



May 30, 2014

**COMMENTS OF THE RETAIL ASSOCIATIONS IN RESPONSE TO EPA’S NODA  
ON THE APPLICATION OF RCRA TO THE RETAIL INDUSTRY**

**Executive Summary**

The Retail Industry Leaders Association (“RILA”), the Food Marketing Institute (“FMI”), the National Association of Chain Drug Stores (“NACDS”), and the National Retail Federation (“NRF”), and their members (collectively, the “Retail Associations”) are pleased to submit these comments in response to EPA’s Notice of Data Availability and request for comment, entitled “Hazardous Waste Management and the Retail Sector: Providing and Seeking Information on Practices to Enhance Effectiveness to the Resource Conservation and Recovery Act Program,” 79 Fed. Reg. 8926 (Feb. 14, 2014) (“NODA”). In particular, the Retail Associations appreciate the opportunity to share with EPA their ideas for clarifying and streamlining EPA’s Resource Conservation and Recovery Act (“RCRA”) regulations as they apply to the retail sector.

**Background and context:** Retail stores are in every community and offer a wide range of products that American consumers use in their daily lives. Retailers and suppliers move these products safely through vast distribution networks around the country before they arrive on store shelves. Nearly all of these products are sold to consumers, and are either consumed or used by consumers and/or disposed of without additional regulations. Only a small percentage remains unsold because, for example, suppliers launch new marketing programs or change formulations, the products have exceeded their “best by” date, or they have been recalled by the supplier. Similarly, a small percentage of products are returned to a store by a consumer for any number of reasons. Some of these unsold/returned products may be considered “hazardous waste” subject to the RCRA regulations.

Subjecting unsold/returned products to full RCRA regulation runs counter to RCRA’s mandate of resource conservation and EPA’s objectives for sustainable materials management, while offering virtually no additional environmental benefit and depleting scarce hazardous waste disposal resources. We believe it is possible to make regulatory and non-regulatory changes to the RCRA program to facilitate protection of the environment and human health in the retail sector while also encouraging reuse, recycling and the management of materials in a more sustainable fashion.

**Proposed Solutions:** In particular, the Retail Associations propose that EPA provide targeted solutions for two particular product types – nicotine products and aerosol cans –

and create an alternative, equally protective program for all unsold/returned products in the retail sector.

***Solutions for specific product types (Section II below):*** Unsold/returned nicotine products and aerosol cans are particular concerns for the retail sector because the Retail Associations’ members expend significant resources managing them as acutely hazardous wastes or hazardous wastes, respectively.

A variety of nicotine containing products, mainly including smoking cessation products like patches, gums, and lozenges (products with public health benefits), and also electronic cigarettes, are currently pushing many retail stores into large quantity generator status. Since those products may be classified as acutely hazardous wastes, handling more than 1 kg of such products at any given time means that retail stores are “large quantity generators” of hazardous waste,<sup>1</sup> subjecting retailers to numerous in-store requirements and burdening regulatory agencies with disproportionate oversight responsibilities for many retailers who would not be large quantity generators but for nicotine products. We discuss in detail below why the basis for regulating nicotine products meant for human use or consumption as acutely hazardous wastes is dubious, and we believe low-concentration nicotine products can be reclassified as non-acutely hazardous waste, with no reduction in protection of human health or the environment.

Aerosol cans are convenient mechanisms for consumers to receive and use a wide array of products that range from pharmaceuticals to air fresheners, and cheese product to sunscreen. These cans make up a significant volume of unsold/returned products, and their sheer variety makes waste characterization and subsequent decisions regarding recycling or disposal unnecessarily complex and confusing. As a result, some retailers conservatively assume that all unsold/returned aerosols are hazardous wastes and dispose of them accordingly, foreclosing potential opportunities for beneficial recycling, recovery, and reuse of potentially valuable materials. The Retail Associations propose that EPA issue guidance on two separate issues that could quickly provide meaningful relief for key categories of aerosol products: (1) guidance that aerosol cans are not reactive hazardous wastes and (2) guidance that aerosol cans with common fuel propellants and containing non-hazardous chemical products are not hazardous wastes when the propellants are recovered for use as a fuel. We also propose that EPA initiate a rulemaking to classify and regulate aerosol cans as universal wastes, which would ultimately provide a reasonable and environmentally protective framework for all aerosol products.

***Solution for all retail products (Section III below):*** Finally, the Retail Associations propose that EPA create an alternative program for unsold/returned products in the retail sector that considers the realities of retail operations. RCRA’s manufacturing-oriented framework does not work when applied to the retail sector, where the hazardous waste generation pattern is vastly different. Although there may be regulatory or non-regulatory solutions for individual waste streams (e.g., nicotine products, aerosols), the Retail

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<sup>1</sup> “Large Quantity Generator” status is the highest generator status under RCRA and historically has included only entities like large scale chemical companies, steel mills, shipyards, and tire manufacturing companies.

Associations urge EPA to consider a comprehensive regulatory solution in the form of a conditional exclusion from the RCRA definition of solid waste for wastes generated or collected by retail stores and managed in a reverse distribution system under certain conditions tailored to ensure the protection of human health and the environment. The Retail Associations envision that a conditional exclusion would provide a streamlined set of regulations for retailers that will enhance compliance, encourage reuse/recycling and better management of unsold/returned products in reverse distribution, ensure environmental protection, and create opportunities for increased sustainability.

## **I. THE RETAIL ASSOCIATIONS**

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 Retail Associations surveyed their broad membership to determine the breadth of compliance needs, current hazardous waste handling methods, and challenges, as well as the associated costs. That information is included throughout these comments where relevant.

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. FMI's U.S. members operate nearly 40,000 retail food stores and 25,000 pharmacies, representing a combined annual sales volume of almost \$770 billion. Through programs in public affairs, food safety, research, education and industry relations, FMI offers resources and provides valuable benefits to more than 1,225 food retail and wholesale member companies in the United States and around the world. FMI membership covers the spectrum of diverse venues where food is sold, including single owner grocery stores, large multi-store supermarket chains and mixed retail stores.

NACDS represents traditional drug stores and supermarkets and mass merchants with pharmacies. NACDS members operate more than 40,000 pharmacies, and NACDS' 125 chain member companies include regional chains, with a minimum of four stores, and national companies. Chains employ more than 3.8 million individuals, including 175,000 pharmacists. They fill over 2.7 billion prescriptions yearly, and help patients use medicines correctly and safely, while offering innovative services that improve patient health and healthcare affordability.

NRF is the world's largest retail trade association, representing discount and department stores, home goods and specialty stores, Main Street merchants, grocers, wholesalers, chain restaurants and Internet retailers from the United States and more than 45 countries. Retail is the nation's largest private sector employer, supporting one in four U.S. jobs – 42

million working Americans. Contributing \$2.5 trillion to annual GDP, retail is a daily barometer for the nation's economy. NRF's "This is Retail" campaign highlights the industry's opportunities for life-long careers, how retailers strengthen communities, and the critical role that retail plays in driving innovation.

## **II. EPA SHOULD CONSIDER TARGETED SOLUTIONS FOR NICOTINE AND AEROSOLS**

### **A. EPA Should Reclassify Low-Concentration Nicotine Products As Non-Acutely Hazardous**

The Retail Associations urge EPA to undertake a targeted (and expedited) rulemaking focused on reclassifying unsold nicotine-containing products, such as nicotine replacement therapy ("NRT") products and e-cigarettes, as non-acutely hazardous. NRT products (*e.g.*, gums, lozenges, patches, inhalers, and nasal sprays containing low concentrations of nicotine or related compounds) have been proven to be highly effective treatments in helping smokers stop using tobacco products. *See, e.g.*, U.S. Public Health Service, "Clinical Practice Guideline: Treating Tobacco Use and Dependence" (2008 Update) (identifying each of these products as "an effective smoking cessation treatment that patients should be encouraged to use"), *available online at* <http://bphc.hrsa.gov/buckets/treatingtobacco.pdf>. In addition, e-cigarettes offer an alternative to tobacco products. However, the current RCRA regulations inappropriately classify such products as acutely hazardous wastes, subject to a large quantity generator ("LQG") threshold of just 1 kilogram/month, and this is the sole reason why thousands of retail stores across the nation are subject to full regulation under RCRA.

We believe there is a compelling case that the low-concentration nicotine products currently on the market should be reclassified as non-acutely hazardous. Certainly, it cannot be reasonably argued that nicotine gums and lozenges that millions ingest multiple times daily -- with the encouragement of federal, state, and local health authorities, and the medical community more generally -- are acutely hazardous. There is ample precedent for such a reclassification, and in this case it would provide tens of millions of dollars in annual regulatory relief to retail stores that, but for the misclassification of nicotine products, would either be conditionally exempt from RCRA regulation or subject to the substantially reduced requirements for small quantity generators ("SQGs").

We understand that EPA is aware of the nicotine issue, but decided not to address it in the NODA, because the Agency intends to address the issue in a separate proposal on pharmaceutical wastes. Although we appreciate EPA's efforts and, at this point, do not know what the Agency plans to say in the upcoming proposal regarding nicotine, we are concerned that addressing the issue through the pharmaceutical rulemaking may unduly delay a solution (*e.g.*, if that rulemaking is slowed down by issues unrelated to nicotine) and ultimately may not lead to an appropriate resolution (*e.g.*, if it continues to regulate nicotine-containing products as acutely hazardous when they are not, and thereby imposes

the new regulatory regime on retailers that otherwise would be conditionally exempt from regulation).

A full discussion of this issue is beyond the scope of the current comments. However, we provide below some preliminary data in support of a reclassification. If EPA is open to pursuing such a rulemaking, we would be pleased to elaborate at a later date.

**1. *The human toxicity data that the original acutely hazardous classification was based on has been demonstrated to be erroneous.***

EPA originally listed nicotine (and salts) as acutely hazardous wastes based in large part on a then-common estimate that the median lethal dose (LD<sub>50</sub>) to humans through oral administration is only 1 mg per kg of body weight.<sup>2</sup> However, this estimate has since been discredited. The 1 mg/kg estimate was based on extrapolations from “highly dubious self-experiments performed in the middle of the nineteenth century” and is inconsistent with more recent “literature reports on nonfatal nicotine intoxications.”<sup>3</sup> A more careful estimate indicates that “the lower limit causing fatal outcomes is 0.5-1 g of ingested nicotine, corresponding to an oral LD<sub>50</sub> of 6.5-13 mg/kg.”<sup>4</sup>

The roughly order-of-magnitude change in estimated human toxicity could be critical in assessing the appropriateness of classifying nicotine products as acutely hazardous or non-acutely hazardous under RCRA, and thus warrants a reevaluation of the current classification. *Cf.* 75 Fed. Reg. 78,918 (December 17, 2010) (removing saccharin from the lists of RCRA hazardous wastes based on revised human health data).

**2. *The high-concentration nicotine products that formed the basis for the original acutely hazardous waste listing no longer exist, and completely different products with much lower concentrations have since come onto the market.***

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<sup>2</sup> See EPA Office of Solid Waste, Background Document entitled “Section 261.33 – Hazardous Waste from Discarding of Commercial Chemicals Products and the Containers and Spill Residues Thereof” (January 1981) (“CCP Background Document”), Appendix A.

<sup>3</sup> See B. Mayer, Department of Pharmacology and Toxicology, Karl-Franzens University (Graz, Austria), “How much nicotine kills a human?” *Archives of Toxicology* (2013).

