal waste satellite accumulation area that allows for accumulation in up to a 55-gallon drum. The one-year accumulation period for universal waste aerosol cans should then begin when cans are moved from the universal waste satellite accumulation area to the primary universal waste accumulation area. This approach is consistent with guidance under the Ohio state universal waste program:

> "A handler of UW may puncture or crush an aerosol container to remove and collect the contents of the aerosol container rendering the container empty. A handler who generates the UW aerosol containers can collect these containers at a universal waste satellite accumulation area consisting of a container or unit

[19] 83 Fed. Reg. 11660.
[20] RCRA, Superfund & EPCRA Call Center Monthly Report, *Broken Batteries as Universal Wastes*, September 2002, RO 14634.
[21] *Broken Batteries as Universal Waste* (citing 40 CFR sections 273.13(a)(1) and 273.33(a)(1)).
[22] Considering the contents of a battery could be significantly harmful to human health and the environment.
[23] 6 COLO. CODE REGS §1007-3 Part 273.

> having a capacity not to exceed fifty-five gallons, or a cabinet. The aerosol containers must be moved to the main UW storage or puncturing area when it is full, where it may be accumulated for up to one year. This is the only type of universal waste where a satellite accumulation container may be used."[24]

EPA should not assume that hazardous waste generators and universal waste handlers will or currently engage in drastically different puncturing and draining activities. While the universal waste program allows for the accumulation of such waste for up to a year, ACC does not expect that this streamlined capability would result in universal waste handlers puncturing and draining a significantly greater number of aerosol cans at one time than hazardous waste generators. Hazardous waste generators already process these cans in large batches, and ACC expects those practices to continue by universal waste handlers at a similar pace.

III. EPA should ensure that limitations on puncturing and draining are reasonable and facilitate implementation of the universal waste program.

EPA has proposed a number of limitations on the puncturing and draining of non-empty aerosol cans to be applicable at the federal level. Because the universal waste program is generally less stringent than the preexisting RCRA hazardous waste rules, states must decide to adopt the updated federal definition of universal waste. ACC recognizes EPA's effort to strike an appropriate balance between existing state universal waste program requirements for discarded non-empty aerosol cans and the proposed rule. EPA should finalize a rule that provides for fewer limitations on puncture and draining activities in order to allow states to decide whether to opt in and provide additional limitations of their own, if needed.

A. Methods and means of puncturing:

EPA's final rule should not include a requirement that puncturing and draining activities be done using only commercially available devices, as similar restrictions are not used in other state regulatory programs. State regulatory programs such as California and Ohio do not impose such requirements. California's state program, for example, requires that the handler ensures aerosol cans are processed using "equipment designed, maintained, and operated so as to prevent fire, explosion, and the unauthorized release of any universal waste or component of a universal waste to the environment."[25] Moreover, Ohio's state program requires handlers to "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."[26] EPA's final rule should aim to be consistent with other state universal waste programs that do not require puncturing and draining activities to be done only using commercially available devices.

[24] Ohio Specific Universal Waste, Hazardous Waste Program, P. 4, *available at* http://www.epa.ohio.gov/portals/32/pdf/UW%20Ohio%20Specific%2018.pdf.
[25] CA Health and Safety Code, section 25201.16(h)(2).
[26] OAC Rule 3745-273-13(E)(4)(a) and 3745-273-33(E)(4)(a).

B. Post puncture and draining activity

The Agency should apply the recycling unit exemption to the puncturing device, containers directly connected to the puncturing device, and any filters directly connected to containers receiving the accumulated contents of the aerosol cans.[27] EPA already recognizes that puncturing and draining, "if performed as part of the recycling process, is exempt from RCRA permitting requirements under 40 CFR 261.6(c)."[28] EPA has proposed to require that universal waste handlers "conduct puncturing and draining activities using a device specifically designed to safely puncture aerosol cans and contain the residual contents and any emissions thereof."[29] The Agency also proposes that universal waste handlers immediately transfer contents of a waste aerosol can or puncturing device to a container or tank that meets the applicable requirements of 40 CFR 262.14, 262.15, 262.16 or 262.17, but later requires a hazardous waste determination be conducted on the drained contents per 40 CFR 262.11 to decide whether or not the drained contents are actually fully regulated hazardous waste.[30] EPA should clarify that disconnection or removal of spent filters, accumulation containers, or contents from the recycle unit is viewed as a new point of generation and thus the point at which a hazardous waste determination per 40 CFR 262.11 must be made. The Agency should also take this opportunity to clarify when a spent air filter might be considered fully regulated hazardous waste (e.g. when the recycle unit is used to puncture and drain aerosol cans that contained P- or U-listed commercial chemical products) and that spent air filters and drained aerosol contents are not considered F- or K-listed hazardous wastes.

IV. Technical Correction

EPA states that it is making four technical corrections to the universal waste standards for mercury-containing equipment.[31] ACC believes that the Agency has inadvertently omitted reference to satellite accumulation requirements now located at 40 CFR 262.15 and the conditions for a very small quantity generator at 40 CFR 262.14 as part of its proposed technical correction. ACC requests that the final rule language be revised to refer to the requirements of 40 CFR 262.14, 262.15, 262.16 or 262.17, as applicable for each respective section of 40 CFR 273.13(c)(2)(iii) and (iv) and 273.33(c)(2)(iii) and (iv).

V. Conclusion

ACC generally supports EPA's proposal to add aerosol cans to the universal waste program in order to increase recycling and streamline the regulatory framework for aerosol cans. In order to

[27] These are a necessary part of the recycling unit or "device designed to safely puncture aerosol cans *and* contain the residual contents and any emissions thereof." *Id.*
[28] 83 Fed. Reg. 11660.
[29] 83 Fed. Reg. 11666. Proposed sections 40 CFR 273.13(e)(3)(i) and 40 CFR 273.33(e)(3)(i).
[30] *Id* at 11666-11667. Proposed sections 40 CFR 273.13(e)(3)(iv-vi) and 40 CFR 273.33(e)(3)(iv-vi).
[31] 83. Fed. Reg. 11662.

encourage greater participation in the universal waste program, the Agency should adopt the Ohio programs' view of reactivity, adopt a flexible approach to accumulation requirements and a practical method of applying RCRA empty requirements to aerosol cans, and should avoid imposing a requirement that puncturing and draining may only be done using commercially available devices.

Sincerely,

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