May 14, 2018

COMMENTS OF THE RETAIL ASSOCIATIONS ON EPA'S PROPOSAL TO ADD AEROSOL CAN WASTES TO THE UNIVERSAL WASTE REGULATIONS

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1. Introduction

The Retail Industry Leaders Association ("RILA"), the Food Marketing Institute ("FMI"), and the National Association of Chain Drug Stores ("NACDS"), and their members (collectively, the "Retail Associations") are pleased to submit these comments in response to the proposal of the U.S. Environmental Protection Agency ("EPA" or the "Agency") to classify and regulate hazardous aerosol can wastes as universal wastes under the Resource Conservation and Recovery Act ("RCRA"). *See* 83 Fed. Reg. 11,654 (March 16, 2018).

Retailers sell a wide variety of aerosol products in our stores every day that are generally deemed safe for consumption or use by ordinary consumers, and meet all applicable safety regulations. Examples include deodorants, hair styling products, shaving creams, cheese, spot removers, etc. If a customer discards these products at home, he or she throws it out in the normal municipal waste disposal or recycling stream. However, when the same consumer product goes unsold by a store or is returned to a store by a customer, it may be classified as a "hazardous waste," potentially subjecting the store to the same burdensome hazardous waste generator regulations as a steel mill or chemical plant.

Because of the regulatory complexity and uncertainty, retailers often have little choice but to handle all their unsold, returned, or used aerosols as fully regulated hazardous wastes, despite the fact that the products pose little or no risk to human health and the environment. As a result aerosol cans now account for up to 50 percent or more of the materials from the retail sector that are deemed to be hazardous wastes. This imposes tremendous costs on the industry and makes recycling difficult or impractical. In order to address these issues, a number of states have streamlined the requirements for aerosol wastes by classifying them as universal wastes.

The Retail Associations greatly appreciate this opportunity to submit comments on the proposed addition of hazardous aerosol can wastes to the federal universal waste regulations. This is also an important opportunity to further build our relationship and continue to work with the Agency on ways to protect our customers and the environment, while streamlining the burdensome regulatory compliance process for our businesses – two goals that are not mutually exclusive.

We would welcome the opportunity to provide additional input to EPA, and to answer any questions the Agency may have with respect to the points made in these comments.

Section 2 below provides a general summary of our comments. Section 3 provides background on the Retail Associations and their interest in this rulemaking. Section 4 expresses the Associations' strong support for the classification and regulation of hazardous aerosol can wastes as universal wastes, and provides further reasons for such action. Section 5 explains certain changes to the scope of the proposed rule that we think are essential to make the rule workable and to maximize its benefits. Section 6 urges EPA to clarify that as soon as the final rule is issued, hazardous aerosol can wastes may immediately be transported in *all* states without a hazardous waste manifest or a hazardous waste transporter. Section 7 explains why we believe the Agency's Regulatory Impact Analysis for the proposed rule dramatically underestimates the cost savings that could be achieved under the proposal (with the changes we are suggesting). Section 8 highlights the need for the Agency to issue guidance on certain fundamental issues related to aerosols, in addition to issuing the universal waste rule, and Section 9 provides a brief conclusion. Finally, we once again commend the Agency for this process and reiterate the commitment of the Retail Associations to continuing to work with EPA to develop common sense regulations that protect our customers and the environment while not overburdening businesses with red tape and compliance costs.

2. Summary of Comments

The Retail Associations strongly support the classification and regulation of hazardous aerosol can wastes as universal wastes. As discussed in Section 3 below, the Retail Associations represent a broad cross section of the retail industry – the economic sector that EPA recognizes as having the largest percentage of entities affected by this rulemaking – and thus have a strong interest in the Agency's universal waste proposal. We have been urging EPA to take this type of action for several years, and are pleased that the Agency has initiated the current rulemaking. As discussed more fully in Section 4 below, we believe aerosol cans are particularly well suited for addition to the universal waste rule, since they satisfy all of the criteria specified in the regulations for classification as universal wastes. For example, they are generated ubiquitously, pose relatively low risks, are difficult to segregate into regulated and non-regulated streams, and would be handled in a more protective manner if the full RCRA hazardous waste regulations were not applied during generation, storage, transport, and collection. In addition, they have been successfully managed as universal wastes in several states for many years.

We are concerned, however, that the scope of the proposal has been unnecessarily and inappropriately narrowed in certain ways that would make the universal waste rule unworkable, especially in the retail sector (which EPA estimates represents approximate two-thirds of the affected generator universe). In particular, as discussed in Section 5 below, the proposed rule would require generators to make fine technical judgments about each individual aerosol can in order to determine whether it can be managed as a universal waste. Some of these technical judgments include:

- o Whether the can dispenses chemical products in the form of a foam or spray (eligible for management as a universal waste) or in the form of a gel or paste (potentially not eligible);

- o Whether the can expels only gas (potentially not eligible) or also expels a solid or liquid (eligible);

- o Whether any dried spray, splatters, or drips on the outside are evidence of leakage (potentially not eligible) or simply usage (eligible); and

- o Whether the can is both "empty" and "reactive" (in which case it might not be eligible), even though EPA has repeatedly said that it cannot clearly define when an aerosol can is empty or reactive.

We question whether any generator could confidently make these types of judgments. In any event, in the retail sector, drawing all these distinctions would be hopelessly impractical, given the extremely wide range of aerosol products being handled, the significant numbers of waste aerosol cans being generated, the limited experience of most retail employees with these types of issues, and the high turnover of retail personnel. Moreover, EPA has long maintained that one of the key advantages of the universal waste rule is that it obviates the need for distinguishing between look-alike products. For these reasons and others discussed in Section 5, we urge the Agency to expand the scope of its proposal by including non-aerated products and gas-only products, by removing or modifying the exclusion for aerosol cans with evidence of leaking or damage, and by clarifying the status of empty aerosol cans.

EPA should also clarify that as soon as the final rule is issued, hazardous aerosol can wastes may immediately be transported in *all* states without a hazardous waste manifest or a hazardous waste transporter – regardless of if/when the states adopt the universal waste rule. As discussed in Section 6, even though states generally have the authority to impose hazardous waste rules that are more stringent than the federal regulations, they are preempted from imposing more stringent rules with respect to transport of hazardous wastes, as a result of the explicit preemption provisions of the federal Hazardous Materials Transportation Act. Clarifying this point would go a long way toward accelerating and maximizing the benefits of the universal waste rule, especially for companies that generate hazardous aerosol can wastes in multiple states (*e.g.*, nationwide or regional retailers) and/or need or want to transport such wastes across state lines to an environmentally sound recycling or disposal facility. EPA should also, as it has with other universal waste rules, encourage states to adopt the final rule and issue guidance specifying that the Agency will not take enforcement actions involving aerosol can universal wastes that are managed in compliance with the universal waste rule, regardless of whether the state has adopted the rule or received authorization for the rule.

With these changes and clarifications, the cost savings that would result from the rule are likely far greater than EPA estimated in its Regulatory Impact Analysis – perhaps as great as $80 million per year or more. As discussed in Section 7 below, the Agency's primary methodology for estimating the cost savings was fundamentally flawed, in large part because it assumed that

retail stores (the largest category of affected generators) are similar to manufacturing facilities in that only a very small percentage are likely to have their "generator status" (*i.e.*, their status as Large, Small, or Very Small Quantity Generators) change as a result of the universal waste rule. In fact, however, the rule is likely to have a substantial effect on the generator status of retail facilities (*e.g.*, stores, distribution centers, and return centers), since they commonly generate relatively low volumes of hazardous wastes, and hazardous aerosol can wastes represent a substantial percentage of such wastes. Indeed, this is why the Retail Associations have been advocating so strongly over the last several years for a universal waste rule for aerosols.

Finally, to further improve the regulatory framework for aerosol cans, we also urge the Agency to move forward on its separate commitment to issue guidance on when aerosol cans are subject to hazardous waste regulation in the first instance. In particular, as discussed in Section 8 below, we ask EPA to clarify (a) that aerosol cans destined for recycling are not solid wastes, (b) that aerosol cans do not exhibit the characteristic of reactivity, (c) that aerosol cans qualify as empty once they are no longer capable of dispensing the chemical product in a reliable and steady way as required for the intended application, and (d) that generators may use statistical information to determine the quantity of aerosol cans that need to be counted in determining their hazardous waste generator status. EPA should try to issue such guidance before or together with the final universal waste rule, if that can be done without delaying the universal waste rule. However, the first priority should be to issue a final universal waste rule for hazardous aerosol can wastes, which can be followed up afterwards, if necessary, with the guidance. In any event, the Retail Associations would welcome the opportunity to work with the Agency to ensure that the guidance encourages environmental sound management of used aerosols without imposing undue burdens on the regulated community.

3. The Retail Associations and Their Interest in This Rulemaking

The Retail Associations represent a broad cross section of the retail sector in the United States, including large and small companies, from chains with more than a thousand stores nationwide to regional companies with a handful of stores. The vast majority of the members of each of the Associations market aerosol products, have the potential to generate hazardous aerosol can wastes (as discussed further below), and therefore have a strong interest in the current rulemaking. Each of the individual Associations is described briefly below:

- RILA is an organization of the world's most successful and innovative retailer and supplier companies – the leaders of the retail industry. RILA members represent more than $1.5 trillion in annual sales and operate more than 100,000 stores, manufacturing facilities, and distribution centers nationwide. Our member retailers and suppliers have facilities in all 50 states and the District of Columbia, as well as internationally, and employ millions of workers domestically and worldwide.

- FMI proudly advocates on behalf of the food retail industry, which employs nearly 5 million workers and represents a combined annual sales volume of almost $800 billion. FMI member companies operate nearly 33,000 retail food stores and 12,000 pharmacies. FMI membership includes the entire spectrum of food retail venues: single

owner grocery stores, large multi-store supermarket chains, pharmacies, online and mixed retail stores. Through programs in public affairs, food safety, research, education, health and wellness and industry relations, FMI offers resources and provides valuable benefits to almost 1,000 food retail and wholesale member companies and serves 85 international retail member companies. In addition, FMI has almost 500 associate member companies that provide products and services to the food retail industry.

- NACDS represents traditional drug stores, supermarkets, and mass merchants with pharmacies. Chains operate 40,000 pharmacies, and NACDS' nearly 100 chain member companies include regional chains, with a minimum of four stores, and national companies. Chains employ nearly 3 million individuals, including 152,000 pharmacists. They fill over 3 billion prescriptions yearly, and help patients use medicines correctly and safely, while offering innovative services that improve patient health and healthcare affordability. NACDS members also include more than 900 supplier partners and over 70 international members representing 20 countries.