<sup>4</sup> *Id.*; see also D. Matsushima, et al., “Absorption and Adverse Effects Following Topical and Oral Administration of Three Transdermal Nicotine Products to Dogs,” *Journal of Pharmaceutical Sciences* (1995) (“Studies of ingestion of tobacco or nicotine polacrilex gum by children – in which doses up to 6 mg/kg nicotine did not result in death – raise ... questions about the usefulness of [the 1 mg/kg] estimated lethal oral dose of nicotine in humans”); S. Schneider, et al., “Internet suicide guidelines: Report of a life threatening poisoning using tobacco extract,” *Journal of Emergency Medicine* (2010) (“The fatal dose of nicotine for adults [has been] estimated to be [1 mg/kg] but doubts about the validity of these data have been expressed as survival without complication after repeated ingestion of significantly higher amounts of nicotine has been observed”).

At the time that nicotine and salts were listed as an acutely hazardous waste under RCRA in 1980, the only nicotine products apparently being marketed were pesticides with extremely high concentrations of the chemical, such as Black Leaf 40 which contained 40% nicotine sulfate. NRT products were not approved for use in the U.S. until several years later.<sup>5</sup> Similarly, e-cigarettes did not appear in the market until the mid-2000s.

Clearly, the focus of the original listing was pesticide products with high concentrations of nicotine, rather than the NRT and e-cigarette products that appeared later. However, nicotine use as a pesticide started to decline rapidly in the years following the listing. *See generally* EPA, Reregistration Eligibility Decision for Nicotine (March 2008) at 8. The last EPA registrations for use of nicotine as a pesticide on food crops were cancelled in 1994, *id.*, and as of January 1, 2014, there are no longer any nicotine pesticides registered for use in the U.S. *See* 74 Fed. Reg. 26,695 (June 3, 2009) (EPA order cancelling “the last nicotine pesticide product registered for use in the United States ... effective January 1, 2014”).

In light of these developments, essentially the only wastes currently covered by the nicotine listing are NRT and e-cigarette wastes that were not and could not have been contemplated by EPA at the time of the listing. Although we do not have data on the precise concentrations of nicotine in these products, it is clear that the concentrations are far lower than the concentrations present in the pesticide products that formed the basis for the listing decision. For example, nicotine gum and lozenges typically contain either 2 or 4 mg of nicotine per piece; assuming a piece weighs a few grams, this corresponds to approximately 0.1% nicotine. Nicotine patches typically deliver between 7 and 21 mg of nicotine; assuming they contain 21 mg of nicotine and weigh only 1 g (approximately the weight of a paperclip), this would correspond to about 2% nicotine. (Actual concentrations might be a little higher, to the extent that the patches contain more nicotine than they actually deliver.) The concentrations of nicotine in the liquids used in e-cigarettes vary, but reportedly are typically less than 3%.<sup>6</sup>

In sum, the low-concentration nicotine products currently on the market bear little resemblance to the high-concentration nicotine products that were the focus of the original nicotine listing, and which are no longer on the market. Given the dramatic change in product mix, a reevaluation of the 1980 acutely hazardous classification is clearly warranted.

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<sup>5</sup> *See, e.g.*, 78 Fed. Reg. 19,718 (April 2, 2013) (“The nicotine gum and patch products were originally approved [by the Food and Drug Administration] between 1984 and 1992. Both the gum and the patch were initially available by prescription only; these products were switched from prescription to OTC status between 1996 and 2002. The nicotine lozenge and mini-lozenge were approved directly for OTC use in 2002 and 2009, respectively.”).

<sup>6</sup> *See, e.g.*, M. Trehy, et al., Food and Drug Administration, Division of Pharmaceutical Analysis, “Analysis of Electronic Cigarette Cartridges, Refill Solutions, and Smoke for Nicotine and Nicotine Related Impurities,” *Journal of Liquid Chromatography & Related Technologies* (2011) (reporting concentrations up to 25.6 mg/mL, which corresponds to 2.56%).

**3. *The current low-concentration nicotine products do not meet the regulatory criteria for acutely hazardous wastes.***

Under the RCRA regulations, a waste may be listed as acutely hazardous if “[i]t has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, [it exceeds certain criteria for acute toxicity in laboratory animals].” See 40 C.F.R. § 261.11(a)(2). Although the reference to “low doses” is rather ambiguous, EPA explained in the 1981 background document for the original commercial chemical product listings that the phrase was intended only to cover “extremely powerful poisons.” See CCP Background Document at 22. In particular, chemicals would be listed as acutely hazardous if “ingestion of less than a teaspoonful ... would be fatal to an adult.” *Id.*

It seems clear that the low-concentration nicotine products currently on the market would not meet this criterion. Individual pieces of nicotine gum or nicotine lozenges are approximately one teaspoon in size, and they obviously are not “fatal to an adult.” Millions of people ingest these products daily, with the encouragement of the medical community. Indeed, according to the website of the National Institutes of Health, people may chew up to 24 pieces of gum per day, or ingest up to 20 lozenges per day.<sup>7</sup> There can be no doubt that these products are not acutely hazardous as defined under the RCRA regulations.

Nicotine patches likewise do not appear to qualify as acutely hazardous. As an initial matter, it is difficult to imagine a scenario in which a person might ingest a nicotine patch. We are aware of one study in which adult volunteers chewed on unused nicotine patches, and while some adverse effects were noted, none were lethal. See F. Harchelroad, et al., “Oral absorption of nicotine from transdermal therapeutic systems,” *Veterinary and Human Toxicology* (1992). Another study reported on incidents in which young children had “bitten, chewed, or swallowed part of a patch.” See A. Woolf, “Childhood Poisoning Involving Transdermal Nicotine Patches,” *Pediatrics* (1997) (“Woolf Study”). Of 18 cases, 13 involved no symptoms; the remaining 5 children had symptoms ranging from fussiness/fatigue to a burning tongue or vomiting, but “[a]ll recovered fully.” *Id.* Thus, the patches do not appear to meet the RCRA criteria for acutely hazardous by oral administration.

Although EPA originally listed nicotine as acutely hazardous based on dermal toxicity, as well as oral toxicity, see CCP Background Document, Appendix A, it seems clear that nicotine patches are not acutely hazardous by dermal contact, inasmuch as their very purpose is to be applied to the skin. Moreover, the Woolf Study (cited above) reported on 18 incidents in which young children were dermally exposed to nicotine patches. In half the cases, the children showed no symptoms, while in the other half, the children exhibited symptoms ranging from fussiness, pallor, or skin irritation to nausea or dizziness. Once again, “[a]ll recovered fully.” In a separate study, the same researcher reported on “[n]ine

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<sup>7</sup> See NIH, MedlinePlus at <http://www.nlm.nih.gov/medlineplus/druginfo/meds/a684056.html> (“Do not chew more than 24 pieces [of nicotine gum] a day”) and <http://www.nlm.nih.gov/medlineplus/druginfo/meds/a606019.html> (“Do not use ... more than 20 [nicotine] lozenges per day”).

cases of dermal exposure to 2-20 transdermal nicotine patches ... result[ing] from either intentional misuse or suicide attempts [most of which were accompanied by] exposure to other drugs.” See A. Woolf, et al., “Self-poisoning among adults using multiple transdermal nicotine patches,” *Journal of Toxicology – Clinical Toxicology* (1996). Although “[a]ll suffered medical complications” and most required hospitalization, “all recovered.” *Id.* While these studies do indicate that nicotine patches may pose a risk, such risks do not rise to the level of warranting an acutely hazardous waste listing.

Finally, with respect to the liquids used in e-cigarettes, based on our preliminary research, we are not aware of any direct toxicological studies on the materials. However, using the estimated human LD<sub>50</sub> (oral) for nicotine of 6.5 to 13 mg per kg of body weight (as discussed above), as well as the fact that the liquids used in e-cigarettes generally contain less than 3% nicotine (as also discussed above), the LD<sub>50</sub> of the liquids can be estimated to be between 217 and 433 mg/kg. These values are well above the regulatory threshold for acutely hazardous wastes. See, e.g., 40 C.F.R. § 261.11(a)(2) (stating that wastes may be classified as acutely hazardous if they have an oral LD50 in rats of less than 50 mg/kg); CCP Background Document at 22 (indicating that wastes may be classified as acutely hazardous if they have an oral LD50 in humans of less than 100 mg/kg).

We want to stress that we are not arguing here that the low-concentration nicotine products currently on the market do not pose any potential hazards to human health (or the environment). Rather, our point is that these products do not meet the regulatory requirements for classification as acutely hazardous wastes under RCRA. For these reasons, we are proposing that the low-concentration products should be reclassified from acutely hazardous to non-acutely hazardous (and that the high-concentration products, if any, should remain classified as acutely hazardous).

**4. *The current low-concentration nicotine products are similar in nicotine concentration to tobacco products that are not regulated as hazardous wastes, much less acutely hazardous wastes.***

Tobacco products are not subject to regulation under RCRA as hazardous wastes – much less as acutely hazardous wastes – due to the fact that they are not expected to exhibit any characteristics of hazardous waste and are not listed as hazardous wastes. Although such products obviously contain nicotine, they are not covered by the “P075” listing for nicotine commercial chemical products, because they are not “[a] commercially pure grade of the chemical, [a] technical grade[ ] of the chemical ... [or a] formulation in which the chemical is the sole active ingredient.” See 40 C.F.R. § 261.33(d), Comment (defining the phrase “commercial chemical product”).

Significantly, the low-concentration nicotine products currently on the market – which are regulated not only as hazardous wastes, but as acutely hazardous wastes – contain approximately the same concentration of nicotine as unregulated tobacco products. As noted above, the low-concentration nicotine products generally contain less than 3% nicotine. By comparison, ordinary filtered cigarettes contain an average of 1.63% nicotine, with some brands containing up to about 2%. See, e.g., J. Malson, et al., “Comparison of

the nicotine content of tobacco used in bidis and conventional cigarettes,” *Tobacco Control* (2001). Smokeless tobacco products may contain as much as 3.4% nicotine. See K. Tilahalski, et al., “Assessing the Nicotine Content of Smokeless Tobacco Products,” *Journal of the American Dental Association* (1994).

The Retail Associations question whether it makes sense to regulate low-concentration nicotine products, such as over-the-counter NRT therapies, as acutely hazardous wastes, when tobacco products with comparable levels of nicotine are completely unregulated under RCRA.

**5. *There is ample precedent for reclassifying low-concentration commercial chemical products such as nicotine from acutely hazardous to non-acutely hazardous.***

EPA has previously recognized that acutely hazardous waste listings based on the toxicity of concentrated forms of a chemical may not be appropriate for commercial products containing much lower concentrations of the same chemical. Indeed, it is for this reason that the Agency “split” the original acutely hazardous waste listings for both warfarin and zinc phosphide – both of which applied regardless of concentration – into two listings each: an acutely hazardous listing which applies only to high-concentration products (greater than 0.3% for warfarin, or 10% for zinc phosphide), and a non-acutely hazardous waste listing which applies to low-concentration products. See 49 Fed. Reg. 19,922 (May 10, 1984). EPA explained that “[t]his change has been made because these lower concentration formulations of warfarin and zinc phosphide do not meet the criteria for classification as acutely hazardous waste.” *Id.* The Retail Associations believe that similar action is now warranted for nicotine-containing products.

**6. *Reclassification would provide substantial regulatory relief to the retail industry.***

Reclassification of low-concentration nicotine products as non-acutely hazardous wastes would provide well over \$40 million per year in regulatory relief to the retail industry, as discussed below. These costs -- and the related burdens on state regulators and local first responders, as discussed in the next section – cannot be justified, given the very small quantities of these products that are unsold, the low risks of the products, and the fact that these products do not meet the criteria for acutely hazardous wastes, as discussed above.

Members of the Retail Associations report that low-nicotine products are the sole reason why the vast majority of stores handling such products are classified as LQGs, rather than SQGs or conditionally exempt small quantity generators (“CESQGs”). Although we have not at this point been able to develop a solid estimate of the number of stores so affected, a conservative -- perhaps very conservative -- estimate would be 12,000 stores nationwide. We have arrived at this figure using two separate methods, both of which are largely in agreement with each other (and, we understand, EPA’s own estimates).

Our first method was to look at data from the U.S. Census Bureau, which specifies the numbers of establishments in various retail sectors. *See* U.S. Census Bureau, Statistical Abstract of the United States: 2012, Table 1048 (Retail Trade in 2007 and 2008). The 2008 figures for the sectors that seem most likely to carry nicotine products include the following: (a) supermarkets and grocery stores (63,400), (b) convenience stores (25,700), (c) pharmacies and drug stores (42,000), and (d) warehouse clubs and superstores (4,400). The total of these figures is 135,500 stores. Although some of these stores may not actually carry nicotine products, some may not generate significant quantities (>1 kg) of waste nicotine products, and some may qualify as LQGs for other reasons, we believe – based on survey responses from the Retail Associations’ members -- it is not unreasonable to expect that 10% of these stores are being pushed into the LQG category due to unsold nicotine-containing products. This would correspond to about 13,000 stores.

Our other methodology was to look at the data in EPA’s most recent National Biennial RCRA Hazardous Waste Report (for 2011). At the time of that report, it was not widely recognized that EPA had announced late the prior year that NRT products, including patches, were viewed as acutely hazardous wastes under RCRA.<sup>8</sup> As a result, it appears that only one nationwide retailer reported taking that announcement into account. That one retailer submitted biennial reports for approximately 1,200 stores. If we assume a number of other nationwide retailers (plus some regional or local retailers) have followed suit in the most recent biennial reporting period, it seems likely that ten times this number of stores – approximately 12,000 -- will now qualify as LQGs. Indeed, other information from members of the Retail Associations suggests that this figure is likely very conservative.

In order to estimate the costs to each store, we have focused on just a few regulatory requirements that apply only to LQGs, or that impose more costs on LQGs than SQGs or CESQGs:

- a. **Biennial reporting.** LQGs, but not SQGs or CESQGs, are required to submit a biennial report. *See* 40 C.F.R. § 262.41 (biennial reporting requirement); § 262.44 (specifying that SQGs are not subject to biennial reporting); and § 261.5 (conditionally exempting CESQGs from RCRA regulation). The members of the Retail Associations indicate that the reporting process costs them about \$350 to \$640 per store, which includes the biennial reports, state annual reports, obtaining generator ID numbers, and related consultant fees. This range is consistent with EPA’s own estimates that the costs per generator of preparing and submitting a biennial report (including the Site Identification Form and Form GM only) are approximately \$374/year.<sup>9</sup>

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<sup>8</sup> *See* Letter from Robert W. Dellinger, Director, Materials Recycling and Waste Management Division, EPA, to Charlotte A. Smith, Director, PharmEcology Services, WM Healthcare Solutions, Inc. (August 23, 2010) (RCRA Online #14817).

<sup>9</sup> *See* EPA, “Supporting Statement for EPA Information Collection Request Number 0976.16, 2013 Hazardous Waste Report, Notification of Regulated Waste Activity, and Part A Hazardous Waste Permit Application and Modification” (September 19, 2012) at 73.

- b. **Contingency planning.** LQGs, but not SQGs or CESQGs, are required to prepare and maintain a contingency plan. *See* 40 C.F.R. § 262.34(a)(4) (generally requiring generators to comply with 40 C.F.R. Part 265, Subpart D, including the contingency planning requirement); § 262.34(d) (subjecting SQGs to reduced requirements); and § 261.5 (conditionally exempting CESQGs from RCRA regulation). Based on a survey of the Retail Associations' members, the costs of such contingency planning can be estimated to be between \$400 and \$1,000 per year per store. Again, this range is consistent with EPA's own estimates, which indicate that the costs per generator of preparing and maintaining a contingency plan are approximately \$411/year.<sup>10</sup>
- c. **Training.** LQGs are required to comply with detailed RCRA requirements for personnel training, while SQGs are subject to minimal requirements to ensure their employees' familiarity with relevant waste handling and emergency procedures, and CESQGs are not subject to any training requirements. *See* 40 C.F.R. § 262.34(a)(4) (generally requiring generators to comply with the training requirements in § 265.16); § 262.34(d)(5)(iii) (subjecting SQGs to significantly reduced requirements); and § 261.5 (conditionally exempting CESQGs from RCRA regulation). Retail members of the Retail Associations estimate that full RCRA training costs them between \$2,000 and \$3,500 per store per year. Large retailers commonly have tens of thousands of store employees; and they indicate that they tend to train about 3% to 10% of their workforce in hazardous waste handling, which is 2 to 3 employees per store or more. However, some companies train up to 100% of their store employees.
- d. **Additional manifesting.** LQGs are generally required to manifest their wastes off-site every 90 days, or 4 times per year, while SQGs need only manifest their wastes off-site 2 times per year (or less, if the wastes must be shipped more than 200 miles) and CESQGs are not subject to manifesting at all. *See* 40 C.F.R. § 262.34(a) (limiting on-site accumulation of hazardous wastes by LQGs to 90 days); § 262.34(e) (allowing SQGs to accumulate hazardous wastes on-site for up to 180 days, or 270 days if the wastes must be shipped more than 200 miles); and § 261.5 (conditionally exempting CESQGs from RCRA regulation). Thus, stores that are classified as LQGs due to unsold nicotine products will generally have to complete at least two manifest forms each year that they otherwise would not have to complete.<sup>11</sup> EPA has estimated the costs for an LQG to complete each manifest (and comply with associated requirements) to be

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<sup>10</sup> *See* EPA, Supporting Statement for EPA Information Collection Request Number 0820.10, Hazardous Waste Generators (January 2008) at 74.

<sup>11</sup> The extra manifest forms also correspond to extra shipments of hazardous wastes, and therefore additional – and unnecessary – carbon emissions from transport vehicles.

approximately \$137.<sup>12</sup> For two manifests, the costs would be twice that, or \$274/year.

Adding up the estimates above, these requirements can be expected to cost each affected store between \$3,024 and \$5,414 per year. If we estimate the costs per store at \$3,000 (on the conservative side), and these annual costs are imposed on 12,000 stores as a result of the misclassification of nicotine (again, on the conservative side), the nationwide cost would be approximately \$36 million per year.

This figure is almost certainly a significant underestimate, given that we have not included a variety of other costs imposed by changing the classification of store facilities from CESQG to LQG (*e.g.*, the costs of transport to and disposal at a permitted hazardous waste facility), or from SQG to LQG (*e.g.*, more frequent hazardous waste transport and disposal). These other costs could be substantial.<sup>13</sup> Thus, it appears likely that correcting the misclassification of nicotine would provide regulatory relief well in excess of \$40 million per year.

***7. Regulating low-concentration nicotine products the same way as other pharmaceutical products would not provide a comparable level of regulatory relief.***

We understand that EPA is intending to address nicotine-containing products in the upcoming proposal on pharmaceutical wastes. Although we wholeheartedly endorse the development of a streamlined regulatory approach for pharmaceuticals, we are concerned that the proposal may not provide an appropriate level of regulatory relief for nicotine products. For example, if the pharmaceutical proposal merely specifies that NRT products and e-cigarettes may be handled under the new rules applicable to pharmaceutical wastes – without specifically correcting the misclassification of such low-concentration nicotine wastes – thousands of retail stores that properly should qualify as CESQGs will continue to be improperly regulated as LQGs. Although the new regulatory regime for pharmaceutical wastes may reduce the applicable requirements for these stores, the stores will continue to be subject to a significant degree of regulation that they would not be subject to if they were properly classified as CESQGs. For this reason, we believe it is critical that EPA address nicotine more directly, by reclassifying low-concentration products as non-acutely hazardous.

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<sup>12</sup> See EPA, Hazardous Waste Manifest Cost Benefit Analysis (October 2000) at 3-7, *available online at* <http://www.epa.gov/osw/hazard/transportation/manifest/pdf/cba-rprt.pdf>.

<sup>13</sup> We do not at this time have an estimate of the other additional costs. However, one member of the Retail Associations has estimated that the total costs per store (including the items enumerated above and others) may be as high as \$14,000 per year. We also note that almost 30 years ago, EPA estimated that the costs of transportation alone (not including disposal), for a CESQG reclassified as an SQG, would be close to \$1,000 per year. *Cf.* 51 Fed. Reg. 10,146, 10,172 (March 24, 1986) (“average incremental costs that would be imposed on [generators reclassified from CESQGs to SQGs] for the transportation of their hazardous waste [not including disposal] are estimated to be ... \$838 per year (for generators that ship 600 kg of waste a short distance twice yearly)”).

**8. *Reclassification would significantly facilitate RCRA implementation by EPA and the states, and would promote the cause of environmental protection.***

As discussed above, we conservatively estimate that the number of retail stores that are currently being inappropriately regulated as LQGs as a result of the misclassification of low-concentration nicotine products is in the range of about 12,000. Although approximately 1/10th of these stores previously submitted biennial reports as regulated hazardous waste generators, approximately 10,800 did not. Thus, in the upcoming biennial report (for 2013), the ranks of hazardous waste generators can be expected to swell from the 16,447 reported for 2011 to approximately 27,250 – a 66% increase. Stated another way, retail stores inappropriately captured in the RCRA regulatory program due to misclassification of nicotine can be expected to represent approximately 44% of all regulated hazardous waste generators in the country ( $12,000/27,250 = 0.44$ ).

These figures present a challenge not only to the retail industry, as discussed above, but also to the federal and state regulators responsible for implementing RCRA. A sudden 66% increase in the size of the regulated community will severely strain existing compliance assurance, inspection, and enforcement resources – particularly in this era of tight budgets. Moreover, if 44% of the generator facilities in the system are facilities that do not really belong, the resources of the implementing agencies are likely to be diluted and misdirected toward overseeing facilities that do not pose a significant risk. Rather than promoting the cause of environmental protection, continued misclassification of low-concentration nicotine wastes would actually have precisely the opposite effect.

A similar issue arises with first responders at the local level. Under the RCRA regulations, LQGs are required to submit their contingency plans to “all police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.” *See* 40 C.F.R. § 265.53 (incorporated into the rules for LQGs at § 262.34(a)(4)). Moreover, these same organizations are required to be sent all revisions to the contingency plans, *id.*, including each time the list of emergency coordinators changes. *See* 40 C.F.R. § 265.54(d). Given the large number of potentially affected retail stores, and the frequent turnover in retail personnel (potentially including emergency coordinators at the stores), first responders are likely to be overwhelmed and confused by the influx of contingency plans. Indeed, some members of the Retail Associations have reported receiving numerous inquiries from these organizations asking why they are being sent these documents. Given the low risks of nicotine gum and other low-nicotine products, submitting contingency reports to first responders seems to be of little or no value, and in fact may distract them from their vital duties in protecting local communities.