The Retail Associations and their members have a clear and strong interest in this rulemaking. Indeed, EPA, in the preamble to the proposal, stated that "[the] economic sector[ ] … with the largest percentage of potentially affected entities [is] the retail trade industry … representing 65% of the affected Large Quantity Generator universe." *See* 83 Fed. Reg. at 11,655. Retailers, including members of the Associations, market an extremely wide range of aerosol products, including but not limited to the following:

- Adhesives
- Air fresheners
- Air horns
- Antifungal treatments
- Antistatic agents
- Artificial snow
- Bathroom cleaners
- Carpet cleaners
- Cooking oils
- Cheese
- Deodorants
- Disinfectants
- Engine degreasers
- Fabric fresheners
- Fabric protectors
- First aid products
- Floor cleaners
- Foam insulation
- Furniture polishes
- Hair styling products
- Lubricants
- Novelties
- Oven cleaners
- Paints
- Perfumes
- Pesticides
- Shaving creams
- Starter fluids
- Sealants
- Spot removers
- Starch
- Sunscreens
- Tanning products
- Varnishes
- Waterproofing treatments
- Whipped dessert toppings

Of course, the vast majority of aerosols handled by retailers are not wastes in their hands, but rather are sold to customers and ultimately disposed or recycled (after use) by the customers. Nevertheless, significant amounts are either returned by customers or are unsold due to various

reasons (*e.g.*, damage, defect, recall, obsolescence, expiration, seasonal product changes, or removal from shelves due to failure to "sell through" at an acceptable rate). Most of these unsold/returned items are not wastes, because they are suitable for re-shelving, liquidation sale through a secondary market, donation to non-profit organizations, or shipment to a manufacturer or its agent for credit. In some instances, however, the unsold/returned aerosol products do become wastes, and depending upon their composition, may be classified as hazardous wastes. Members of the Retail Associations have reported that aerosols represent up to 50% (by weight) or even more of all the potentially hazardous unsold/returned products that they handle. Retailers may also generate smaller amounts of aerosol can wastes in other ways, such as through cleaning/maintenance of buildings, equipment, and vehicles, constructing product displays, preparing foods and beverages, providing various services to customers, and conducting routine office/administrative functions. In light of all these potential mechanisms for generating hazardous aerosol can wastes, the Retail Associations, their members, and the retail sector more broadly, have a strong interest in the current rulemaking.

4. The Retail Associations Strongly Support the Classification and Regulation of Hazardous Aerosol Can Wastes as Universal Wastes

The Retail Associations strongly support the addition of hazardous aerosol can wastes to the RCRA universal waste rule. Indeed, the Associations have been urging the Agency take this step for several years, such as in comments submitted together with another retail sector trade association (*i.e.*, the National Retail Federation) on EPA's 2014 Notice of Data Availability ("NODA") on the application of RCRA to retailers. *See* Comments of the Retail Associations in Response to EPA's NODA on the Application of RCRA to the Retail Industry (May 30, 2014) (EPA Docket ID# EPA-HQ-RCRA-2012-0426-0038) ("Retail Associations NODA Comments") (Attachment 1 to the current comments) at 26-31. At least one of the Associations, RILA, also encouraged EPA to adopt a universal waste rule for aerosol can wastes as part of the Agency's regulatory reform efforts under Executive Order 13777. *See* Comments of the Retail Industry Leaders Association on EPA's Request for Public Comment on "Evaluation of Existing Regulations" (May 15, 2017) (EPA Docket ID# EPA-HQ-2017-0190-32612) ("RILA Regulatory Reform Comments") (Attachment 2) at 8-13.

EPA has presented a compelling case for classification of hazardous aerosol can wastes as universal wastes in the preamble to the current proposal. *See* 83 Fed. Reg. at 11,658-59. However, we provide below some additional support demonstrating that aerosol cans meet each of the criteria set forth in the RCRA regulations for additions to the list of universal wastes.[1] In short, aerosol cans are perfectly suited for management under the universal waste program since they are generated ubiquitously, pose relatively low risks, are difficult to segregate into regulated and non-regulated streams, and would be handled in a more protective manner if the full RCRA hazardous waste regulations were not applied during generation, collection, and transport. Moreover, a number of states (including environmental leaders such as California and Colorado)

[1] *See* 40 C.F.R. § 273.81. It is worth noting that EPA has stressed that "it does not believe that each and every factor must be met in order for a waste to be appropriate for the universal waste system, and for regulation of the waste under part 273 to improve waste management and implementation." *See* 60 Fed. Reg. 25,492, 25,513 (May 11, 1995) (stating further that "the Agency will make decisions based on the weight of the evidence").

have long classified and regulated aerosol cans as universal wastes, and their programs for doing so appear to have been highly successful.

- **CRITERION #1:** ***The waste or category of waste, as generated by a wide variety of generators, is listed in subpart D of part 261 of this chapter, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in subpart C of part 261 of this chapter.*** **[40 C.F.R. § 273.81(a)]**

  As EPA notes in the preamble to the proposal, aerosol cans may exhibit the RCRA characteristic of ignitability if they contain flammable propellants such as propane or butane. *See* 83 Fed. Reg. at 11,656. In addition, discarded aerosol cans may be hazardous if they contain commercial chemical products that either exhibit a hazardous characteristic or are listed as hazardous wastes. *Id*. While in many instances it may be difficult for a generator to determine if the aerosol can wastes it generates are hazardous or not, there can be no doubt that many waste aerosol cans are hazardous.

  Of course, many – perhaps even most – aerosol cans are not hazardous. Nevertheless, hazardous aerosol can wastes can and should still be designated as universal wastes. Indeed, EPA has long recognized that one of the key benefits of the universal waste rule is that it "eliminates [the need for] identifying, documenting, and keeping separate regulated waste and unregulated waste." *See* 60 Fed. Reg. at 25,513. The Agency noted that it "wishes to encourage persons to manage both regulated waste and unregulated waste in the same collection systems … [a]s long as all commingled waste is managed in a system that meets the requirements of the universal waste regulations." *Id*. EPA indicated that this approach was particularly attractive in situations where "an across the board hazardous waste determination [could not be made] for entire categories of waste" and/or where a waste "either becomes hazardous or is no longer hazardous due to changes in manufacturing practices [or product composition]." *Id*. Given the difficulty in determining which waste aerosols are hazardous and which are not, they seem to be an ideal candidate for designation as universal wastes.

- **CRITERION #2:** ***The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities).*** **[40 C.F.R. § 273.81(b)]**

  As discussed above, the retail industry handles a significant amount of unsold/returned aerosol cans. However, a much larger quantity of waste aerosol cans are generated by the persons and entities that purchase and use aerosol products. Households are by far

collectively the largest generators of such wastes.[2] However, a wide variety of businesses generate aerosol wastes, as well, by using the products.

In the Regulatory Impact Analysis for the proposed rule, EPA identifies 18 industries with large and small quantity generators that generate hazardous aerosol can wastes. *See* 83 Fed. Reg. at 11,638. However, we believe that the range of generators of such wastes is much broader. For example, vehicle fleet owners and service centers commonly use aerosol lubricants, paints, sealants, and the like, and the same is true for virtually anyone who owns or services industrial equipment. Office buildings and cleaning services use a variety of aerosol cleaning products for both hard surfaces (*e.g.*, wood polish, bathroom cleaners, etc.) and fabric surfaces (*e.g.*, carpet cleaners and upholstery fresheners). Healthcare facilities use aerosol disinfectants. Exterminators and businesses with pest control problems use aerosol pesticides. Hair salons use aerosol hair sprays, styling gels, and the like. Laundries and dry cleaners use aerosol spot removers and fabric protectors. Restaurants use aerosol cooking sprays, and other food products. The list of businesses, large and small, that use products dispensed with aerosol cans and generate the cans as wastes is almost endless. Moreover, federal, state, and local government agencies are also major users and generators of aerosols, inasmuch as they operate large office buildings, infrastructure facilities, healthcare centers, schools, parks, and facilities where large numbers of individuals are housed (*e.g.*, military installations and prisons). Although most of these commercial/government users of products in aerosol cans are not required to handle the used cans as hazardous wastes (*e.g.*, because they qualify as Very Small Quantity Generators ("VSQGs")), they collectively constitute a major portion of the used aerosol can stream.

Clearly, waste aerosol cans are generated ubiquitously in an extremely wide range of settings, both industrial and not. This fact makes them ideal candidates for the universal waste rule. EPA has long stressed that "[o]ne of the problems the universal waste rule is designed to address is that a relatively large portion of some waste types are exempt from the hazardous waste regulations (*i.e.*, are generated by households and CESQGs [*i.e.*, Conditionally Exempt Small Quantity Generators]) and are indistinguishable from the regulated portion of the waste. This 'look alike' problem makes implementation of the [standard RCRA] program for these wastes extremely difficult." *See* 60 Fed. Reg. at 25,514. Aerosol cans appear to be precisely the type of material that EPA had in mind. A large proportion of aerosol cans are generated as wastes by exempt households and VSQGs, but regulated entities generate a substantial amount of aerosol wastes, as well, and such wastes are typically indistinguishable from the aerosols generated by exempt persons.

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[2] *See, e.g.*, European Aerosol Federation, "Annual Report 2017" (Attachment 3) at 17 (indicating that 55.5% of aerosol products produced in Europe are personal care products, and an additional 20.7% are household products).

o **CRITERION #3:** ***The waste or category of waste is generated by a large number of generators (e.g., more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator.*** **[40 C.F.R. § 273.81(c)]**

Virtually all households in the U.S. can be expected to generate at least some waste aerosol cans. That alone accounts for approximately 100 million generators, making the wastes among the most common potentially hazardous wastes generated in the country. Although these generators would be excluded from regulation under the household waste exclusion, the numbers of business, government, and other institutional generators that are potentially regulated (unless they qualify as VSQGs) is similarly very large. The Retail Associations estimate that the number of retail establishments in the United States handling unsold/returned aerosols is likely well over 100,000 (based on Census data on the number of retailers in key sectors that can be expected to market (and thus handle unsold/returned) aerosol products).[3] We have not made an effort to quantify the number of generating establishments in other industries, but given the wide range of such industries (as noted above), it seems almost certain that the numbers of such generators would be in the millions.

The amounts generated by each generator likely vary substantially. Members of the Retail Associations report that individual stores often handle up to 1000 lbs/year of unsold/returned aerosol cans. Each household user of aerosols presumably generates a fairly limited number of waste aerosol cans each month or year. Business users of aerosol products may generate somewhat larger amounts, depending upon their size and the nature of their operations. However, it might reasonably be expected that if a facility requires a very large amount of a particular chemical product, it might be more likely to use a different means of application. For example, a facility that uses large quantities of spray paint would likely obtain a bulk liquid paint that could be aerosolized using compressed gas, rather than using individual aerosol cans. Accordingly, it appears that waste aerosol cans are generated by large numbers of generators, most commonly in relatively small quantities.

o **CRITERION #4:** ***Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste.*** **[40 C.F.R. § 273.81(d)]**

EPA has stated that "the goal of this factor is to facilitate addition of wastes to the universal waste system that are most likely to be collected, and to be collected in a manner that ensures good management of the waste." *See* 60 Fed. Reg. at 25,514. The Retail Associations believe that aerosol cans are precisely the type of materials that EPA had in mind. As an initial matter, aerosol cans constitute a large stream that is readily

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[3] *See* U.S. Census Bureau, "Statistical Abstract of the United States: 2012," Table 1048 (data as of 2008) (Attachment 4) (indicating that there are 114,100 gasoline stations, 63,400 supermarkets and grocery stores, 25,700 convenience stores, 56,100 automotive parts/accessories/tire stores, 42,000 pharmacies and drug stores, 23,000 home centers and hardware stores, 22,100 sporting goods stores, 19,800 lawn and garden stores, 14,000 cosmetics/beauty supplies/perfume stores, and 4,400 warehouse clubs and superstores).

identifiable and easy to segregate for special management. Indeed, many of the key elements needed for proper stewardship of this waste stream are already in place. According to a study organized by the Sustainable Packaging Coalition ("SPC"), approximately 70% of Americans have access to curbside or drop-off recycling facilities that accept aluminum or steel aerosol cans. *See* SPC, "2015-16 Centralized Study on Availability of Recycling for Aerosol Containers" (Attachment 5). In addition, several major waste services providers have developed and are marketing programs for collecting and recycling waste aerosol cans from consumer and/or business generators.

Notwithstanding these efforts, it appears that vast quantities of aerosol cans are simply being disposed of by consumers in the ordinary trash. Designating aerosol cans as universal wastes would significantly facilitate collection and recycling programs, and would encourage use of such programs.[4] The requirements of the universal waste rule would also ensure that these activities are performed in a manner that is protective of human health and the environment.

o **CRITERION #5:** ***The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (e.g., waste management requirements appropriate to be added to 40 CFR 273.13, 273.33, and 273.52; and/or applicable Department of Transportation requirements) would be protective of human health and the environment during accumulation and transport.*** **[40 C.F.R. § 273.81(e)]**

Waste or unsold/returned aerosol cans present relatively low risks during accumulation and transport. As an initial matter, these aerosol cans are the same as the aerosol cans that are distributed and used regularly by households and businesses of virtually every type, except that they generally contain significantly less of the propellant and chemical product than the unused items. Moreover, as noted above, over half of all aerosol wastes appear to be generated by households, and are frequently disposed of in the ordinary trash.

It is particularly noteworthy that aerosol cans are not "naked" chemicals, as might be the case, for example, with bulk pesticides (some of which are already classified as universal wastes). *See* 40 C.F.R. § 273.3 (classifying certain pesticides as universal wastes). Rather, aerosols by their very nature are engineered devices – devices that by law must meet U.S. Department of Transport ("DOT") requirements for design, filling, testing,

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[4] As just one example, in states that regulate household hazardous wastes as hazardous wastes once they are collected, the universal waste rule would enable collected household hazardous aerosol can wastes to be stored at the collection site and transported to an ultimate recycling/disposal facility in accordance with the universal waste requirements, rather than the full hazardous waste regulations. *See* Rhode Island Rules and Regulation for Hazardous Waste Management, Rule 5.1(b)(1) ("owners and/or operators of facilities that accept household hazardous waste … shall comply with the requirements for Large Quantity Generators … and upon receipt the household hazardous waste shall be subject to full regulation as hazardous waste"); Minnesota Admin. R. 7045.0310(3) ("An operator who establishes or operates all or part of a household hazardous waste management program must comply with the standards applicable to large quantity generators [with limited exceptions]").

ability to withstand heat and shock, etc. *See generally* 49 C.F.R. § 173.306(a)(3). These requirements help minimize risks during both accumulation and transport. Moreover, during transport, the used aerosols, like unused aerosols, are subject to additional DOT controls. For example, the aerosols must be packed in strong outer packagings, which among other things, must meet general packaging requirements for protectiveness. *See* 49 C.F.R. § 173.306(a)(3)(iv) and 171.8 (defining "strong outer packaging"). In addition, the outer packagings must be specially marked. *See* 49 C.F.R. § 173.306(i). As EPA notes in the preamble to the proposal, *see* 83 Fed. Reg. at 11,658, local fire codes also provide comprehensive protections during storage of aerosols (*e.g.*, package markings, storage quantity limits, design of storage areas, fire alarm systems, fire protection systems such as sprinklers, etc.). *See, e.g.*, National Fire Protection Association ("NFPA") Fire Code (2018), Chapter 61 (Aerosol Products) (Attachment 6). These DOT and fire code requirements should obviate the need for further regulation during accumulation and transport.

To the extent that any additional regulation might be warranted, the requirements of the universal waste rules should be sufficient. They require that the wastes be stored in a protective manner, that containers be labeled and marked to indicate their contents, that employees be trained, that any releases be addressed appropriately, and that the wastes be sent to a properly authorized facility in a timely fashion. In addition, if a facility generates or accumulates large quantities, they must notify EPA and track all shipments of the waste into and out of the facility. These safeguards have proven highly effective for other universal wastes, and the Retail Associations believe they would likewise be effective for aerosol cans (as demonstrated in California, Colorado, and other states, as discussed below in the context of Criterion #8).

- **CRITERION #6:** ***Regulation of the waste or category of waste under 40 CFR part 273 will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (e.g., the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems) to recycling, treatment, or disposal in compliance with Subtitle C of RCRA.*** **[40 C.F.R. § 273.81(f)]**

The determination of whether individual aerosol cans are wastes or non-wastes, and hazardous or non-hazardous, can be extremely difficult. *See generally* Retail Associations NODA Comments at 17-20. With so many generators in so many different industries, many of which do not generally handle hazardous wastes and thus are particularly unsuited to making a proper determination, it is almost inevitable that mistakes will be made. Indeed, some generators may not even be aware of the need to make a determination or the possible implications of a hazardous waste determination. This is especially true given that the waste aerosol cans are in many cases identical to, or at least similar to, the products that business employees use and discard at their households and therefore are excluded from RCRA regulation. Thus, it seems likely that large numbers of generators of potentially hazardous aerosol cans are routinely disposing of such products in the ordinary trash.

Regulating aerosol cans as universal wastes would significantly reduce this problem. As EPA noted in the final rule designating lamps as universal wastes, "the streamlined requirements of the universal waste program will give [unsophisticated] generators a more accessible starting point for good environmental management. If regulatory requirements are simpler, … more hazardous waste[s] will be handled properly … instead of going to solid waste landfills or to municipal waste combustors. Improved management will … lead to a reduction in the total amount of hazardous waste emissions to the environment." *See* 64 Fed. Reg. 36,466, 36,473 (July 6, 1999).

Moreover, regulating waste aerosol cans as universal wastes would encourage better management of such wastes by more sophisticated generators. For example, such generators would have less reason to try drawing fine distinctions between used aerosol cans that are wastes versus non-wastes, or hazardous versus non-hazardous. Many generators – perhaps most – would simply direct all their used aerosol cans through the universal waste system. EPA has previously acknowledged that this type of result can be an important reason for designating wastes as universal.[5] Moreover, a universal waste designation would facilitate consolidation of waste aerosol cans from multiple facilities and/or generators, which in turn would provide economies of scale that would likely make recycling options more viable.[6]

- **CRITERION #7:** ***Regulation of the waste or category of waste under 40 CFR part 273 will improve implementation of and compliance with the hazardous waste regulatory program.*** **[40 C.F.R. § 273.81(g)]**

Designating aerosol cans as universal wastes would not only encourage environmentally preferred outcomes, as noted above, but would also improve implementation and compliance. Not only would generators generally be relieved of the requirement to assess whether individual cans are wastes or non-wastes, and hazardous or non-hazardous, but the same would be true for federal and state inspection and enforcement personnel. Thus, implementation would certainly be improved. Moreover, as EPA has noted, "[i]f regulatory requirements are simpler [as a result of a universal waste rule], the compliance rate will improve." *See* 64 Fed. Reg. at 36,473; *see also* 70 Fed. Reg. at 45,511 ("adding [waste] to the universal waste rule will improve compliance with the hazardous waste regulations by making it more achievable").

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[5] *See* 60 Fed. Reg. at 25,515 ("diversion of unregulated portions of a waste … from non-hazardous management systems could be a reason to add a waste to the universal waste system. For example, in some cases it may be likely that facilitating the collection of commingled regulated and unregulated waste would encourage development of collection systems that could divert significant quantities of the waste, including unregulated waste, from non-hazardous waste management systems").

[6] *Cf*. 70 Fed. Reg. 45,508, 45,511 (August 5, 2005) (a universal waste designation "will allow generators … to send [their wastes] to a central consolidation point. … Under the universal waste rule, a handler of universal waste can send the universal waste to another handler, where it can be consolidated into a larger shipment for transport to a [recycling] facility").

o **CRITERION #8:** ***Such other factors as may be appropriate.*** **[40 C.F.R. § 273.81(h)]**

As EPA notes in the proposal, the fact that aerosol can wastes have successfully been managed as universal wastes under existing programs (*e.g.*, in California and Colorado) "weighs in favor of concluding that management of aerosol cans under the federal universal waste regulations is likely to be successful." *See* 83 Fed. Reg. at 11,659. However, the Agency has understated the extent to which aerosols are already being managed as universal wastes.

At the present time, a total of six states allow aerosol can wastes in general to be handled as universal wastes.[7] Moreover, additional states allow particular categories of aerosol can wastes (*e.g.*, aerosol paint wastes or pharmaceutical aerosol wastes) to be managed as universal wastes.[8] Indeed, even the federal universal waste rule appears to cover aerosol pesticide wastes in some circumstances. *See* 40 C.F.R. § 273.3 (covering, for example, unused pesticide products that are collected and managed as part of a waste pesticide collection program). As far as we are aware, all of these programs have been successful in facilitating the proper management of the aerosol can wastes that they cover.

For all of the reasons discussed above and in the preamble for the proposed rule, aerosol cans are ideal candidates for inclusion in the universal waste rule. Such a change would be of substantial benefit to the retail industry, but would also benefit a host of other business, government, and other institutional generators of aerosol wastes, as well as federal and state environmental agencies. We therefore urge EPA to finalize the proposed rule (with the changes and clarifications discussed in detail below) as soon as possible.

5. EPA Should Modify the Scope of the Universal Waste Rule for Hazardous Aerosol Can Wastes to Ensure the Rule Is Workable and Provides Maximum Benefits

Although the Retail Associations are strongly supportive of adding hazardous aerosol can wastes to the universal waste rule, we are concerned that EPA's proposal unnecessarily and inappropriately limits the scope of the rule by (a) narrowly defining the term "aerosol can," (b) excluding aerosol cans with "evidence of leakage, spillage, or damage," and (c) including an exclusion for "empty" aerosol cans that is expressed in a manner that may cause some to believe

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[7] *See* California Health & Safety Code § 25201.16; 6 Colorado Code Regs. 1007-3, Section 273.2(d); New Mexico Admin. Code 20.4.1.1001; Utah Admin. Code Rule 315-273-6(b); Ohio Admin. Code R. 3745-273-89(A); Minnesota Pollution Control Agency, "Waste aerosols and compressed gas cylinders" (Publication w-hw4-00) (December 2017) (Attachment 7) at 2 ("You may manage hazardous waste aerosols … that are not empty equivalent to universal wastes in Minnesota").

[8] *See* New Jersey Admin. Code 7:26A-1.3 (defining universal wastes to include oil-based finishes, and defining oil-based finishes to include "aerosol paint cans"); 25 Pennsylvania Admin. Code § 266b.4 (expanding the state universal waste rule to include oil-based finishes) and § 266b.3 (defining oil-based finishes to include "aerosol paint cans"); 30 Texas Admin. Code § 335.262 (classifying and regulating "paint and paint-related wastes" as universal wastes); Michigan R. 335.262 (classifying and regulating pharmaceutical wastes as universal wastes); Michigan Department of Environmental Quality, "Universal Waste Pharmaceuticals" (July 2012) (Attachment 8) ("Universal Waste Pharmaceuticals … may be liquid, solid, paste, or *aerosol*" (emphasis added)).

that certain empty aerosol cans are ineligible for management as universal wastes. As discussed below, these limits have no rational basis. In addition, by requiring generators to make fine technical judgments about each individual aerosol can that they generate as wastes, these limits would render the universal waste rule unworkable, especially in the retail sector (which EPA estimates represents approximately two-thirds of the affected generator universe). This is one of the things that the universal waste rule was specifically designed to avoid. *See, e.g.*, 60 Fed. Reg. at 25,513 (stating that one of the key benefits of the universal waste rule is that it "eliminates [the need for] identifying, documenting, and keeping separate regulated waste and unregulated waste"). Accordingly, we urge EPA to eliminate these limitations in the final rule.

5.1 ***Definition of Aerosol***

Under the proposed rule, an aerosol can would be defined as "an intact container in which gas under pressure is used to aerate and dispense any material through a valve in the form of a spray or foam." *See* 52 Fed. Reg. at 11,664 (proposed to be codified at 40 C.F.R. §§ 260.10 and 273.9). As discussed below, the Retail Associations are concerned that this definition is unnecessarily and inappropriately narrow, and that it would complicate and potentially undermine implementation of the universal waste rule. Accordingly, we request that EPA expand the definition, for example by aligning it with the corresponding definition under international dangerous goods regulations. We also request that EPA delete the reference to "intact," because it is unnecessary and likely to create confusion, especially in light of the separate proposed exclusion for aerosol cans that show evidence of leakage, spillage, or damage that could cause leakage (discussed further below).