For all of the reasons outlined above, we urge EPA to reclassify low-concentration nicotine products as non-acutely hazardous wastes. We would welcome the opportunity to offer a specific proposal for doing so and to provide additional supporting information, as necessary.

## **B. EPA Should Take Steps to Rationalize the RCRA Regulatory Framework for Aerosol Cans**

**Background and context:** Aerosol cans are a common and convenient means of providing a wide range of products to consumers (see list below). Products sold in aerosol cans are carried by virtually all retailers, from pharmacies to supermarkets, and general merchandise to convenience and department stores. Given the broad array and substantial volume of these products, even the small percentage that is returned to the store by consumers or remains unsold presents a major challenge for a broad cross-section of the retail industry, including many members of the Retail Associations.

As discussed more fully below and in the examples provided, the challenge lies primarily in the application of the complex and confusing industrial waste regulations to the vast diversity of products sold in retail stores that are packaged in aerosol cans, which can result in a different status and therefore different regulatory requirements for different types of aerosol products, for the same product manufactured by different companies, and even for different units of the same product, depending on their condition. A proper determination under the current regulations depends upon detailed information (*e.g.*, about the cans, their contents, and how they will be managed) that frequently is outside the knowledge of retailers and/or their store-level employees.

As a result, some retailers over-classify all their unsold/returned aerosol cans as hazardous wastes, thereby triggering unnecessary costs for management of such materials and other wastes (*e.g.*, if the inappropriately classified “hazardous” aerosol cans push the stores into a higher-regulated generator status), placing unnecessary strains on limited hazardous waste treatment and disposal capacity in the U.S., and in many instances not recycling the cans or their contents – the option that would more sustainably manage those materials. Other retailers may simply assume that all their unsold/returned aerosol cans are non-hazardous, thereby leading to inappropriate handling. Moreover, even for those aerosol cans that are properly characterized, we question whether the RCRA regulatory requirements, which were designed in order to handle industrial wastes, are appropriate for unsold or returned aerosol cans carried in retail stores.

**Proposed solutions:** The Retail Associations urge EPA to address these issues by providing guidance on two separate issues that could immediately provide meaningful relief for key categories of aerosol products. First, we ask EPA to issue guidance clarifying that aerosol cans do not exhibit the characteristic of reactivity, and thus are not hazardous under RCRA unless their contents are either listed commercial chemical products or characteristically hazardous. Second, EPA should issue guidance clarifying that aerosol cans containing non-hazardous chemical products and propellants that are commonly used as fuels (*e.g.*, propane and butane) are not hazardous wastes if they are destined for recycling in which the propellants are recovered for fuel use.

In the longer term, the Retail Associations also urge EPA to initiate a rulemaking to designate and regulate aerosol cans as universal wastes. The universal waste rules would provide a simplified, but protective, framework for handling aerosol cans. In addition, this

approach would encourage retailers and others to recycle all their aerosol cans – whether they would be considered hazardous wastes or not – and thereby obviate the need for drawing fine distinctions between different aerosol can types, while simultaneously increasing the quantity of aerosol cans and their contents that are recycled for beneficial use.

### **1. *Background on Aerosol Cans Marketed by Retailers***

Aerosol cans are used to dispense an extremely wide range of products sold through retail channels. A non-exhaustive list is provided below for illustrative purposes:

- Adhesives
- Air fresheners
- 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
  
- Pharmaceutical inhalers
- Shaving creams
- Starter fluids
- Sealants
- Spot removers
- Starch
- Sunscreens

- Tanning products
- Varnishes
- Waterproofing treatments
- Whipped dessert toppings

Of course, the vast majority of the aerosol cans handled by retailers are sold to customers and ultimately disposed or recycled by the customers. Nevertheless, significant amounts are not sold (for a variety of reasons, such as damage, product discontinuation, product expiration, etc.) or are returned by customers to the stores. For example, one large member of the Retail Associations – a nationwide general merchandiser -- has reported that it handles approximately 4.3 million pounds of unsold/returned aerosol cans per year. *See* “Walmart proposal for the non-hazardous management of consumer product aerosol cans under the Resource Conservation and Recovery Act,” *available online at* [http://www.rila.org/sustainability/Documents/Compliance%20Documents/WMT\\_Proposal\\_Aerosols.pdf](http://www.rila.org/sustainability/Documents/Compliance%20Documents/WMT_Proposal_Aerosols.pdf). (“In 2010, Walmart managed approximately 4.3 million pounds of consumer product aerosol cans as hazardous waste”). We think it is reasonable to assume that the industry as a whole (including other national, regional, and local general merchandisers, as well as specialty retailers at all levels) generates at least 10 times as much, or about 43 million lbs./year.<sup>14</sup> Moreover, 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. Although this percentage will vary among retailers and across retail channels, unsold/returned aerosol cans are clearly a major issue.

The number of retail establishments in the United States handling unsold/returned aerosols is also high, most likely well over 100,000. Census data provide the following numbers of retailers in key sectors that can be expected to market (and handle unsold/returned) aerosol products: gasoline stations (114,100), grocery stores (89,100), automotive parts/accessories/tire stores (56,100), pharmacies and drug stores (42,000), home centers and hardware stores (23,000), sporting goods stores (22,100), lawn and garden stores (19,800), cosmetics/beauty supplies/perfume stores (14,000), and warehouse clubs and superstores (4,400). *See* U.S. Census Bureau, “Statistical Abstract of the United States: 2012,” Table 1048 (data as of 2008).

It is also worth noting that the problems associated with properly characterizing and managing aerosol cans (as discussed below) are not limited to the retail industry, but rather are shared with the users of the products. The total number of aerosol cans produced in the U.S. has been estimated to be 3.768 billion per year. *See* Consumer Specialty Products Association (“CSPA”) News Release (May 16, 2014), “North American Aerosol Product Filling Up Again in 2013 CSPA Industry Survey Reveals,” *available online at*

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<sup>14</sup> Although this amount of unsold/returned aerosol products handled by retailers is significant, and of critical importance to the retail industry, it is important to place this figure in perspective. It corresponds to approximately 22,000 tons per year. By comparison, EPA has estimated that the total amount of all hazardous wastes generated in the U.S. during 2011 was 34,000,000 tons. *See* EPA, National Biennial RCRA Hazardous Waste Report (2011) at 1-1.

<http://www.cspa.org/news-media-center/news-releases/2014/05/north-american-aerosol-product-filling-up-again-in-2013-cspa-industry-survey-reveals/> (“2014 CSPA News Release”) (see chart accompanying the press release). The amount ultimately discarded by end users is likely to be roughly the same as the amount manufactured (although there may be some differences, due to imports, exports, stockpiling, and other factors). If we assume that the typical aerosol can discarded by consumers weighs only 1/3 of a pound,<sup>15</sup> this would mean that approximately 1,000,000,000 pounds (or 500,000 tons) of waste aerosol cans are generated in the U.S. by all types of consumers each year. To put this figure in perspective, it is approximately the same as the total amount of all (federal) hazardous wastes generated in the nation’s most populous state, California. *See* EPA, National Biennial RCRA Hazardous Waste Report (2011) at 1-1 (indicating that 534,000 tons of hazardous wastes were generated in California in 2011). Although increasing amounts of the cans discarded by consumers are being recycled, the vast majority is still being disposed in landfills – and this presents an extraordinary opportunity in sustainable materials management. Moreover, the amounts of aerosol cans being discarded by customers clearly dwarf the amount of aerosol cans that are managed by retail stores as unsold/returned products.

## ***2. Problems Created by the Current RCRA Regulations for Unsold/Returned Aerosol Cans***

The current RCRA regulations present considerable challenges for retailers handling unsold or returned aerosol cans. The first issue is the difficulty of determining if/when such products are hazardous wastes. Based on our understanding of the existing rules and guidance, the status of the materials could potentially depend upon multiple factors, including but not necessarily limited to the following:

- Whether the chemical product contained in and dispensed by the aerosol can is a listed commercial chemical product.<sup>16</sup>
- Whether the chemical product contained in and dispensed by the aerosol can exhibits a characteristic of hazardous waste. *See* Lowrance Aerosol Letter (cans are hazardous if they contain characteristically hazardous commercial chemical products).

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<sup>15</sup> Although the weight of aerosol cans discarded by consumers can obviously vary significantly, the 1/3 lb. figure seems reasonable in light of two factors: (1) many new/unused aerosol cans have net (content) weights of 1 lb. or even more, and (2) the cans themselves can be estimated to weigh ¼ lb. *See, e.g.,* Oregon Department of Transportation, Maintenance Yard Environmental Management System Policy and Procedures Manual (2005), Section 4.1 (Aerosol Cans), *available online at* [www.oregon.gov/ODOT/HWY/OOM/EMSdoc/Q4A.pdf](http://www.oregon.gov/ODOT/HWY/OOM/EMSdoc/Q4A.pdf) (stating that “[a]n aerosol can weighs about 4 ounces (or ¼ pound) plus the weight of the contents,” and noting that “a half-empty 17 ounce can [weighs about] 12½ ounces or ¾ pound”).

<sup>16</sup> *See* Letter from Sylvia K. Lowrance, Director, Office of Solid Waste, EPA, to Kurt E. Whitman, Project Coordinator, SW Inc. (September 1988) (RCRA Online #13225) (“Lowrance Aerosol Letter”) (cans are hazardous if they contain listed commercial chemical products).

- Whether the propellant is ignitable. *Id.*
- Whether the propellant is a chemical that is commonly used as a fuel.<sup>17</sup>
- Whether the aerosol can exhibits the characteristic of reactivity, based on the potential for it to explode or detonate when heated under confinement or subjected to a strong initiating force.<sup>18</sup>
- Whether the aerosol can was returned by a household.<sup>19</sup>
- Whether the aerosol can was returned by a conditionally exempt small quantity generator (“CESQG”). *See* 40 C.F.R. § 261.5.
- Whether the aerosol can meets the RCRA definition of “empty.” *See* Denit Aerosol Letter (“in order to dispose of a can as non-hazardous ... a generator would have to determine that the can is empty (or that the product it contained was not hazardous)”).
- Whether the aerosol can has been punctured and drained of fluids, or is otherwise devoid of significant liquids.<sup>20</sup>
- Whether the aerosol can will be returned to service or will be evaluated for potential return to service. *See* 40 C.F.R. § 261.2(e)(1)(ii) (materials are not solid wastes if “[u]sed or reused as effective substitutes for commercial products”).

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<sup>17</sup> *See* 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) (“EPA Propellant Memorandum”) (“Since propane and butane [propellants] are materials that are normally both used as fuels, when unused, they can be burned as fuels without being considered solid wastes”).

<sup>18</sup> *See* EPA, RCRA Hotline Report (September 1987) (RCRA Online #13027) (“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).

<sup>19</sup> *See* 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 Aerosol Letter”) (“household waste (including aerosol cans) is excluded from the definition of hazardous waste”).

<sup>20</sup> *See* 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) (“Cotsworth Aerosol Letter”) (“a steel aerosol can that does not contain a significant amount of liquid (*e.g.*, a can that has been punctured and drained) would meet the definition of scrap metal ... and, if it is to be recycled, would be exempt from regulation”).