The proposed definition would exclude two significant categories of products commonly viewed as aerosol products, each of which is discussed separately below:

(1) ***Products that use compressed/liquefied gas to expel materials without aerating them or producing a spray or foam*** – Common examples of products in this category that might be found in a retail store would include cans of shaving gel, "spray" cheese, and novelty plastic string streamers. There is no apparent reason for excluding these types of products from the universal waste rule. Indeed, the DOT Hazardous Materials Regulations ("HMR") classify these products as aerosols and regulate them in the same manner as products that aerate materials and produce sprays or foams.[9] Similarly, the NFPA defines an aerosol container in a way that is independent of whether the material being dispensed is aerated or produces a spray or foam.[10] Accordingly, we believe that the universal waste rule should similarly cover these products.

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[9] *See* 49 C.F.R. § 171.8 (defining an aerosol as "an article consisting of any non-refillable receptacle containing a gas compressed, liquefied or dissolved under pressure, the sole purpose of which is to expel a … liquid, paste, or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas").

[10] *See* NFPA Code 30B, Sections 3.3.1 through 3.3.3 (defining an aerosol container as a metal can or plastic container that uses "liquefied or compressed gas [to] expel[ ] the contents … when [a] valve is actuated").

(2) ***Products that contain and expel only gas*** – Common use examples of products in this category that might be found in a retail store would include compressed gas dusters and pneumatic horns. The proposed regulatory definition of aerosol would not necessarily exclude these products, since they are articles in which "gas under pressure is used to aerate and dispense any material [in this case the gas itself] through a valve in the form of a spray." However, the preamble to the proposal seems to indicate that EPA intends to exclude gas-only products. *See* 83 Fed. Reg. at 11,660 ("compressed gas canisters … would not be included"). The only rationale the Agency gives is that these products allegedly "present a greater risk than aerosol cans." *Id*. However, as far as we can tell, there is no evidence of such increased risk. Indeed, international rules for the transport of dangerous goods explicitly classify gas-only products as aerosols and regulate them in the same way as aerosols that expel other materials.[11] Moreover, under the existing DOT regulations, gas-only products are regulated in much the same way as aerosols, and DOT is currently considering a petition to align the definition of aerosol under the HMR with the international definition in order to explicitly cover gas-only products.[12] Accordingly, we believe that these products pose essentially the same risks as products with gases that expel other materials, and that they should therefore also be covered by the universal waste rule.

Not only would the exclusion of these products be unnecessary and inappropriate, but it would also substantially complicate and undermine implementation of the rule. If these products are excluded, generators and other handlers might effectively be required to inspect each and every aerosol can to determine whether it is a non-aerating product or a gas-only product ineligible for management as universal waste. Failure to do so might require the generator/handler to handle all of its aerosol wastes as (non-universal) hazardous wastes, which would render the universal waste rule a nullity. However, performing the inspection would be extremely challenging and might even be a non-starter. This is especially true in the retail sector, given the exceptionally broad range of aerosol products carried by many stores, and the generally limited experience and high turnover of personnel in the sector.

In the preamble to the proposal, EPA also states that the proposed definition would have the advantage of "keep[ing] consistency with the existing state [universal waste] programs [covering aerosols]." However, two state universal waste programs already cover non-aerating products

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[11] *See, e.g.*, United Nations Recommendations on Transport of Dangerous Goods: Model Regulations ("UN Model Regulations"), Section 1.2.1 (Attachment 9) ("*Aerosol or aerosol dispenser* means an article consisting of a non-refillable receptacle … containing a gas, compressed, liquefied, or dissolved under pressure, *with or without a liquid, paste or powder*, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state *or in a gaseous state*" (emphasis added)).

[12] *See* 49 C.F.R. 173.306 (rules for limited quantities of compressed gases, including those in aerosol and non-aerosol products); Petition of the Consumer Specialty Products Association, the Council on Safe Transportation of Hazardous Articles, Inc., the National Aerosol Association, and the American Coatings Association to DOT (September 28, 2017) (Attachment 10) (stressing the safety of "pure gas units used in consumer and industrial [applications]").

and/or gas-only products.[13] Moreover, as noted above, regulations that apply across the nation and/or internationally generally include these products. Accordingly, the best way to maintain consistency with existing regulatory regimes would be to define aerosol cans in a way that includes non-aerating and gas-only products.

In light of the above, we urge EPA to change the proposed definition of aerosol can to enable non-aerated and gas-only products to be managed as universal wastes, for example by adopting the definition used in international dangerous goods regulations:

> *Aerosol or aerosol dispenser* means an article consisting of a non-refillable receptacle … made of metal, glass or plastics and containing a gas, compressed, liquefied, or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state.

See, e.g., UN Model Regulations, Section 1.2.1 (Attachment 9).

We also urge EPA to delete the requirement that aerosol products be "intact" to be considered aerosol cans. This requirement seems unnecessary since the proposal includes a separate provision (discussed further below) excluding aerosol cans that show evidence of leakage, spillage, or damage that could cause leakage from the universal waste rule. Moreover, inclusion of the word "intact" may cause significant confusion by raising questions as to whether the standard for an intact aerosol can is different from the standard for determining whether an aerosol can shows evidence of leakage, spillage, or damage that could cause leakage (although the preamble to the proposed rule indicates that the standards are meant to be the same, saying that "[t]hrough this exclusion [for leaking/damaged aerosol cans], EPA intends that hazardous waste aerosol cans *that are not intact* continue to be subject to the full hazardous waste standards," *see* 83 Fed. Reg. at 11,660 (emphasis added)).

5.2 ***Exclusion for Leaking/Damaged Aerosols***

The proposed rule would exclude from the applicability of the universal waste program "[a]erosol cans that show evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions." *See* 52 Fed. Reg. at 11,665 (proposed to be codified at 40 C.F.R. § 273.6(b)(4)). EPA claims that this exclusion is necessary because "the proposed [universal waste] management standards … rel[y] in part on the fact that the aerosol cans to be managed … are not leaking or otherwise damaged [in a way] where contents or propellants could be dispersed … [or where there might be] an increased risk of fire." *Id*. at 11,660. As discussed below, this exclusion is inconsistent with the current rules for other universal wastes, it

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[13] *See, e.g.*, Ohio Admin. Code 3745-273-09(A) ("'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" (emphasis added)); Minnesota Pollution Control Agency, "Universal Wastes" (February 2018) (Publication w-hw4-62) (Attachment 11) (stating that aerosols "may … be managed as universal waste" and defining them as "pressurized containers used to dispense *liquid* or *gaseous* products" (emphasis added)).

is not necessary to protect human health and the environment, and it is so vague and potentially susceptible to overly broad interpretation that it could potentially undermine the entire rule.

As an initial matter, EPA's conclusion about the need for this exclusion is inconsistent with the current rules for other universal wastes. None of the existing federal universal waste rules for other products exclude leaking or damaged products. Instead, the rules simply require more protective packaging for leaking/damaged products:

- For batteries, handlers "must contain any universal waste battery that show evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions" in a container that is "closed, structurally sound, compatible with the contents of the battery, and … lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions." *See* 40 C.F.R. §§ 273.13(a)(1) and 273.33(a)(1).

- Universal waste pesticides must be contained in a container that is "closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions," or in a container that does not meet these standards (*e.g.*, a leaking container), "provided that the unacceptable container is overpacked in a container that does meet the requirements." *See* 40 C.F.R. §§ 273.13(b)(1)-(2) and 273.33(b)(1)-(2).

- Handlers of universal waste mercury-containing equipment "must place in a container any [such] equipment with non-contained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions," and the container must be "closed, structurally sound, compatible with the contents of the device, must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means." *See* 40 C.F.R. §§ 273.13(c)(1) and 273.33(c)(1).

- With respect to universal waste lamps, handlers "must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment," and such containers must be "closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions." *See* 40 C.F.R. §§ 273.13(d)(2) and 273.33(d)(2).

EPA has provided no meaningful rationale for departing from this approach for aerosol cans. Nor do we believe any such rationale exists. Just as with leaking/damaged batteries, pesticide containers (which may include some aerosol cans), mercury-containing equipment, and lamps, leaking/damaged aerosol cans can safely be managed as universal wastes if they are packaged in suitably protective containers (*e.g.*, containers that are closed, structurally sound, compatible with the contents of the aerosols, and lack evidence of leakage, spillage or damage that could

cause leakage under reasonably foreseeable conditions). The use of protective containers is already required for all aerosol cans under EPA's proposed rule.[14] Thus, there is no need to exclude leaking/damaged aerosol cans.[15]

Moreover, the criteria that EPA proposes for determining when aerosol cans would be excluded are so vague that they would create confusion in the regulated community and invite arbitrary enforcement by regulators, effectively undermining the benefits of the entire universal waste rule for aerosol cans. We recognize that the criteria are similar to the standards that currently trigger more protective packaging for other universal wastes (*i.e.*, whether the aerosol cans "show evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions"). However, the criteria are uniquely problematic for aerosol cans, in part because aerosol cans – unlike other universal waste items (with the exception of aerosol pesticides and perhaps some other types of pesticide containers) – are designed specifically to disperse chemical products. It is not uncommon for aerosol containers to have on the outside dried splatters or drips of the chemical products they dispersed during use (*e.g.*, due to failure to shake the cans properly prior to use, overspray in a confined area, backspray in a windy area, a defective nozzle, or sputtering as the aerosol can neared the end of its useful life). However, regulators or inspectors could potentially view such splatters or drips as "evidence of leakage, spillage, or damage" making the cans ineligible for management under the universal waste rule. In addition, in the absence of certainty about how the splatters/drips will be viewed be regulators or inspectors, some generators/handlers might conservatively assume that all aerosol cans bearing these marks should be handled as fully regulated (non-universal) hazardous wastes. Because many, if not most, used cans will have such splatters/drips, the universal waste rule for aerosol cans could effectively become unusable, thereby undermining all the potential benefits of the proposed rule.

Similar issues would arise in a variety of other situations. Aerosol cans that are fully intact may nevertheless show evidence of corrosion – especially if the chemical products they contained and dispersed are corrosive (*e.g.*, certain cleaning products) and/or if they are stored for extended periods in damp conditions. Aerosol cans may also have missing actuator buttons, for a variety of reasons that have nothing to do with their basic structural integrity, such as that the actuators may have fallen off (*e.g.*, if they were not attached correctly to begin with), they may have inadvertently been knocked off during handling or use, or they may have been intentionally removed (*e.g.*, under proposed §§ 273.13(e)(2)(iii) and 273.33(e)(2)(iii), which authorize

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[14] *See* 52 Fed. Reg. at 11,666 (proposed to be codified at 40 C.F.R. §§ 273.13(e)(1) and 273.33(e)(1)) (proposing to require handlers to accumulate universal waste aerosol cans "in a container that is structurally sound, compatible with the contents of the aerosol cans, and lacks evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions").

[15] Further protections for leaking/damaged aerosols are also provided by other regulatory regimes, such as the DOT hazardous materials transport regulations and local fire codes (as discussed generally in Section 4 above in the context of Criterion #5). For example, the DOT rules require that aerosols that are damaged, defective, or leaking to the point where they do not meet applicable design standards must be transported in special aerosol salvage drums marked "AEROSOL SALVAGE" or "AEROSOL SALVAGE DRUM." *See* 49 C.F.R. § 173.306(k)(2). Inasmuch as DOT has determined that such salvage drums are protective during transport (including storage incidental to transport), there is no reason to exclude these aerosol cans from the universal waste rule.

handlers to "[r]emov[e] actuators to reduce the risk of accidental release"). In addition, intact aerosols may be dented or scratched (more so than other universal wastes, like lamps which would generally break rather dent, or batteries that do not have a gas-filled cavity and are more solid/dense). Any one of these conditions could potentially be viewed as "leakage, spillage, or damage" under the proposed rule, which might prevent the aerosol cans from being managed as universal wastes. In this way, EPA's proposed exclusion has the potential to become the exclusion that swallows the entire rule.

5.3 ***Exclusion for Empty Aerosols***

The proposed rule would exclude from the applicability of the universal waste program "[a]erosol cans that meet the standard for empty containers." *See* 52 Fed. Reg. at 11,665 (proposed to be codified at 40 C.F.R. § 273.6(b)(3)). EPA explains in the preamble that "[a]n aerosol can that meets the definition of empty container in 40 CFR 261.7 is not subject to hazardous waste regulation, and may be recycled as scrap metal." *Id*. at 11,660. The Agency states that the exclusion applies to "aerosol cans that have been emptied of their contents (both propellant and product)." *Id*. The Retail Associations have several concerns with this part of the proposal.

First, even though EPA states in the preamble that empty aerosol cans are "not subject to hazardous waste regulation," the Agency in the past has indicated that empty aerosols might exhibit the characteristic of reactivity and thus remain subject to hazardous waste regulation. *See* EPA, RCRA Hotline Report (September 1987) (RCRA Online #13027) (Attachment 12) ("Irrespective of the lack of contained waste, the aerosol cans [may] be a RCRA hazardous waste because they demonstrate the hazardous characteristic of reactivity"). As discussed in Section 8 below, we do not believe that any aerosol cans – much less empty aerosol cans – qualify as reactive hazardous wastes. However, if any empty aerosols are deemed to be reactive, the exclusion of empty cans from the universal waste rule could potentially be interpreted to mean that such "reactive" empty cans would have to be managed as fully regulated (non-universal) hazardous wastes.[16] Such a result would make no sense, given that full or partially full aerosol

[16] We note that there is some uncertainty with respect to this point, because of the confusing way that the exclusions in proposed 40 C.F.R. § 273.6(b) are structured. That provision states that the requirements of the universal waste rule do not apply to aerosol cans that (1) are not wastes, (2) are non-hazardous, (3) are empty, or (4) show evidence of leakage, spillage or damage. It is our understanding that for the first two categories (*i.e.*, aerosol cans that are not waste or are non-hazardous), EPA's intent is that generators would not be *required* to handle the cans as universal wastes, but would *allowed* to do so (or to handle the cans completely outside the RCRA regulatory program). On the other hand, for the last category (*i.e.*, cans with evidence of leaking or damage), the Agency's intent apparently is that generators would be *prohibited* from handling the cans as universal wastes (and would have to handle them as fully regulated hazardous wastes, assuming they are solid and hazardous wastes). Thus, the "exclusions" for these categories apparently are intended to mean very different things.

For aerosol cans that are empty and non-reactive (which, as noted above, we believe would include *all* empty cans), EPA presumably intends the exclusion to operate in the same manner as for the first two categories, *i.e.*, to mean that generators are not *required* to handle the cans as universal wastes, but are *allowed* to do so (or to handle the cans completely outside the RCRA regulatory program). However, to the extent EPA may believe that any empty aerosol cans are reactive (which, as noted above, we do not believe is the case), it seems unlikely that the Agency would intend the exclusion to work the same way (since that would allow "reactive" empty cans to be managed

cans exhibiting the reactivity characteristic (to the extent that any such cans might be deemed by EPA to be reactive) would be eligible for management under the universal waste rule. Moreover, if "reactive" empty aerosol cans cannot be managed as universal wastes, retailers and other generators would have to identify and segregate such cans so that the rest could be managed as universal wastes – an almost impossible task, especially given the lack of clarity about what constitutes an empty aerosol and/or a reactive aerosol, as well as the generally limited experience and high turnover of personnel in the retail sector.

We doubt that EPA intended such results from its proposed exclusion of empty aerosols. Perhaps the Agency intended its statement in the preamble that empty aerosols are "not subject to hazardous waste regulation" to clarify that empty containers are not subject to regulation as reactive hazardous wastes. If so, we support such a clarification, but ask EPA to make this point more explicit, so as to avoid any potential confusion. In this regard, it is worth noting that the 1987 EPA guidance referenced above did not actually *conclude* that empty aerosols could be reactive, but rather responded to a question that was posed to the Agency *assuming* that they could be reactive. *See* EPA, RCRA Hotline Report (September 1987) (RCRA Online #13027) (Attachment 12) ("[W]ould aerosol cans free of hazardous waste, but still potentially reactive because of contained propellant be regulated as hazardous waste?"). Thus, a statement now that empty aerosol cans are not reactive would not actually reverse prior EPA guidance. And, as discussed in Section 8 below, it would be supported by the fact that even full or partially full aerosols are not properly viewed as reactive.

A second problem with EPA's proposal on empty aerosol cans is that it provides no clear standard for when an aerosol can qualifies as empty such that it would be excluded from the universal waste rule. The proposed regulatory exclusion covers "[a]erosol cans that meet the standard for empty containers under part [sic] 261.7." *See* 52 Fed. Reg. at 11,665 (proposed to be codified at 40 C.F.R. § 273.6(b)(3)); *see also id*. at 11,660 (addressing "aerosol can[s] that meet[ ] the definition of empty container in 40 CFR 261.7"). However, EPA has long side-stepped the issue of when aerosol cans qualify as empty under Section 261.7, leaving generators without any meaningful standard to apply.[17]

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completely outside the RCRA regulatory program). For these aerosol cans, EPA might intend the exclusion to operate in the same way as the exclusion for damaged/leaking aerosol cans, such that the "reactive" empty cans would have to be managed as fully regulated hazardous wastes, rather than as universal wastes. This is the potential interpretation discussed in the main text above. However, it is possible that EPA may intend the exclusion for "reactive" empty cans to operate in yet a third (unspecified) way.

[17] *See, e.g.*, Letter from Jeffrey D. Denit, Acting Director, Office of Solid Waste, EPA, to John DiFazio, Chemical Specialties Manufacturers Association (October 7, 1993) (RCRA Online #11780) ("Denit Letter #1) (Attachment 13) ("We have … been asked to determine whether used aerosol cans would meet the definition of 'empty' under 40 CFR 261.7. … [I]f 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. … 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"); Letter from Jeffrey D. Denit, Acting Director, Office of Solid Waste, EPA, to Gregory L. Crawford, Vice President, Recycling Operations, Steel Recycling Institute (October 7, 1993) (RCRA Online #11782) ("Denit Letter #2) (Attachment 14) (same).

Moreover, the preamble to the proposed rule further muddies an already muddy picture by introducing a new standard for "empty" aerosol cans and conflating it with a standard previously offered by the Agency for entirely different purposes. In particular, EPA states in the preamble that the proposed exclusion covers "aerosol cans that have been emptied of their contents (both propellant and product)," *see* 83 Fed. Reg. at 11,660, even though this standard is not in the proposed regulatory text, has no precedent we are aware of, and leaves unanswered what it means to be emptied of propellant and product. In addition, EPA states in the preamble that empty aerosol cans as defined under 40 C.F.R. § 261.7 "may be recycled as scrap metal," even though past Agency guidance states that the standard for recycling aerosol cans as scrap metal is whether they "contain a significant amount of liquid," not whether they meet the standard of empty in 40 C.F.R. § 261.7. *See, e.g.*, Denit Letter #1 ("if the [aerosol] cans are being recycled, it is not necessary to determine whether they are 'empty' under the criteria 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"); Denit Letter #2 (same). Complicating matters even further, EPA has previously stated that *one way* to ensure an aerosol can does not contain a significant amount of liquid is by puncturing and draining it, *id*., which has left the misimpression in the minds of some that this is the *only way* to achieve this standard. And, by blurring the distinction between the "no significant liquids" standard and the definition of empty container, EPA may be leaving the misimpression that the only way to render an aerosol can empty is by puncturing and draining it.

In light of the above, the Retail Associations urge EPA to clarify that empty aerosol cans are not reactive and thus do not have to be managed as either universal or hazardous wastes (although they may be managed as universal wastes on a voluntary basis), and further to clarify when aerosol cans qualify as empty (including, but not limited to the fact that emptying does not require puncturing and draining). We elaborate further on the guidance needed on these and related issues in Section 8 below.

6. EPA Should Clarify That As Soon As It Finalizes the Proposed Rule, Aerosol Can Wastes May Be Transported in All States Without a Hazardous Waste Manifest or a Hazardous Waste Transporter

In the preamble to the proposed rule, EPA indicates that the designation of hazardous aerosol can wastes as universal wastes under the federal regulations would not take effect in authorized states unless and until such states adopted the same designation under state law. *See* 83 Fed. Reg. at 11,662-63. Moreover, because such designation would generally make the state programs less stringent than they currently are (except in the case of the few states that already designate aerosol cans as universal wastes), the states "would not have to adopt the universal waste regulations for aerosol cans." *Id*. at 11,663. These statements leave open the possibility that some states may never adopt the universal waste rule for aerosol cans, and/or that there may be an extended period of time during which there will be a patchwork of regulation for aerosol cans.[18]

[18] To minimize this patchwork and fully realize the benefits of a universal waste rule for hazardous aerosol can wastes, we ask EPA to encourage states to quickly adopt the new rule, as the Agency has done for previous universal waste rules. *See, e.g.*, 60 Fed. Reg. 25,492, 25,536 (May 11, 1995) (final original universal waste rule) ("Even though States are not required to adopt today's rule, EPA strongly encourages them to do so"); 64 Fed. Reg.

The proposed rule does not address how this patchwork will work. However, this issue is of vital importance, especially to retailers and other generators that may be generating hazardous aerosol can wastes in multiple states, to persons developing/operating national or regional collection and recycling/disposal programs for aerosol can wastes, and to generators and transporters moving aerosol cans across state lines to appropriate destination facilities. Of particular importance are the requirements (if any) that may apply to the transport of such wastes from, to, or through states that have not yet (or never will) classify aerosol cans as universal wastes.

As discussed below, EPA has previously addressed essentially the same issue in the context of other universal waste rules. However, when it has done so, it has ignored relevant law and the Agency's own guidance, and arrived at a conclusion that inappropriately and unnecessarily undermined implementation of the universal waste rule. The Retail Associations urge the Agency to rectify the situation by clarifying, once and for all, that once a waste is designated as a universal waste under federal law, the waste may be transported nationwide without a hazardous waste manifest or a hazardous waste transporter.

In prior universal waste rulemakings, EPA has stated that federally designated universal wastes remain subject to full hazardous waste regulation as long as they are in states that have not (yet) adopted the federal universal waste rule, with the result being that transport from, through, or to such a state must be performed by a hazardous waste transporter and must be accompanied by a hazardous waste manifest.[19] However, these statements overlooked the fact that federal rules for transportation of hazardous materials (including hazardous wastes) generally preempt state rules that are more stringent.

36,466, 36,472 (July 6, 1999) (final universal waste rule for lamps) ("EPA hopes to encourage … states to regulate spent lamps as universal waste and therefore promote greater consistency in regulatory approaches across state borders"); 70 Fed. Reg. 45,508, 45,516 (August 5, 2005) (final universal waste rule for mercury-containing equipment) ("[states] do not have to adopt the universal waste regulations … although EPA encourages them to do so").