- Whether the aerosol can is dented, corroded, or missing the actuator button (to the extent that these factors may affect the potential for the product to be used/reused). *Id.*
- Whether the aerosol can will be sent to the manufacturer or a contractor of the manufacturer for potential credit. *Id.*; *cf.* 73 Fed. Reg. 73,520, 73,525 (December 2, 2008) (“Because unused or expired pharmaceuticals ... being returned ... for possible manufacturer credit ... still have potential value [they] are thus not considered wastes”).
- Whether the aerosol can will be recycled and, if so, how (*e.g.*, whether the propellant will be burned for energy recovery, whether the metal will be recovered, and how the chemical products will be managed). *See* Lowrance Aerosol Letter, Denit Aerosol Letter, Cotsworth Aerosol, and EPA Propellant Memorandum.

It would be difficult, and in some cases may be impossible, for a retail store to obtain all of the information needed about each individual aerosol can being handled in order to assess the various factors listed above. Moreover, even if it were practicable to obtain such information, the regulatory implications would not always be clear. As just one example among many: what is the appropriate status of a slightly dented, button-less aerosol can containing a non-hazardous chemical product and an ignitable propellant that is a common fuel if the can is sent to a manufacturer for credit and then will be evaluated for either donation or recycling that entails burning of the propellant as fuel? Is it a non-waste, a non-hazardous waste, an ignitable hazardous waste, or potentially a reactive hazardous waste? It is questionable whether a RCRA expert, much less the employees in a grocery or corner convenience store, could confidently make these types of characterizations.

The reactivity issue poses a particular challenge. 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.” *See* 40 C.F.R. § 261.23(a)(6) (relevant part of the definition of reactivity); EPA, RCRA Hotline Report (September 1987) (RCRA Online #13027) (“Irrespective of the lack of contained waste, ... aerosol cans [c]ould be a RCRA hazardous waste because they demonstrate the hazardous characteristic of reactivity”). However, the Agency has repeatedly denied requests for guidance on which aerosol cans might be reactive.<sup>21</sup> Moreover, EPA has not provided any guidance on how companies, including retailers, might determine for themselves which aerosol cans (if any) exhibit the characteristic of reactivity.<sup>22</sup> Nevertheless, the Agency has

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<sup>21</sup> *See, e.g.*, Cotsworth Aerosol Letter (“*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*” (emphasis added)).

<sup>22</sup> *See* Letter from David Bussard, Director, Hazardous Waste Identification Division, EPA, to Paul G. Wallach (August 14, 1997) (RCRA Online #14176) (“[f]or the characteristic[ ] of ... reactivity, there is no test method specified as to the operational definition of the characteristic”).

stressed that “[i]t remains the responsibility of the generator ... to make [the reactivity] determination.” See Cotsworth Aerosol Letter. By raising the specter that aerosol cans might be reactive, declining to provide guidance on when they are, and saying that generators are responsible for making a proper determination, EPA has left the regulated community in an extremely tenuous position.

In light of the complexity and confusion surrounding the proper characterization of unsold/returned aerosol cans, some retailers (and other generators) conservatively assume that all such items are hazardous wastes (e.g., due to reactivity). However, this results in unnecessary costs for management of such materials, without any meaningful environmental benefit (especially given that aerosol cans are probably not reactive, as discussed further below). Moreover, it could also result in unnecessary costs for other wastes, if, for example, misclassification of the aerosol cans causes some retailers to misclassify themselves as SQGs or even LQGs, rather than CESQGs. Other retailers (and other generators) may take the opposite approach, assuming that none of their aerosol cans are hazardous wastes. However, this could result in improper management of some aerosol cans, such as those that are not empty and contain chemical products that are listed or characteristic hazardous wastes. Finally, even if all aerosol cans are properly characterized within EPA’s current complex rubric, we question whether the full RCRA regulations, which were designed for industrial wastes, are appropriate for handling the consumer aerosol products marketed by retailers -- much less the small percentage of these products that must be handled by retail stores as unsold/returned products -- especially since such rules discourage beneficial recycling, recovery, and reuse of potentially valuable materials.

The Retail Associations believe there is a better way. We discuss below our proposal for issuing guidance on two separate issues that could quickly provide meaningful relief for key categories of aerosol products, as well as for initiating a rulemaking to classify and regulate aerosol cans as universal wastes, which would ultimately provide a reasonable and environmentally protective framework for all aerosol products.

### **3. Proposed Solutions**

#### **a. EPA Should Issue Guidance Clarifying That Aerosol Cans Do Not Exhibit the Characteristic of Reactivity**

The Retail Associations urge EPA to issue guidance clarifying that aerosol cans are not reactive hazardous wastes. There is a strong basis for reaching such a conclusion. As noted above, EPA’s only suggestion that aerosol cans might be reactive is under the portion of the reactivity definition addressing wastes that are “capable of detonation or explosive reaction if [they are] subjected to a strong initiating source or if heated under confinement.” See 40 C.F.R. § 261.23(a)(6). We first focus on the “heated under confinement” prong of this definition, followed by the “strong initiating source” prong. We then address more general reasons supporting the conclusion that aerosols should not be deemed reactive.

(1) ***Aerosol Cans Do Not Explode or Detonate When “Heated Under Confinement” As Contemplated By the RCRA Reactivity Characteristic.***

EPA has never explained the method that a generator should use to determine whether a material in general (or an aerosol can, in particular) is capable of exploding or detonating “if heated under confinement.” During the original rulemaking establishing the reactivity characteristic, commenters expressed concern that “many inert, non-reactive materials, including tap water, can be triggered to detonate or explode under confinement when subjected to ... extreme heat and pressure.” See EPA, “Background Document, Reactivity Characteristic” (May 1980) (“Reactivity Background Document”) at 24. The Agency responded by stating that it “is only concerned with substances capable of exploding under reasonable confinement conditions – *i.e.*, those confinement conditions likely to be encountered in disposal environments.” *Id.* (emphasis in the original). More specifically, EPA indicated that the types of disposal environments to be considered included disposal in a sanitary landfill and storage in a drum. *Id.* at 19-20. In the contemporaneous EPA background document on the ignitability characteristic, the Agency said that “the logical choice [for defining that characteristic] would be to use that temperature to which wastes are capable of being subjected during routine management.” See EPA, “Background Document, Ignitability Characteristic” (May 1980) at 10. “After careful study, the Agency ... discovered that liquid wastes are exposed to temperatures of up to 140° [F] in the routine handling of such wastes.” *Id.* at 10-11. For the same reason, it appears that, under the reactivity characteristic, a waste should be deemed reactive only if it is capable of exploding or detonating at temperatures at or below 140°F.<sup>23</sup>

In the case of aerosols, the U.S. Department of Transportation (“DOT”) regulations ensure that the products will not explode or detonate at 140°F. All aerosol cans must meet the DOT requirements in order to be transported in commerce. The rules require that “the metal container must be capable of withstanding without bursting a pressure of one and one-half times the equilibrium pressure of the contents at 130°F.” See 49 C.F.R. § 173.306(a)(3)(ii). Although 130°F is slightly below 140°F, the safety factor of 1.5 can be expected to protect against bursting at 140°F.<sup>24</sup> Moreover, it is worth noting that the

<sup>23</sup> Cf. 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) (“EPA Ammunition Memorandum”) (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).

<sup>24</sup> This can be demonstrated using the Ideal Gas Law, which provides that  $PV=nRT$ , where P is the pressure of a gas, V is the volume, n is the number of moles, R is the universal gas constant, and T is the temperature (in terms of absolute temperature, such as on the Kelvin scale (°K)). See generally EPA Emission Inventory Improvement Program, Volume II, Chapter 16, “Methods for Estimating Air Emissions from Chemical Manufacturing Facilities” (August 2007) at 16.6-1, available online at <http://www.epa.gov/ttnchie1/eiip/techreport/volume02/>. This equation can also be expressed as  $P/T = nR/V$ . In an aerosol that is no longer being used, all of the items on the right-hand side of this equation are constant (*i.e.*, the volume (V) and the number of moles of gas (n) in the can do not change, and the same is by definition true of the universal gas constant (R)). Thus, the ratio of pressure to temperature (P/T) must remain constant. Stated another way, if the temperature in the can is increased by a certain percentage, the pressure in the can must increase by the same percentage (so that the ratio does not change).

“bursting” endpoint specified by DOT is not necessarily the same as the endpoint under the RCRA reactivity characteristic (*i.e.*, explosion or detonation), which would presumably occur only at the same or higher temperatures. In addition, the DOT rules specify that “[n]o leakage or permanent deformation of a container may occur [at 131°F].” *See* 49 C.F.R. § 173.306(a)(3)(v). Accordingly, the DOT regulations, to which all aerosol cans are subject, ensure that aerosol cans will not explode or detonate “when heated under confinement,” within the meaning of the RCRA regulation on the reactivity characteristic.

**(2) *Aerosol Cans Do Not Explode or Detonate When “Subjected to a Strong Initiating Source” As Contemplated by the RCRA Reactivity Characteristic.***

The second prong of the relevant part of the RCRA reactivity definition is designed to ensure that wastes do not explode or detonate when “subjected to a strong initiating source.” Although EPA has not elaborated on this language, it appears to address the stability of waste under conditions of pressure or shock. *See, e.g.*, Reactivity Background Document at 24 (discussing wastes being “subjected to ... pressure”). Indeed, EPA has previously determined that certain types of waste ammunition are not reactive based solely on their ability to withstand the shock induced by “drop tests ... to simulate handling errors” (as well as elevated temperatures, under the “heated under confinement” prong, as discussed above). *See* EPA Ammunition Memorandum.

In the case of aerosols, the DOT rules again ensure that the materials will not explode or detonate when subjected to “handling errors” such as dropping. One of the fundamental DOT requirements for packagings is that they 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.” *See* 49 C.F.R. § 173.24(b)(1). Of course, among the “conditions normally incident to transportation” are jostling, bumping, tipping, and dropping. Similar conditions also occur during normal use, and common sense indicates that aerosol cans do not explode or detonate under such conditions. Thus, it seems clear that aerosol cans will not explode or detonate when “subjected to a strong initiating source,” as that phrase is used under the RCRA reactivity characteristic.

**(3) *Aerosol Cans Are Not the Type of Waste Intended to be Covered by the RCRA Reactivity Characteristic.***

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Using this relationship, we can determine how much the pressure within a can would increase if the temperature were increased from (i) the temperature required under the DOT regulations (*i.e.*, 130°F or 327.6°K) to (ii) the temperature required under the RCRA reactivity characteristic (*i.e.*, 140°F or 333.2°K). This would represent a temperature increase of 1.7% (*i.e.*,  $(333.2-327.6)/327.6 = 0.017$ ), and thus would cause the pressure to increase by 1.7%. The aerosol can should be able to withstand this pressure, because, as noted above, the DOT regulations require aerosol cans to withstand 1.5 times the pressure at 130°F (*i.e.*, a 50% increase in pressure). *See* 49 C.F.R. § 173.306(a)(3)(ii). Indeed, even if an aerosol can were heated to the higher temperature mentioned in the EPA Ammunition Memorandum (*i.e.*, 160°F or 344.3°K), the temperature, and thus the pressure, would increase by only 5.1% (*i.e.*,  $(344.3-327.6)/327.6 = 0.051$ ). This is well within the 50% safety factor provided by the DOT regulations, and thus the can would not be expected to burst, much less to explode or detonate, at the higher temperatures (*i.e.*, 140°F or 160°F).