Moreover, we ask EPA, as it has done in the past for other universal wastes, to state its intention not to take enforcement actions involving hazardous aerosol can wastes managed in accordance with the universal waste rule, even if the relevant state has not yet adopted the rule or received authorization for the rule. *See, e.g.*, Memorandum from Steve Herman, Assistant Administrator, Office of Enforcement and Compliance Assurance, EPA, and Elliott P. Laws, Assistant Administrator, Office of Solid Waste and Emergency Response, EPA, to EPA Regional Administrators (April 10, 1996) (RCRA Online #11960) (Attachment 15) ("By finalizing 40 C.F.R. Part 273, EPA has taken the position that managing wastes in compliance with those standards is environmentally protective. Therefore, … Regions should take enforcement actions involving universal wastes only where handlers of such wastes are not in full compliance with the Part 273 standards"); Memorandum from Mike Shapiro, Director, Office of Solid Waste, EPA, to Senior RCRA Policy Managers, EPA Regions I-X (February 13, 1997) (RCRA Online #14088) (Attachment 16) (same).

[19] *See, e.g.*, 60 Fed. Reg. 25,492, 25,537-38 (May 11, 1995) (final original universal waste rule); 64 Fed. Reg. 36,466, 36,482-83 (July 6, 1999) (final universal waste rule for lamps); 70 Fed. Reg. 45,508, 45,516-17 (August 5, 2005) (final universal waste rule for mercury-containing equipment).

EPA itself has previously noted the preemptive effect of federal rules for transport of hazardous wastes, stating for example that "[even though] preemption authorities are quite foreign to RCRA [they] are introduced into the transporter arena by the statutory directive in RCRA to maintain consistency with the DOT framework [for transportation of hazardous materials under the Hazardous Materials Transportation Act ("HMTA")]."[20] Indeed, even state hazardous waste transport requirements that have been authorized by EPA pursuant to RCRA are not immune to pre-emption under the HMTA.[21]

In the present case, if hazardous aerosol can wastes are classified as universal wastes, any state rules requiring such items to be shipped as ordinary hazardous wastes would be preempted. Consider, for example, the requirement that hazardous wastes be transported with a manifest. Under EPA's proposed rule, hazardous aerosol can wastes would not have to be shipped with a manifest for purposes of federal law. The HMTA explicitly provides that state shipping paper requirements (including manifest requirements) are preempted if they are not "substantively the same" as the corresponding federal requirements. *See* 49 U.S.C. § 5125(b)(1)(C). DOT has clarified that, under this standard, state requirements must "conform[ ] in every significant respect to the Federal requirement." *See* 49 C.F.R. § 107.202(d). Thus, any state manifest requirements for aerosol cans would clearly be preempted.

As EPA itself stated in 1984, federal law "prohibit[s] States from requiring separate State manifests or other information to accompany waste shipments [if such documents or information are not required by federal law]."[22] DOT echoed these statements in its own 1984 notice, saying that "no carrier could be required to carry any State manifest form that differs from the EPA

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[20] *See* Letter from Michael Shapiro, Director, Office of Solid Waste, EPA, to Richard J. Barlow, Northeast Waste Management Officials Association ("NEWMOA") (June 11, 1996) (RCRA Online #14135) (Attachment 17); *see also N.Y. Dep't of Envtl. Conservation v. DOT*, 37 F.Supp.2d (N.D.N.Y. 1999) ("despite the RCRA's recognition that states are permitted to establish requirements which are 'more stringent' than EPA regulations, … when dealing with transporters of hazardous waste, this general state empowerment must be read in conjunction with the statutory mandate that EPA regulations be consistent with the HMTA").

[21] *See, e.g.*, 60 Fed. Reg. 62,527, 62,534 (December 6, 1995) ("EPA-authorized State requirements governing hazardous waste transporters that are more stringent than EPA's own regulations are preempted when those requirements fail to meet [HMTA preemption] standards…. There is no basis for the position … that any State can avoid preemption of its hazardous waste transporter requirements simply by obtaining authorization under RCRA"); Letter from Michael Shapiro, Director, Office of Solid Waste, EPA, to Charles Dickhut, Chemical Waste Transportation Institute (August 17, 1994) (RCRA Online #13692) (Attachment 18) ("RCRA authorization decisions provide no basis for shielding state regulations touching upon hazardous materials transport from possible preemption challenges raised under the HMTA").

[22] *See* 49 Fed. Reg. 10,490, 10,492 (March 20, 1984); *see also id*. ("States . . . may not require any additional information to accompany the waste shipment"; "no other form may be required by a State to accompany a waste shipment"; *id*. at 10,494 ("States are not precluded from setting up another system of forms . . . as long as the system does not interfere with the actual shipment of waste [and] transporters [are] not . . . required to carry these forms"; *id*. at 10,495 ("States may not require that any information other than the federally-required items accompany shipments of hazardous waste").

form."[23] Over the years, DOT has frequently reiterated this limitation on state information requirements for shipping materials in commerce.[24] Significantly, preemption applies not only to interstate shipments, but to intrastate shipments as well.[25]

Other state requirements for transport of hazardous aerosol can wastes would likewise be preempted. As in the case of state manifest requirements, state rules governing packaging, labeling, or release reporting during transportation are explicitly preempted if they differ in any respect from the federal rules. *See* 49 U.S.C. §§ 5125(b)(1)(B), (D). State rules for licensing or registration of transporters are also preempted if they operate as an "obstacle" to the goals of the federal hazardous materials law.[26] Of course, state rules related to handling of aerosol cans at stationary facilities will generally not be preempted, because they do not involve transportation.[27]

The Retail Associations recognize that EPA may be inclined to defer on the issue of preemption to the department that is responsible for implementing the federal hazardous materials transportation law (*i.e.*, DOT). However, EPA's prior statements on interstate transport of universal wastes have sufficiently clouded the issue that it is now essential that the Agency set the record straight (in consultation with DOT, if necessary). EPA, in fact, has been willing to do so in the past.[28] The Agency should be eager to do so in the current case, because preemption will significantly advance the goal of facilitating nationwide recycling of aerosol cans. At a minimum, EPA should disavow the statements in prior universal waste rules, and clarify that they were not intended to represent determinations that state rules requiring hazardous waste manifests or hazardous waste transporters were not preempted.

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[23] *See* 49 Fed. Reg. 10,507, 10,508 (March 20, 1984); *see also id*. ("while [the uniform manifest rules] do not prohibit the transporter from voluntarily carrying [additional] information, they do preclude States from requiring the transporter to do so").

[24] *See, e.g.*, 60 Fed. Reg. 62,527, 62,537-38 (December 6, 1995) (New York regulations requiring additional manifest information are preempted, because there are no corresponding federal requirements); 58 Fed. Reg. 11,176 (February 23, 1993) (Illinois regulations requiring a different format for providing information on the manifest are preempted).

[25] *See* 62 Fed. Reg. 1208 (January 8, 1997) (expanding the scope of the hazardous materials regulations to cover intrastate shipments, consistent with a 1990 amendment to the federal hazardous materials transportation law codified at 49 U.S.C. § 5103(b)(1)).

[26] *See* 49 U.S.C. § 5125(a)(2); *Colorado Public Utilities Commission v. Harmon*, 951 F.2d 1571 (10th Cir. 1991) (Colorado permit requirements for hazardous material transporters are preempted because they are an obstacle to the congressional goal of promoting safety through uniform standards).

[27] One possible exception relates to loading, unloading, and storage activities that are incidental to transportation. *See* 68 Fed. Reg. 61,906, 61,938 (October 30, 2003) (revising 49 C.F.R. § 171.1(c) to clarify that transportation includes loading, unloading, and storage incidental to transportation) and 61,923-24 (explaining that state and local requirements related to these activities may be preempted).

[28] *See, e.g.*, 49 Fed. Reg. at 10,495 ("States through which hazardous waste shipments pass are not allowed to place additional information requirements on the transporter as a condition of transportation."); RCRA/CERCLA Hotline Report (May 1985) (RCRA Online #12399) (Attachment 19) ("States through which [a] waste shipment travels may not dictate manifest requirements.").

Finally, the Retail Associations recognize that EPA may also be reluctant to address the preemption issue due to concerns about the potential reactions of state regulatory agencies. Although such agencies may generally be protective of their sovereign authority, we believe that, in the present case, they generally recognize the benefits of uniform national regulations for hazardous aerosol can wastes. Indeed, they may welcome preemption as important step forward in meeting recycling goals for such wastes. Moreover, EPA would not be establishing new law by addressing the preemption issue. Rather, it would simply be recognizing that, under existing law, the effect of the new federal universal waste rule for hazardous aerosol can wastes would be to preempt more stringent state rules for transportation of such wastes.

7. EPA's Regulatory Impact Analysis Dramatically Underestimates the Potential Cost Savings That Would Be Achieved Under the Universal Waste Rule

In the Regulatory Impact Analysis ("RIA") for the proposed rule, EPA's "primary" analysis estimates that the costs savings associated with the proposal would be only $3.0 to $3.5 million per year. *See* RIA at 24. The Agency also includes an "alternative" analysis in an appendix, which results in an estimate of $56.7 to $63.3 million per year, but discounts this analysis by saying that "the analysis presented in this appendix … may overestimate cost savings." *Id*. at 48-49. As discussed below, EPA's primary analysis dramatically underestimates the likely cost savings, in part because it fails to take into account the unique characteristics of affected facilities in the retail sector, which the Agency itself acknowledges represent about two-thirds of the universe of affected hazardous waste generators. *See* 83 Fed. Reg. at 11,655. Indeed, even EPA's alternative analysis likely understates the cost savings significantly.

Throughout the RIA, EPA notes that the "cost savings [under the proposal] are largely attributable to facilities changing generator status as a result of no longer having to count aerosol cans towards their HW [hazardous waste] generator status." *See* RIA at ES-4, 24, and 47. The Retail Associations agree, but take issue with the Agency's estimates of the number of facilities expected to change generator status, especially under the primary analysis. According to that analysis, only about 500 facilities nationwide across all industries would change generator status under the proposal, representing less than 0.8% of the aerosol-generating Large Quantity Generator ("LQG") universe and 3.7% of the aerosol-generating Small Quantity Generator ("SQG") universe. *Id*. at ES-4 and 19. However, these figures seem extremely low. Some individual retail companies are likely to have more than 500 facilities change generator status as a result of a universal waste rule for aerosol cans, and the number across the entire retail sector would clearly be many times that figure (not even counting the number of facilities in other industries). Indeed, it is for this reason that the Retail Associations and the retail sector as a whole have been urging the Agency so strongly over the last several years to classify and regulate aerosol cans as universal wastes.

Based on our review of the RIA, we believe there are three main sources of EPA's error, each of which is discussed briefly below:

o ***Use of SQG Data Skewed Heavily to the Manufacturing Sector.*** EPA apparently estimated the percentage of SQGs that would become VSQGs under the proposal by reviewing the admittedly very limited data on SQGs in its 2015 Biennial Report ("BR") database, and determining for each SQG facility in that database how the exclusion of aerosol cans from counting toward the SQG threshold might affect the status of the facility. *See* RIA at 18 (explaining the methodology) and 8 (explaining that the BR database is a "significant underrepresentation" of the SQG universe, because "only LQGs are required to make BR submissions"). However, the BR data on SQGs are heavily skewed toward the manufacturing sector. Only 8% of the aerosol-generating SQGs in the BR database are from the retail sector, even though EPA itself acknowledges that the sector represents fully 65% of the aerosol-generating universe.[29] In contrast, almost half of the aerosol-generating SQGs in the BR database are in the manufacturing sector. *See* RIA at 7.

In light of the above, EPA's estimate of the percentage of SQGs that would become VSQGs under the proposal is based primarily on manufacturing facilities, even though retail stores represent by far a greater number of affected facilities and have characteristics that make it far more likely that they will change generator status. Members of the Retail Associations have reported that aerosol cans frequently account for 50% (by weight) or even more of all the potentially hazardous unsold/returned products handled by retailers. *See* Retail Associations NODA Comments at 16. We suspect that few, if any, manufacturing facilities would have such a high proportion of aerosol can wastes. Moreover, given the fundamental differences in the operations of retail stores and manufacturing facilities, we suspect that retail stores in the SQG category are much more likely to generate waste quantities only slightly above the SQG threshold and/or to exceed that threshold only on an episodic basis. Taken together, these characteristics make it much more likely that SQG retail stores would become VSQGs under a universal waste rule for aerosols.[30]

By basing its estimate of the effects primarily on facilities in the manufacturing sector (and in other sectors that likewise are substantially different from the retail sector that represents the bulk of affected generators), EPA has dramatically understated the percentage of SQGs that would become VSQGs under the proposal. The effects of this error on the bottom-line estimate of cost savings are very substantial. EPA's alternative analysis estimates that approximately 80% of aerosol-generating SQGs will become VSQGs under the proposal. *See* RIA at 48. That figure seems much closer to reality, and

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[29] *See* RIA at 7 (indicating that the BR database has only 59 aerosol-generating SQG retail facilities out of a total 710 aerosol-generating SQG facilities across all industries, which corresponds to 8%); 83 Fed. Reg. at 11,655 ("[the] top economic sector[ ] … with the largest percentage of potentially affected entities [is] the retail trade industry … representing 65% of the affected … universe").

[30] *See, e.g.,* Retail Associations NODA Comments at 24, n.26 ("Several members of the Retail Associations … estimate that *well over half* of their stores would be reclassified as CESQGs if all aerosols were exempted from 'counting' for purposes of determining generator status [as would be the case under the universal waste rule]" (emphasis added)).

by EPA's estimates would increase the annual cost savings from the $3.0-$3.5 million range to the $56.7-$63.3 million range.

o ***Failure to Account for Expected Change in the Status of Large Numbers of Retail LQG Facilities under the Upcoming Rule on Low-Concentration Nicotine Products.*** As noted above, EPA's primary analysis projects that only a handful of the estimated 6520 aerosol-generating LQG facilities in the country will change generator status as a result of the proposed rule. *See* RIA at ES-4 and 19. In fact, however, it is likely that large numbers of these facilities will change status under the universal waste rule for aerosols. The reason is that the vast majority of these LQGs (4,225, according to EPA's primary estimate) are retail stores, *see id*. at 7, and we believe that most of these facilities are LQGs only because they generate more than 1 kg of low-concentration nicotine products (*e.g.*, nicotine gum, lozenges, patches, prescription liquids, and e-cigarettes), which are currently classified as acutely hazardous wastes under RCRA.[31] EPA has proposed to reclassify these products as non-acutely hazardous wastes or to exclude them from RCRA regulation, either one of which would likely cause many of these facilities to be reclassified as SQGs. *See* 80 Fed. Reg. at 58,071-73. Like other SQG retail facilities, these newly-SQG retail facilities would be highly likely to change to VSQG facilities under the universal waste rule for aerosols.

  If these newly-SQG retail facilities are included in the analysis, the effects on the bottom-line estimate of cost savings would be substantial. EPA has estimated that the annual cost savings per facility of changing from an SQG to a VSQG would be $3600 to $3800 (assuming that virtually all of these facilities will be Small Quantity Handlers of Universal Wastes ("SQHUWs")). *See* RIA at 25. Thus, if there are 3,000 newly-SQG retail facilities that would become VSQGs as a result of the universal waste rule for aerosols,[32] the total annual cost savings for these facilities alone would be $10.8 to $11.4 million – a few times EPA's primary estimate of the annual cost savings for the entire country. Assuming EPA finalizes its rule on low-concentration nicotine products before it finalizes the proposed universal waste rule for aerosols, it should revise its RIA to account for these substantial additional savings.

o ***Underestimate of Baseline Numbers of LQG and SQG Facilities Generating Aerosol Wastes.*** EPA's primary analysis in the RIA estimates that there are currently 6,520 LQGs and 13,019 SQGs that generate aerosol can wastes, while the Agency's alternative

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[31] *See* 40 C.F.R. § 261.33(e) (EPA Hazardous Waste No. P075) (acute hazardous waste listing for nicotine); 80 Fed. Reg. 58,014, 58,017 (September 25, 2015) ("unused nicotine patches, gums and lozenges are finished dosage forms of nicotine and therefore are regulated as P075 when discarded"); Retail Associations NODA Comments at 9 (stating that "Members of the Retail Associations report that low-[concentration] nicotine products are the sole reason why the vast majority of stores handling such products are classified as LQGs" and estimating the numbers of such facilities in the several thousands).

[32] This figure corresponds to approximately 70% of the 4,225 aerosol-generating retail industry LQGs identified by EPA in its primary analysis. We note that even if the actual percentage of retail LQGs that would be affected in this way is lower than 70%, the 3,000 facility figure may be reasonable, given that EPA's baseline figure of 4,225 retail LQGs generating hazardous aerosol can wastes is probably far too low (as discussed further below).

analysis estimates the figures at 7,239 and 14,454, respectively. *See* RIA at 19 and 48. The Retail Associations believe that these baseline numbers are likely all too low. With respect to LQGs, the 2013 BR data showed a total of 20,771 LQGs. *See* EPA, "Regulatory Impact Assessment of the Potential Costs, Benefits, and Other Impacts of the Final Hazardous Waste Generator Improvements Rule" (September 2016) ("Generator Rule RIA") (Attachment 20), Exhibit 2-6. It seems likely that virtually all of these LQGs generate at least some aerosol can wastes, if nothing else from cleaning offices and bathrooms. Yet, the current RIA estimates suggest that only about one-third of these LQGs generate any aerosol can wastes. Focusing just on the retail sector, the 2013 BR data showed 5,563 LQGs in the industry, virtually all in retail categories, such as health and personal care stores, that can almost invariably be expected to sell aerosol products (and thus to generate significant quantities of aerosol wastes). *Id*. Yet, the current RIA estimates that only 4,225 retail LQGs generate aerosol wastes.

The apparent underestimates are magnified in the RIA, since EPA bases its estimates of aerosol-generating SQGs on its estimates of aerosol-generating LQGs. In particular, EPA arrived at its SQG estimates by multiplying the LQG estimates by a factor of two (2.0). *See* RIA at 8-9. However, there are several reasons to question this methodology. First, as noted above, the underlying estimates of the number of aerosol-generating LQGs seem low. Second, in the RIA for the 2016 hazardous waste generator rule, EPA estimated that the ratio of SQGs to LQGs was significantly higher, namely between 2.4 and 3.1. *See* Generator Rule RIA, Exhibit ES-2. Although these ratios were not focused specifically on aerosol-generating generators, there is no apparent reason why the ratios would be significantly different for such generators, as opposed to generators of hazardous wastes as a whole. Third, EPA based its factor of 2.0 on data from just 3 states, and for one of those states, the Agency acknowledged that it had to use indirect (and probably incomplete) means to identify the relevant facilities. *See* RIA at 8. Fourth, EPA in the 2014 NODA estimated that the number of SQGs in the retail sector alone was 16,774 (virtually all of which would be expected to generate significant quantities of aerosol wastes), which is substantially greater than the number of SQGs that EPA is now estimating for all industries (*i.e.*, 13,019 under the primary analysis, and 14,454 under the alternative analysis). *See* RIA at ES-4 and 19 (estimate from the primary analysis) and 48 (estimate from the alternative analysis); 79 Fed. Reg. 8,926, 8,932 (February 14, 2014) (NODA estimate).

These deviations raise serious questions about EPA's methodology, and suggest that the baseline estimates of the affected universe of generators – and therefore the ultimate estimate of the costs savings – are substantially too low. As noted above, even a relatively modest increase in the number of generators whose status would change under the universal waste rule could increase the expected cost savings by millions of dollars each year.

For all of the reasons discussed above, the Retail Associations believe that EPA has dramatically underestimated the likely cost savings that would result from a universal waste rule for aerosol

cans. Adding up all the estimates discussed above, we believe that the total cost savings will likely be at least $80 million per year, and potentially significantly higher.

8. EPA Should Follow Through on Its Commitment to Issue Guidance on the Extent to Which Aerosol Cans Are Subject to RCRA Regulation in the First Instance

Although the Retail Associations believe that EPA's proposal to classify and regulate hazardous aerosol can wastes as universal wastes is a major step forward in improving the regulatory framework for such materials, we also believe it is imperative for the Agency issue guidance on when aerosol cans qualify as solid and hazardous wastes, and are subject to RCRA regulation, in the first instance. Since at least as far back as 2014, the Retail Associations have stressed that an effective strategy for aerosol cans requires not only a universal waste rule for hazardous aerosol can wastes, but also new guidance on these fundamental issues. *See, e.g.*, Retail Associations NODA Comments at 20-25. At least one of the Associations, RILA, underscored the importance of guidance (as well as a universal waste rule) in its 2017 comments on EPA's regulatory reform efforts under Executive Order 13777. *See* RILA Regulatory Reform Comments at 8-12. In its 2016 Retail Strategy, EPA acknowledged the need for additional guidance, committing, for example, to develop a "guide on how to recycle aerosol cans under the existing Subtitle C recycling exclusions." *See* EPA, "Strategy for Addressing the Retail Sector under RCRA's Regulatory Framework" (September 12, 2016) (Attachment 27) at 6. We urge EPA to follow through on this commitment, and would welcome the opportunity to assist the Agency in this effort. EPA should try to issue such guidance before or together with the final universal waste rule, if that can be done without delaying the universal waste rule. However, the first priority should be to issue a final universal waste rule for hazardous aerosol can wastes, which can be followed up afterwards, if necessary, with the guidance.

We believe that guidance is needed on four main issues, each of which is discussed briefly below:

- ***Applicability of the Definition of Solid Waste to Aerosol Cans Destined for Reclamation.*** EPA should clarify that aerosol cans (whether full, partially full, or empty) are not solid wastes when they are destined for reclamation (*e.g.*, recovery of metals in the housing of the dispenser, useful propellants such as hydrocarbons suitable for use as fuel, and/or the chemical products originally intended to be dispensed). The Agency has long stated that aerosol cans, as well as the propellants and chemical products inside, are "commercial chemical products."[33] As commercial chemical products, the aerosol cans

[33] *See, e.g.*, Memorandum from Sylvia K. Lowrance, Director, Office of Solid Waste, EPA, to Karl E. Bremer, Chief, RCRA Permitting Branch, EPA Region 5 (December 30, 1992) (RCRA Online #11717) ("Lowrance Memorandum") (Attachment 21) ("the remaining propellants in the cans [are] unused … [and] would be classified as commercial chemical products"); *id.* ("if the aerosol cans are … partially full … they would be considered off-specification [commercial chemical products]"); Letter from Sylvia K. Lowrance, Director, Office of Solid Waste, EPA, to Kurt E. Whitman, Project Coordinator, SWInc. (September 30, 1988) (RCRA Online #13225) (Attachment 22) ("[aerosol] cans are hazardous [under the commercial chemical product listings] if … they contain a commercial chemical product on the 40 CFR 261.33(e) or (f) lists"); Denit Letter #2 (Attachment 14) ("liquids or contained gases removed from aerosol cans may be … listed in Subpart D of 40 CFR Part 261," where the only potentially relevant listings would be the commercial chemical product listings); Denit Letter #1 (Attachment 13) (same).

are classified as non-wastes under the RCRA regulations if they are destined for reclamation.[34] Importantly, EPA has explicitly stated that a material may be legitimately reclaimed even if only non-hazardous components are being recovered.[35] Thus, even if the aerosol cans are being reclaimed only to recover non-hazardous components such as the metal housings, the cans are properly classified as commercial chemical products destined for reclamation, and thus not solid or hazardous wastes.[36]

- ***Potential Reactivity of Aerosol Cans*.** EPA has long suggested that waste aerosol cans, whether full or empty, have the potential to qualify as reactive hazardous wastes on the basis that they are "capable of detonation or explosive reaction if [they are] subjected to a strong initiating source or if heated under confinement."[37] However, as the Retail Associations have demonstrated, aerosol cans do not, in fact, exhibit the reactivity characteristic. *See generally* Retail Associations NODA Comments at 20-23.