When EPA originally promulgated the RCRA reactivity characteristic in 1980, it stressed that “the problems posed by reactive wastes appear to be confined to a fairly narrow category of wastes.” *See* Reactivity Background Document at 10. The Agency noted that “[m]ost generators of reactive wastes are aware that their wastes possess this property and require special handling. This is because such wastes are dangerous to the generators’ own operations.” *See* 45 Fed. Reg. at 33,110. EPA said that it was adopting a “common sense approach” in which “the Agency was leaving the determination of reactivity hazard up to the reasonable judgment of the generator based upon the generator’s past experience with the waste.”<sup>25</sup> Moreover, “[i]t will ... only be in a rare instance that a generator would be unsure of the reactivity class of the waste.” *See* Reactivity Background Document at 11; *see also* 51 Fed. Reg. 21,648, 21,649 (June 13, 1986) (“characteristics define broad classes of wastes that are *clearly* hazardous” (emphasis added)).

Aerosol cans clearly do not exhibit any indicia of reactive wastes. As discussed above, billions of aerosol cans are discarded each year – hardly the “narrow category of wastes” envisioned by EPA as being covered by the reactivity characteristic. Moreover, the hundreds of millions of households and businesses that use aerosol cans do not generally perceive the products (or the wastes) as particularly “dangerous to [their] operations.” The “common sense” cited by EPA would not lead a generator to conclude that aerosol cans are reactive hazardous wastes. Indeed, even though EPA indicated that reactivity would be obvious (such that it would be a “rare instance” where there was uncertainty about the status of a waste), the Agency has repeatedly said (as discussed above) that it could not itself make a determination as to if/when aerosol cans might be reactive. It is also worth noting that EPA in 1980 cited numerous “damage incidents” to support the final RCRA characteristic of reactivity, but not a single one of these incidents involved aerosol cans, despite their ubiquitous nature. *See* Reactivity Background Document, Appendix I.

In light of the above, aerosol cans clearly are not the type of material intended to be covered by the RCRA reactivity characteristic. Moreover, as discussed above, they do not appear to meet the regulatory definition of reactive hazardous wastes, because the DOT regulations ensure that aerosol cans will not explode or detonate when “heated under confinement” or when “subject to a strong initiating source,” within the meaning of those phrases under the RCRA definition of reactivity. The Retail Associations therefore ask EPA to clarify that waste aerosol cans are not reactive hazardous wastes, and are hazardous (if at all) based only on other factors, such as whether they contain listed commercial chemical products.

- b. ***EPA Should Also Issue Guidance that Aerosol Cans Containing Non-Hazardous Chemical Products and Propellants that Are Common Fuels Are Not Hazardous Wastes If Recycled to Recover the Propellant for Fuel Use***

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<sup>25</sup> *See* Reactivity Background Document at 15; *see also* Letter from David Bussard, Director, Hazardous Waste Identification Division, EPA, to Paul G. Wallach (August 14, 1997), (RCRA Online #14176) (“we have ... given reasonable deference to the operational experience of the waste generator”).

The Retail Associations also urge EPA to issue guidance clarifying that aerosol cans containing non-hazardous chemical products and propellants that are commonly used as fuels (*e.g.*, propane and butane) are not hazardous wastes if they are destined for recycling in order to recover the propellants for use as fuels or for use in making fuels. Such guidance would be consistent with existing Agency rules and guidance, and it would encourage the sustainable management of the cans and their contents through recycling. Moreover, because aerosol cans are a substantial part of the potentially hazardous waste stream for retailers, and cans of this type represent a significant amount of the total for many retail establishments, guidance from EPA along these lines would enable some retailers to reclassify stores as CESQGs,<sup>26</sup> thereby minimizing unnecessary and inappropriate regulatory burdens that are only caused by the improper classification of these aerosol cans.

EPA has previously stated that aerosol cans that are either unused or used but not empty are containers of two distinct commercial chemical products: the chemical product intended to be delivered and the propellant required for delivery.<sup>27</sup> For the subset of aerosol cans that we have identified, the chemical product intended to be dispensed is non-hazardous, and thus clearly not a RCRA hazardous waste. Moreover, EPA has clearly stated that the other component -- the propellant -- would not be a solid or hazardous waste, even if it is ignitable, if it is destined to be burned for energy recovery.<sup>28</sup> Since the aerosol can is simply a container for two materials, neither of which are RCRA hazardous wastes, it also is not a RCRA hazardous waste.<sup>29</sup>

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<sup>26</sup> Several members of the Retail Associations (all of which sell aerosol products, but do not sell nicotine products) 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. Moreover, as indicated below, one member reported that half of their aerosols are of the type addressed here (*i.e.*, those with non-hazardous chemical products and propellants that are common fuels). Accordingly, it appears that a significant percentage of these stores could be reclassified as CESQGs under the guidance we are requesting. The effect would likely be magnified if low-concentration nicotine products are reclassified as non-acutely hazardous (as discussed above), since for many stores the only wastes that prevent them from being classified as CESQGs are nicotine products and aerosols.

<sup>27</sup> See, *e.g.*, Letter from Gary Dietrich, Associate Deputy Assistant Administrator for Solid Waste, EPA, to Lawrence W. Bierlein, Council for Safe Transportation of Hazardous Articles (December 30, 1980) (RCRA Online #12020) (discussing “aerosol cans which hold commercial chemical products listed in § 261.33(e) and (f)”); Lowrance Aerosol Letter (stating that “[aerosol] cans are hazardous if ... they contain a commercial chemical product” that is listed or characteristic); EPA Propellant Memorandum (“propellants in the cans ... would be classified as commercial chemical products”).

<sup>28</sup> See EPA Propellant Memorandum (“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”).

<sup>29</sup> Cf. 45 Fed. Reg. 78,524, 78,527 (November 25, 1980) (clarifying that, for commercial chemical products, “it is the hazardous material residue in a container, rather than the container itself, that is controlled under the regulations if and when the residue is discarded or intended to be discarded”).

The same conclusion applies whether the aerosol can is a compressed gas aerosol can (in which the propellant remains in a gaseous state above the liquid product) or a liquefied gas aerosol can (in which the propellant is in a liquified state and is commingled with the liquid product). *See generally* T. Harris, “How Aerosol Cans Work,” *available online at* <http://science.howstuffworks.com/innovation/everyday-innovations/aerosol-can.htm>.

With respect to compressed gas aerosols, it is worth noting that EPA has long maintained that, under the ignitability characteristic, each phase of a two-phase material should be evaluated separately.<sup>30</sup> Thus, in the present case (where ignitability is the only characteristic of concern), the gas propellant and the liquid chemical product should be evaluated separately, as discussed above.

With respect to liquefied gas aerosol cans, where the liquefied propellant and the liquid chemical product are commingled, EPA has previously addressed a somewhat analogous situation. In particular, the Agency considered the regulatory status of mixtures of common liquid fuels and water, and determined that they are not hazardous wastes -- if the fuel component is recovered and burned for energy recovery -- because they are “mixture[s] which contain[ ] a commercial chemical product [that is] normally a fuel [and will be used as such].” *See, e.g.*, Letter from Marcia E. Williams, Director, Office of Solid Waste, EPA, to Joan Keenan (March 19, 1986) (RCRA Online #11138) (discussing mixtures of gasoline and water). Similarly here, the contents of the aerosol cans are mixtures containing a commercial chemical product that is normally a fuel (*i.e.*, the propellant) and that will be recovered from the mixture (which also contains a non-hazardous commercial chemical product) and then used as a fuel. Significantly, moreover, the test methods for determining the ignitability of a liquid must be performed at atmospheric pressure (*i.e.*, 760 mm Hg), and the propellant, at that pressure, would be a gas separate from the liquid chemical product.<sup>31</sup> Once again, this supports a separate analysis of the propellant and the chemical product, and as discussed above, under such an analysis, the cans would not be classified as hazardous wastes.

Clarifying the regulatory status of these aerosol cans in guidance would significantly encourage generators to send these cans to a facility where the propellants can be recovered and used beneficially as fuels (and where the scrap metal can be recycled and the non-hazardous liquid chemical products can otherwise be properly managed). The generators would then not have to store and ship these aerosol cans as hazardous wastes. In addition, for those facilities where these aerosol cans represent a large percentage of the

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<sup>30</sup> *See, e.g.*, Letter from Michael Shapiro, Director, Office of Solid Waste, EPA, to T.L. Nebrich, Jr., Technical Director, Waste Technology Services, Inc. (August 24, 1995) (RCRA Online #13759) (stating that to assess the potential ignitability of a waste containing liquids and solids, “[y]ou should separate the solid/liquid phases of your samples and test each phase separately”); 60 Fed. Reg. 3089, 3092 (January 13, 1995) (explaining how a waste should be tested to determine if liquids are present, in which case the liquids should be tested alone for ignitability).

<sup>31</sup> *See* 40 C.F.R. § 261.21(a)(1) (generally requiring the ignitability of liquids to be assessed under ASTM Standard D93 or D3278); ASTM Standard D93-13, Paragraph 3.1.5 (defining flash point as “the lowest temperature corrected to a barometric pressure of ... 760 mm Hg ... at which application of an ignition source causes the vapors of a specimen ... to ignite ...”); ASTM Standard D3278-96, Paragraph 3.1.1 (same).

potentially hazardous wastes they handle, the facilities may be able to qualify as CESQGs, reducing regulatory burdens for their other hazardous wastes.

The environmental benefits could be substantial. Members of the Retail Associations have reported that aerosol cans account for up to 50% or even more of the potentially hazardous unsold/returned products they handle, and one member has indicated that fully half of their unsold/returned aerosol cans contain non-hazardous chemical products and propellants that are common fuels. Thus, the requested guidance from EPA might well facilitate environmentally sound recycling for 25% of the total potentially hazardous unsold/returned products for many retailers. Although some retailers may not have the resources or expertise to identify, segregate, and separately manage these particular types of aerosol cans, the guidance would incentivize retailers (and others) to take these steps, or to hire a contractor to do so for them. In this way, EPA could easily and quickly produce a highly favorable outcome for the retail industry and simultaneously promote more sustainable materials management.

c. **EPA Should Classify and Regulate Aerosol Cans As Universal Wastes**

The Retail Associations believe that the most effective long-term solution for addressing the aerosol can issue, both for the retail industry and others (*e.g.*, manufacturers and users of aerosol cans), would be to classify and regulate such products as universal wastes. The universal waste program was designed specifically for these types of materials, which are generated ubiquitously, pose relatively low risks, are difficult to segregate into regulated and non-regulated streams, and would be better managed if the full RCRA hazardous waste regulations were not applied during generation, collection, and transport. Two states that are leaders on environmental issues – California and Colorado – have long classified and regulated aerosol cans as universal wastes, and their programs for doing so appear to have been highly successful. *See* Cal. Health & Safety Code § 25201.16; 6 Colo. Code Regs. 1007-3, Section 273.2(d). We urge EPA to follow their lead.

We briefly discuss below why we believe aerosol cans meet the criteria set forth in the RCRA regulations for addition to the list of universal wastes. *See* 40 C.F.R. § 273.81. Although a full discussion of the relevant criteria is beyond the scope of these comments, we believe the discussion here is sufficient to demonstrate the appropriateness of a universal waste designation for aerosol cans. We would welcome the opportunity to provide further support, as necessary.

**(1) 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)]***

EPA has long stated that aerosol cans are hazardous if “(1) they contain a commercial chemical product [that is] on the 40 CFR 261.33(e) or (f) lists or [that] exhibit[s] one or

more of the hazardous waste characteristics, and are not empty ... and/or (2) they exhibit any of the characteristics of hazardous waste.” *See* Lowrance Aerosol Letter. As discussed in detail above, the Retail Associations do not believe that aerosol cans are reactive hazardous wastes (under the second part of the quotation above). However, EPA has been more ambiguous on this point. And, in any event, there can be no doubt that some aerosol cans contain commercial chemical products that are either listed or characteristically hazardous, such that the cans themselves (if not empty) may be classified as RCRA hazardous.