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[34] *See* 40 C.F.R. § 261.2(c)(3) (listed commercial chemical products are not solid wastes when destined for reclamation); 50 Fed. Reg. 14,216, 14,219 (April 11, 1985) (specifying that the rules for listed commercial chemical products also apply to characteristic commercial chemical products); *see also* 40 C.F.R. § 261.1(c)(4) (defining reclamation to include "process[ing] to recover a usable product").

[35] *See, e.g.*, 73 Fed. Reg. 64,668, 64,745 (October 30, 2008) (stating that "[i]t has been the Agency's longstanding policy that … not every constituent or component in a hazardous secondary material would have to contribute … to the recycling process," and indeed "the non-hazardous component of hazardous secondary materials [can] provide the useful contribution"; also citing as examples the use/recovery of non-hazardous glass from lead-containing cathode ray tubes, and the use/recovery of non-hazardous zinc from certain hazardous secondary materials); 78 Fed. Reg. 46,448, 46,462 (July 31, 2013) (stating that "EPA's long-standing policy regarding legitimate recycling does not require that 100% of the hazardous secondary material be reclaimed in order to be legitimately recycled," and concluding that solvent-contaminated wipes destined to be laundered to recover/regenerate the fabric cloth are being legitimately reclaimed, even though the hazardous solvents are being discarded).

[36] At a minimum, EPA should clarify that aerosol cans containing non-hazardous chemical products and ignitable propellants that are commonly used as fuels (*e.g.*, propane and butane) are not hazardous wastes if they are destined for reclamation to recover the propellants for use as fuels or for use in making fuels. As the Retail Associations explained in detail in comments on the 2014 NODA, none of the components of these products are subject to RCRA regulation. *See* Retail Associations NODA Comments at 23-25. The chemical product intended to be dispensed in this situation is non-hazardous, and thus clearly not a RCRA hazardous waste. The metal housing likewise is non-hazardous (and would be excluded or exempt from regulation if it were also reclaimed). Moreover, EPA has clearly stated that the only remaining component – the propellant – would not be a solid waste. *See* Lowrance Memorandum (Attachment 21) ("Since [butane and propane propellants] are fuels and being burned for energy recovery, they would not fall within the definition of a solid waste and would consequently not be considered hazardous wastes"); 40 C.F.R. § 261.2(c)(2)(ii) (commercial chemicals products destined to be used as fuels or to make fuels "are not solid wastes if they are themselves fuels"). Inasmuch as none of the components would be solid or hazardous wastes, the aerosol cans would also not be subject to RCRA regulation.

[37] *See* EPA, RCRA Hotline Report (September 1987) (RCRA Online #13027) (Attachment 12) ("Irrespective of the lack of contained waste, … aerosol cans [c]ould be a RCRA hazardous waste because they demonstrate the hazardous characteristic of reactivity"); 40 C.F.R. § 261.23(a)(6) (supposedly relevant part of the definition of reactivity).

In general, DOT requirements for the design, manufacture, and testing of aerosol cans ensure that the products will not burst – much less explode or detonate – when heated to the types of temperatures contemplated by the RCRA reactivity characteristic (*e.g.*, 140°F or 160°F), or when subjected to the types of initiating sources contemplated by the characteristic (*e.g.*, jostling, bumping, tipping, and dropping).[38] Moreover, EPA has long stated that the reactivity characteristic is intended to capture only a "fairly narrow category of wastes" that are "clearly" hazardous, even "to the generator's own operations."[39] Aerosol cans do not exhibit any of these indicia of reactivity, given that they are ubiquitously generated and EPA itself has expressed uncertainty about when aerosols might be reactive.[40] Thus, we urge EPA to issue guidance clarifying that aerosol cans do not exhibit the RCRA characteristic of reactivity.

- ***Point at Which Aerosol Cans Are "Empty."*** As EPA noted in the preamble to the proposed rule, "[a]n aerosol can that meets the definition of empty container in 40 CFR 261.7 is not subject to hazardous waste regulation." *See* 83 Fed. Reg. at 11,660. However, it is unclear under the referenced definition when aerosol cans qualify as empty. For this reason, we urge EPA to provide guidance on this issue. In general, we believe such guidance must provide a practical means for generators to determine when aerosol cans are empty, recognizing that aerosols are used and/or generated as wastes in an extraordinarily wide range of circumstances by persons of widely ranging degrees of knowledge and experience with hazardous wastes, and that aerosol cans are closed and opaque units that prevent direct observation of the contents and limit direct access to the contents.

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[38] *See, e.g.*, 49 C.F.R. § 173.306(a)(3)(ii) (requiring metal aerosol cans to be "capable of withstanding without bursting a pressure of *one and one-half times* the equilibrium pressure of the contents at 130°F" (emphasis added)); § 173.24(b)(1) (requiring all packagings, including aerosol cans, to be "designed, constructed, maintained, filled, [their] contents so limited, and closed, so that under conditions normally incident to transportation … there will be no identifiable … release of hazardous materials to the environment"); Memorandum from John J. Skinner, Director, Office of Solid Waste, EPA, to David Wagoner, Director, Air & Waste Management Division, EPA Region VIII (November 30, 1984) (RCRA Online #12339) (Attachment 23) (concluding that small caliber ammunition up to 0.50 caliber are not reactive, based on tests showing that they do not detonate or explode at 160°F or when subjected to "drop tests … to simulate handling errors").

[39] *See* EPA, "Background Document: Reactivity Characteristic" (May 1980) (Attachment 24) at 10 ("the problems posed by reactive wastes appear to be confined to a fairly narrow category of wastes"); 51 Fed. Reg. 21,648, 21,649 (June 13, 1986) ("characteristics define broad classes of wastes that are *clearly* hazardous" (emphasis added)); 45 Fed. Reg. 33,084, 33,110 (May 19, 1980) ("[m]ost generators of reactive wastes are aware that their wastes possess this property … because such wastes are dangerous to the generators' own operations").

[40] *See, e.g.*, Letter from Elizabeth A. Cotsworth, Acting Director, Office of Solid Waste, EPA, to T.L. Nebrich, Jr., Technical Director, Waste Technology Service, Inc. (May 19, 1997) (RCRA Online #14235) (Attachment 25) ("Over the past several years we have received numerous questions concerning the regulatory status of used aerosol cans under the … hazardous waste regulations. We are not at this time able to make a categorical determination as to whether various types of cans that may have contained a wide range of products exhibit the characteristic of reactivity").

Under the regulations, aerosols can and should be deemed empty once they are no longer capable of dispensing the chemical product in a reliable and steady way as required for the intended application (*e.g.*, once the can starts sputtering or otherwise delivering an uneven spray). At that point, "[a]ll wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container [*i.e.*, an aerosol can]," *see* 40 C.F.R. § 261.7(b)(1)(i), since it would not be common to keep using an aerosol can once it is no longer dispensing the product properly. In addition, at that point, the aerosol can would almost certainly contain no more than 1 inch of chemical product inside, as specified in 40 C.F.R. § 261.7(b)(1)(ii), since the chamber with the chemical product is rarely (if ever) more than 8 inches tall and manufacturers seem unlikely to design a product that leaves more than 1/8th of the chemical product stranded inside after use. Further, at this point, some significant portion of the propellant is likely to have been discharged, and in this sense the pressure would have "approache[d] atmospheric," as specified in 40 C.F.R. § 261.7(b)(2). Thus, there is a solid basis for issuing practical guidance that an aerosol can qualifies as empty once it stops dispensing the chemical product in a proper way.[41]

- ***Use of Statistics to Determine the Quantity of Aerosol Cans to be Counted Toward a Generator's Status.*** Under the proposed rule, VSQGs would not have to manage their hazardous aerosol can wastes in accordance with the universal waste rule (although they could do so at their option). We believe that a generator should be able to use statistical information (*e.g.*, from similar facilities) to determine the percentage of aerosol cans that need to be counted toward the VSQG limit, without making a determination for each individual can as to whether it is a hazardous waste, empty, etc. EPA has previously allowed this type of approach for another situation in which individual wastes of a particular type may be either hazardous or nonhazardous,[42] and we urge the Agency to confirm that a similar approach may be used for aerosol cans.

9. Conclusion

For the reasons discussed above, the Retail Associations strongly support the classification and regulation of hazardous aerosol can wastes as universal wastes under RCRA. Indeed, we believe aerosol cans are particularly well suited for addition to the universal waste rule, since they satisfy all

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[41] We also urge EPA to issue similar guidance on the issue of when aerosol cans no longer contain "significant liquids," which (as discussed in Section 5.3 above) is the standard that EPA has established for when aerosol cans (whether "empty" or not) may be recycled as scrap metal.

[42] *See* Letter from Michael Shapiro, Director, Office of Solid Waste, EPA, to Lynn L. Bergeson (July 13, 1995) (RCRA Online #14003) (Attachment 26) ("we believe that it would be appropriate for a generator to rely on 'knowledge' of the waste … based on studies done to characterize the frequency of 'hazardous' spent antifreeze generated (relative to the generation of 'nonhazardous' spent antifreeze), in order to characterize the total volume of hazardous waste generated. [For example, if] data … indicate that up to 40% of the spent antifreeze flushed from radiators may be hazardous … it would be appropriate for a spent antifreeze generator to characterize the total consolidated volume of spent antifreeze generated as being 40% hazardous and 60% nonhazardous. … [T]his approach would be appropriate for determining the volume of hazardous waste generated for the purposes of being eligible for special regulatory provisions for small quantity generators").

of the criteria specified in the regulations for classification as universal wastes. However, we urge EPA to expand the scope of its proposal by including non-aerated and gas-only products, by removing or modifying the exclusion for aerosol cans with evidence of leaking or damage, and by clarifying the status of empty aerosol cans. Such changes are needed to make the rule workable (especially for retailers, which EPA estimates represent approximate two-thirds of the affected generator universe) and to maximize the benefits of the rule. The Agency should also clarify that as soon as the final rule is issued, hazardous aerosol can wastes may immediately be transported in *all* states without a hazardous waste manifest or a hazardous waste transporter.

With these changes and clarifications, the cost savings that would result from the rule are likely far greater than EPA estimated in its RIA – perhaps as great as $80 million per year or more. Although this would be a major step forward in improving the regulatory framework for aerosol cans, we also believe it is important for the Agency issue guidance clarifying (a) that aerosol cans destined for recycling are not solid wastes, (b) that aerosol cans do not exhibit the characteristic of reactivity, (c) that aerosol cans qualify as empty once they are no longer capable of dispensing the chemical product in a reliable and steady way as required for the intended application, and (d) that generators may use statistical information to determine the quantity of aerosol cans that need to be counted in determining their hazardous waste generator status. EPA should try to issue such guidance before or together with the final universal waste rule, if that can be done without delaying the universal waste rule. However, the first priority should be to issue a final universal waste rule for hazardous aerosol can wastes, which can be followed up afterwards, if necessary, with the guidance.

Once again, we appreciate this opportunity to provide our comments on this proposed rulemaking. We would welcome the opportunity to provide additional input and/or to answer any questions the Agency may have with respect to the points made above.

Sincerely,

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