While it is likely that many – perhaps even most – aerosol cans are not hazardous, aerosol cans may still be designated 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. 25,492, 25,513 (May 11, 1995). 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 wastes aerosols are hazardous and which are not, they seem to be an ideal candidate for designation as universal wastes.

**(2) CRITERION #2: *The waste or category of waste is not exclusive to a specific industry or group of industries, [and] 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 and its component sectors handle a significant quantity 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. *See, e.g.,* 2014 CSPA New Release (cited above) (chart) (indicating that 27.3% of aerosol products produced in the U.S. are household products, and an additional 24.9% are personal care products).

However, a wide variety of businesses generate aerosol wastes, as well, by using up the products. 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, hotels, 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 inhalers and 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 government and commercial users of products in aerosol cans are not required to handle the used cans as hazardous wastes (*e.g.*, because they qualify as CESQGs), 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) 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 CESQGs, 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.

**(3) 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 CESQGs) is similarly very large. As noted above, the number of retail establishments handling unsold/returned aerosol cans is likely well in excess of 100,000. 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 may handle between 25 lbs./year and 840 lbs./year of unsold/returned aerosol cans. The amount may vary based on a number of factors including product mix and store size. 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 would 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.

**(4) 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 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 the CSPA, approximately 5,300 communities across the nation include aerosol cans in their recycling programs. *See, e.g.,*

<http://www.cspa.org/news-media-center/news-releases/2013/11/recycle-aerosols-on-america-recycles-day/>. Moreover, 65% of Americans have access to local aerosol recycling programs. *See* 2014 CSPA News Release (cited above) (chart). 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 their use. 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.

**(5) 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, roughly 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 containers – containers that by law (as discussed in detail above) must meet DOT requirements for design, filling, testing, 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). These requirements should obviate the need for further regulation during transport, and substantially reduce the need for further regulation during accumulation, as well.

To the extent that additional regulation is 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 and Colorado).

**(6) 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)]***

As discussed above, the determination of whether individual aerosol cans are wastes or non-wastes, and hazardous or non-hazardous, can be extremely difficult. 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 waste 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.<sup>32</sup> 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.<sup>33</sup>

**(7) 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

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<sup>32</sup> 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”).

<sup>33</sup> 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”).

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.”<sup>34</sup>

As discussed more fully above, 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 initiate a rulemaking for designating aerosol cans as universal wastes as soon as practicable.

### **III. EPA Should Conditionally Exclude Unsold/Returned Products When Handled in an Alternative Program for the Retail Sector That Is Equally Protective of Human Health and the Environment and Incentivizes Sustainable Materials Management.**

**Background and context:** Although the proposed solutions for nicotine products and aerosols would make a significant impact on the sector, the Retail Associations also propose a comprehensive solution for unsold/returned products to facilitate safe handling in reverse distribution and to optimize opportunities for reuse or recycling. As discussed above, retailers handle vast numbers of products in forward distribution every day, and consumers use, consume or dispose of these products without additional regulation. For the relatively small percentage of consumer products that are unsold or returned, the Retail Associations believe a rule change is necessary to facilitate safe handling of unsold/returned products, while promoting resource conservation and sustainable materials management.

As discussed in detail in Section A. below, we believe such an alternative approach is necessary because RCRA’s manufacturing-oriented framework does not work for the retail sector, where the patterns of hazardous waste generation differ dramatically from an industrial setting. The costs imposed on the retail sector are disproportionate to the risks associated with unsold/returned products handled in reverse distribution. And significantly, the current RCRA regulations actually discourage retailers from managing unsold/returned products sustainably through appropriate reuse or recycling.

**Proposed solution:** An alternative, equally protective, program could take the form of a conditional exclusion from the RCRA definition of solid waste for wastes generated or collected by retail stores and managed in a reverse distribution system under a streamlined set of conditions to ensure the protection of human health and the environment, enhance compliance, encourage reuse/recycling and better management of unsold/returned products in reverse distribution, and create opportunities for increased sustainability. A full

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<sup>34</sup> 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”).

discussion of specific conditions for the exclusion is beyond the scope of these comments. But if EPA is open to pursuing such a rulemaking, we would be pleased work with the Agency to develop appropriate conditions that protect human health and the environment while encouraging responsible and sustainable management of unsold/returned products in reverse distribution.

As discussed more fully in Section B below, a meaningful alternative program would include the following key elements:

- **“Point of Generation” for Waste Determination:** Unsold/returned products would not be considered wastes until the point where proper judgments could be made about a product’s disposition, which may be at a collection center where products can be consolidated and opportunities can be identified for reuse, resale, or recycling. Whether or not reuse or recycling opportunities are available depends on a number of factors, including the quantity of products available and the location of the products. Facilitating transportation and consolidation of unsold/returned products from individual stores to collection points by delaying the “point of generation” determination would allow decisions to be made about the best disposition of the products across all stores, considering all relevant economic and environmental factors. This way, fewer useful products or recyclable materials would end up in hazardous waste landfills or other disposal facilities. EPA should allow decisions about whether a product is a waste to be made after consolidation at reverse distribution centers, allowing economies of scale to develop and creating new opportunities for reuse, resale, and recycling.
- **“Hazard Characterization:”** Hazard characterization of unsold/returned products would occur at the point where proper judgments could be made about a product’s contents and hazard characteristics. A person with technical expertise can most effectively undertake the analysis necessary to ensure that unsold/returned products are managed properly. Typical retail employees are not equipped with the technical skills or knowledge of product manufacturing processes or formulations to allow them to make complicated regulatory characterizations.<sup>35</sup> Inaccurate characterizations result in some hazardous wastes being managed as non-hazardous, potentially creating risks for human health and the environment, while some non-hazardous wastes may be managed as hazardous, using up valuable hazardous waste management resources and squandering useful products or materials. Characterizing wastes at the most suitable location, which may be a collection center, would increase the likelihood an accurate characterization is made and thereby increase the likelihood that hazardous wastes are managed appropriately and scarce hazardous waste management resources are conserved.
- **Transportation:** Unsold/returned products could be transported in reverse distribution under conditions designed to ensure they are handled in a protective

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<sup>35</sup> We discussed in detail above the complicated analysis required for characterizing unsold/returned aerosol products only. Retailers face these complex determinations for a wide range of unsold/returned consumer products.

manner commensurate with their product-like status, just as they are handled in forward distribution, including applicable Department of Transportation (“DOT”) requirements for hazardous materials transportation, as well as some basic standards for labeling, packaging, and tracking. Under such conditions, a hazardous waste transporter and hazardous waste manifest would be unnecessary.

- ***Store Status Determination:*** Products managed under the alternative program would not count towards a store’s generator status, thereby eliminating the disproportionate burdens on retailers and administrative agencies that follow from achieving “large quantity generator” status, even if episodically.

Below, we describe the current disparity between the existing RCRA regulations and realities of retail operations and the resulting compliance challenges, disproportionate costs, and disincentives for sustainable materials management through recycling. We then explain how a conditional exclusion for unsold/returned products would rectify this disparity, reduce costs, encourage recycling, and enhance compliance and sustainability.

#### **A. Current RCRA Regulations Are Inappropriate for Unsold/Returned Products.**

##### **1. *RCRA’s manufacturing-oriented framework does not work for the retail sector, where the hazardous waste generation pattern is different.***

RCRA requirements for generators of hazardous waste are designed for the industrial or manufacturing context where a relatively small number of waste streams are consistently generated at a few points during the production process that likely occurs in a regular fashion and at regular intervals. Industrial and manufacturing facilities usually require highly trained technical staff to oversee operations, with visibility into and technical understanding of the characteristics of the waste streams generated. The generation pattern for the retail sector is in stark contrast.

- Number and variety of wastes.*** Retailers manage products by stock keeping unit (“SKU”). With tens of thousands of SKUs per store and hundreds of thousands across a national chain, keeping track of which SKUs would be hazardous wastes when discarded is a herculean task, complicated by frequent changes to product formulations or introductions of new products, marketed by thousands of different suppliers. The members of the Retail Associations estimate that they have hundreds to tens of thousands of different products that would be handled as hazardous waste if unsold/returned. In some cases, up to 60% of all products handled at those stores may be considered hazardous waste depending on their composition and condition.
- Knowledge of waste characteristics.*** Retailers buy, distribute, and sell products. They do not have specialized knowledge of those products’ ingredients or properties that would enable them to make accurate hazardous

waste determinations. Moreover, characterizations of products are not necessarily straightforward. How to properly characterize a talking teddy bear with electronic components or a multi-pack product (e.g., first aid kit) is a complex endeavor for a RCRA expert, much less a typical retail employee. Even highly trained individuals could come to reasonably different conclusions about how a particular product should be characterized. Moreover, the store level staff that typically handles unsold or returned consumer products typically experiences high turnover. Accordingly, not only do they not possess the education to make detailed regulatory determinations, they may have few opportunities to gain comprehensive knowledge of a store's complete product line. For these reasons, it is also difficult to achieve consistency in characterizations across stores.

Retailers indicate that they use a variety of methods to determine whether products are hazardous waste if unsold/returned. Those include reviewing the product's Safety Data Sheets, where available; information technologies that capture product characteristics submitted from suppliers; in-store handheld terminals (scan guns); third-party analysis; analysis of product characteristics, such as flash point; standard operating procedures like decision trees; product labels; online searches; and other techniques. Beyond the one-time installation costs, the cost of implementing these systems varies significantly, but may be as high \$1,500 per store per year. We would expect these costs to be even higher for smaller retailers that cannot spread regulatory costs across large numbers of stores and do not have the in-house expertise to develop these systems or the commercial influence to encourage suppliers to develop such systems on the retailer's behalf.

- c. **Many different waste generation scenarios involving many different employees.** There are many different scenarios that could result in "generating hazardous wastes" within the meaning of the current regulations at retail stores, including a customer service representative accepting returns of used or unused products or a stock clerk removing discontinued or recalled products from store shelves. Whether or not a product is a waste may depend on a number of factors not within the control of store personnel, including potential outlets for recycling, resale, or donation where those opportunities may become available only after consolidation of products from multiple stores.
- d. **Number of generators.** Retailers are widely located throughout the United States. Census data show over 1,000,000 retail facilities in the United States. See NODA at 8932. EPA estimates that more than 41,000 retail locations generate hazardous waste, while over 18,000 retail locations would be subject to the RCRA generator requirements. See *id.* We believe the actual number of stores subject to regulation may be much larger, especially considering the number of stores potentially handling nicotine smoking cessation or other non-tobacco nicotine-containing products or generating larger amounts of hazardous waste episodically. The high number of retail facilities potentially

generating hazardous wastes, scattered throughout the country, represents a far different pattern of waste generation than in the industrial sector. For example, EPA's RCRAInfo database shows about 139,105 small quantity generators (which includes some reporting retail locations in addition to industrial generators) and about 31,163 large quantity generators (which includes at least one retailer's locations in addition to industrial generators).<sup>36</sup> If only a tenth of retailers generated hazardous waste in quantities above the threshold for regulation (*i.e.*, about 100,000) that would represent more than half of all RCRA-regulated generators.

The current RCRA framework simply does not work for the vast retail sector where each store may "generate" a wide range of wastes at multiple points within a store, store personnel do not have access to the technical information needed to make accurate decisions about how the wastes should be characterized, and high employee turnover limits the effectiveness of extensive training.

***2. The burdens imposed by RCRA on the retail sector are disproportionate to the risks presented by wastes from unsold/returned products.***

The vast majority of the wastes handled by the retail sector are identical to the wastes that are excluded from RCRA regulation as "household hazardous wastes," in 40 CFR § 261.4(b)(1). Put another way, a consumer is permitted as a matter of law to dispose of a product purchased in a retail store, but the same product must be handled as a hazardous waste by the store. Of the products entering stores through forward distribution, only a small amount are managed by retailers in reverse distribution, and one retailer estimates 0.1% of products in reverse distribution are disposed of as hazardous waste. Thus, the amount discarded by retailers is just a small fraction of what is discarded as household hazardous wastes, so it does not make sense to subject unsold/returned products to full RCRA regulation when a much larger quantity of the same type of wastes is unregulated.

When unsold/returned products are managed as hazardous wastes in the store, many retail stores would qualify as LQGs – the same regulatory status as steel mills and tire manufacturers – in any given month because they handle relatively small quantities of nicotine products and/or an unpredictable flow of other potentially hazardous wastes. Unlike industrial facilities, retailers, by their very nature, are episodic generators of hazardous waste. Generation and accumulation rates vary depending on customer returns, overstocks, seasonality, accidental product damage, and recalls. This inherent variability means that retail facilities can episodically fluctuate from conditionally exempt to SQG to LQG, thereby creating confusion for retailers regarding reporting, training, and other program requirements. Episodic generation resulting in LQG status unnecessarily and unreasonably burdens retail stores by requiring biennial (or more frequent) reports, creating and updating contingency plans, training a high turnover workforce, and implementing LQG emergency response procedures. Because the LQG requirements

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<sup>36</sup> See EPA, RCRAInfo Database, <http://www.epa.gov/enviro/facts/rcrainfo/search.html> (searching for large quantity and small quantity generators).

require significant investment of resources and some states require generators to maintain LQG status in subsequent months, many retailers choose to manage their stores as LQGs year-round to avoid major disruptions to operations.

As mentioned in the section on nicotine products above, the members of the Retail Associations estimate that the cost of managing a store as an LQG rather than a CESQG can range from \$1,000 up to \$14,000 per store per year depending on a variety of factors, with training ranking as one of the highest costs. Because there are potentially limitless points in a retail store that could fit a strict regulatory definition of where “waste” is “generated” for RCRA purposes (*e.g.*, customer service desks, each store shelf), a wide range of store personnel could be considered to be involved in “waste management activities” simply because they removed a product from a shelf or accepted an unwanted product back from a consumer. Under today’s regulations, all of these store associates could be subject to additional and potentially extensive training for handling the same products that store employees handle every day for distribution or sale. While store associates may receive training, high turnover in the retail sector means the cost of training is not necessarily proportionate to increased protection of human health or the environment. We expect that these costs would be even higher for smaller retailers that do not have in-house regulatory specialists and do not have the market power to obtain assistance from their suppliers.

For both LQGs and SQGs, when unsold/returned products are managed as hazardous wastes in the store, they must be sent off-site using a hazardous waste manifest and transported by a licensed hazardous waste transporter. The high costs of transportation are compounded when wastes must be transported across long distances to the limited number of permitted TSDFs that accept hazardous wastes commercially. Because unsold/returned products are in substantially the same form, quantity, and packaging as products handled safely by retailers in forward distribution, by store personnel, and by consumers, reverse distribution simply does not warrant the extraordinary measures imposed by the current RCRA regulations.

Many retailers take a conservative approach and handle most unsold/returned products that could be hazardous as hazardous wastes from the store. But this means that potentially useful or recyclable products are unnecessarily transported as hazardous waste across long distances at high cost and use up limited capacity in hazardous waste landfills and incinerators. According to one industry source, there are only 21 commercial hazardous waste landfills across the US, located in 17 states, and 22 commercial hazardous waste incinerators located in 18 states.<sup>37</sup> Nationwide, EPA estimates there are approximately 18,667 retail locations that are characterized as “large quantity generators” (“LQGs”) or small quantity generators (“SQGs”), who would be required to send hazardous wastes to permitted treatment, storage or disposal facilities (“TSDFs”), *see* NODA at 8932. Even assuming this number is accurate (we think it is too low), this represents a large number of

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<sup>37</sup> *See* Environmental Health & Safety Online, <http://www.ehso.com/cssepa/tsdflandfills.php>; <http://www.ehso.com/cssepa/tsdfincin.php>. *See also* Biennial Report at 3-9 (noting 30 landfills and 62 incinerators receiving wastes from off-site in 2011, without specifying whether they are commercial facilities).

retailers sending useful products across long distances for hazardous waste management. Incineration is not always practicable due to the distance from a retail store, particular waste streams accepted by the incinerator, or an incinerator's capacity. Moreover, hazardous wastes from retail stores may be landfilled (after treatment, if applicable), using up the limited capacity available to dispose of hazardous wastes. This seems particularly wasteful given that a portion of these products could be legitimately reused or recycled if transportation requirements were eased and consolidation were possible. A streamlined set of regulations that encourages reuse and recycling and facilitates making accurate hazard characterizations will save valuable hazardous waste management resources.

Not only does LQG status mean high costs to the retail store, the administrative costs to EPA and state agencies in managing biennial reports and conducting other LQG oversight are out of sync with the relative risks presented by reverse logistics of unsold/returned products. Again, because they are in substantially the same form, quantity, and packaging as products handled safely in forward distribution, regulating stores as LQG's is an unnecessary drain on administrative resources.

***3. Applying the existing RCRA regime to the retail sector squanders opportunities to recycle unsold/returned products and improve sustainable materials management across the sector.***

The current RCRA regime discourages recycling of unsold/returned products by incentivizing handling used/returned products as wastes—rather than materials that still have value. Because waste determinations and characterizations are inordinately complicated for store personnel, and the risks of getting it wrong are extremely high, many companies err on the side of managing unsold or returned products as waste and sending them from the store for disposal (e.g., aerosol cans, personal care products that could be recycled). Outlets for reuse/recycling and resale (e.g., liquidation) may not be available to individual stores due to the relatively small number of products or the types of products available for disposition at any given time. Accordingly, many potentially useful or recyclable products are sent off-site from stores for management as hazardous wastes, when in fact many of these products could be used or recycled if they could be transported to other locations and/or were available in larger quantities after consolidation.

Recycling opportunities are also lost when stores decide to forego offering collection events to customers. Uncertainty over how customer returns must be managed under the RCRA regulations deters stores from offering collection events to customers. Such events would benefit the environment by removing potentially hazardous wastes from the municipal waste streams, creating economies of scale enabling recycling, and educating consumers on safe handling of potentially hazardous wastes. However, facing the costs that would befall stores generating potentially large quantities of hazardous wastes at periodic collection events, coupled with the inherent risks of making waste determinations and characterizations for collected products (e.g., if the customer were to be considered the generator), many stores forego these opportunities.

**B. Proposed Solution for Unsold/Returned Products**

As discussed above, the Retail Associations encourage EPA to consider an alternative, equally protective program for unsold/returned products in the retail sector. In the NODA, EPA identifies several key challenges facing the retail sector, including waste characterization, episodic generation, training, and management of particular product types, such as aerosols. While there may be regulatory or non-regulatory solutions for individual waste streams (*e.g.*, nicotine products, aerosols), the Retail Associations believe the best long-term solution is to provide a streamlined set of requirements for the retail sector that are equally protective of human health and the environment, incentivize product reuse and recycling, and greatly reduce the burden on stores. In particular, the Retail Associations would support a conditional exclusion from the definition of solid waste for unsold/returned products as they are handled in retail stores, transported to a reverse distribution center (including third party collection centers), and managed within the reverse distribution centers up until the point where the ultimate disposition of the products is determined and the hazard characterization is made by qualified personnel.

It may be necessary to impose certain conditions to ensure that the products being excluded are handled in a product-like manner that is protective of human health and the environment. While the precise conditions would have to be determined, in-store requirements might include DOT hazardous materials transportation requirements for shipping, some minimal labeling, tracking, basic instruction, and spill response. Excluded products would be transported by ordinary commercial transportation and without a hazardous waste manifest, just as they are in forward distribution. Commercially reasonable tracking would replace the manifest, and use of commercial transporters (including hazardous materials transporters, as necessary) would greatly reduce the cost of transportation. For the excluded products that are sent for disposal or the types of recycling that would render the products “discarded” under existing rules, a hazard characterization would be made by skilled personnel with the technical abilities to accurately make such a characterization, and, if hazardous, the wastes would be managed as hazardous wastes from that point forward. The Retail Associations look forward to working with EPA to develop an appropriate set of conditions to ensure an equivalent level of protection for human health and the environment.

The Retail Associations anticipate numerous and far-reaching benefits to such a streamlined set of requirements, including:

- (1) Compliance with hazardous waste requirements across the retail sector would be facilitated because the requirements would be designed to work with the normal operations of retail stores and reverse distribution systems, facilitating implementation in the retail environment.
- (2) The streamlined regulations would be equally protective of human health and the environment because products would continue to be subject to the DOT rules for hazardous materials transportation, where applicable, and the appropriate RCRA conditions ensuring they are otherwise managed in a product-like manner.

- (3) The burden on stores would be greatly reduced, decreasing the likelihood stores would be regulated as LQGs, saving retailers the cost of complying with LQG requirements, and reducing associated administrative burdens on regulatory agencies.
- (4) Instead of store personnel determining whether an unsold or returned consumer product is a “waste” within the regulatory definition based on limited options for reuse/recycling or liquidation, waste determinations could occur at the point where products are consolidated and opportunities for reuse/recycling and liquidation can be maximized. Retailers could take advantage of economies of scale for consolidating unsold/returned products, evaluating them, and identifying opportunities that would not otherwise be available.
- (5) Instead of store personnel trying to characterize whether a particular unsold/returned consumer product is “hazardous,” these decisions could be made more accurately by technical personnel in the reverse distribution system. This would reduce the chances of improper hazardous waste characterizations, and, consequently, the possibility that hazardous wastes would be improperly managed.
- (6) Stores could offer collection events for customers, so that recyclable materials could be consolidated and managed efficiently and in a manner that is safe for the environment and human health.
- (7) Recalled products could be quickly removed from stores and efficiently transported to manufacturers or through other reverse distribution systems and consolidated, allowing manufacturers and retailers to work together to manage them in a manner that is most efficient, while also protective of human health and the environment.
- (8) By facilitating reuse/recycling of unsold/returned products, RCRA would no longer be an impediment to retailers achieving zero-waste or other sustainability goals.

Accordingly, a conditional exclusion providing a streamlined set of conditions for unsold/returned products in stores and reverse distribution systems would facilitate compliance, encourage reuse/recycling and better management of unsold/returned products in reverse distribution, ensure environmental protection, and create opportunities for increased sustainable materials management. The Retail Associations encourage EPA to consider such a conditional exclusion, and we stand ready to work with the Agency to develop an alternative program that is equally protective of human health and the environment.

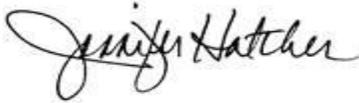
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The Retail Associations appreciate the opportunity to provide our comments on this important matter and look forward to working with EPA to effectuate meaningful changes

to the RCRA regulations to rationalize the regulatory structure and enhance sustainable materials management. Please do not hesitate to contact us for further information.



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