Walmart proposal for the non-hazardous management of consumer product aerosol cans under the Resource Conservation and Recovery Act

Background

In 2010, Walmart managed approximately 4.3 million pounds of consumer product aerosol cans as hazardous waste, which accounted for nearly 40% of our hazardous waste. These aerosol cans are generated through customer returns, facility damage, manufacturer damage, or transportation related damage. They are typically comprised of cosmetically dented cans, customer returned cans missing product, or cans missing actuator nozzles. Because of the uncertainties regarding the regulatory status of waste aerosol cans, Walmart and other retailers, must manage them as hazardous waste. The generator burdens and implications of managing these aerosol cans as hazardous waste include meeting hazardous waste storage requirements, manifesting requirements, and most significantly, direct impacts to generator status. Because they are presently managed as hazardous waste, the vast majority of Walmart's aerosol cans are currently incinerated by licensed disposal facilities with little recovery or recycling of valuable components that could act as substitutes for virgin materials.

Walmart proposes that other alternative outlets already exist that could be used by retailers to manage the cans in a manner that ensures that the purposes of the Resource Conservation and Recovery Act (RCRA) are fulfilled through the environmentally sound recycling of aerosol cans. By removing the significant burdens and implications of managing aerosol cans as hazardous waste, EPA can help aerosol cans reach these legitimate recycling outlets. EPA can achieve this by providing needed clarity to the retail sector and others under the current RCRA regulatory structure.

The Universe of Aerosol Cans in Retail

The 4.3 million pounds of aerosol cans managed as hazardous waste by Walmart in 2010 can generally be segregated into several categories of cans:

1) 17% contained non-hazardous propellant (e.g. nitrogen) and the remaining can contents are non-hazardous (either by listing or characteristic)

2) 52% contained propellants comprised of traditional ignitable fuel sources such as propane or butane and the remaining can contents are non-hazardous (either by listing or characteristic)

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1 The percentages for 2011 are presently trending similarly to 2010. Aerosols cans, while a large percentage of Walmart’s hazardous waste stream, make up only a very minor part of the total number consumer aerosol products handled by Walmart. The vast majority of cans, over 800 million in 2010, are safely shipped to stores and sold to customers, ultimately being disposed of by households and small businesses.
Management of Aerosols in Category #1

This category of cans, representing approximately 17% of the total volume, could be managed entirely as non-hazardous absent uncertainty regarding the characteristic of reactivity (D003) associated with aerosol cans. EPA has maintained that it is unable to determine whether aerosol cans meet the RCRA definition of reactivity in 40 CFR 261.23(6) which is “it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.” However, EPA “has maintained that small arms ammunition intended for disposal, up to and including .50 caliber, is not reactive within the meaning of 40 CFR 261.23(a)(6).” The MSDS for a common ammunition states the following:

CAUTION! EXPLOSIVE. KEEP AWAY FROM HEAT. DO NOT SUBJECT TO MECHANICAL SHOCK.

Risk of explosion by shock, friction, fire or other sources of ignition

It is not surprising, however, that the broad definition of ‘reactive’ results in confusion when applied to aerosol cans since many consumer aerosol cans have similar warnings on their MSDS. If EPA can determine that .50 caliber bullets do not fall within the definition of “reactive,” then it stands to reason that EPA should be able to determine that consumer product aerosol cans are not “reactive.”

It is simply hard to fathom that EPA envisioned the definition of “reactive” encompassing consumer products such as aerosol cans with whipped topping. Nevertheless, the uncertainty surrounding this issue leaves states, generators, transporters, and TSDFs with no clear

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2 See ROs 11782 and 11806.
3 See RO 13712
4 The warning label from a common whipped topping product that contains only whipped topping and nitrogen propellant states the following:

Exposure of cans to temperatures over 120°F may cause bursting. Pressurized containers may explode in heat and should be removed from fire if possible. Waste Disposal Method: Contents of can under pressure, do not puncture or incinerate. Dispose of cans in accordance with local or federal laws and regulations.

5 If any consumer product that might burst when exposed to heat or pressure is “reactive,” then could bicycle inner-tubes, footballs, and balloons be reactive?
direction. If EPA could provide clarity to the retail sector on the status of aerosol cans generally being non-reactive, then Walmart and others would be free to explore more recycling options for aerosol cans. While this section is focusing on aerosols cans in Category #1, the issue of reactivity pervades all categories of consumer product aerosol cans.

As an example of potential unique recycling solutions for Category #1 aerosol cans, Walmart has been in discussions with an entity named G\(^2\) Revolution, LLC regarding the potential reuse of certain consumer products that are not suitable for retail sale or donation due to factors such as denting of the cans or broken actuator nozzles. One such reuse option involves the repurposing of Silly String\textregistered into parking lot wheel stops. A copy of G\(^2\)'s proposal and pictures of the resulting product are attached as Exhibit 1.

**Management of Aerosol Cans in Category #2**

This category of aerosol cans constitutes approximately 52% of Walmart's aerosol can hazardous waste volume which contain a traditional fuel propellant such as propane or butane and no other hazardous constituent. Presently, 40 CFR 261.2(c)(2)(ii) states that all commercial chemical products that are burned for energy recovery are not solid wastes if the commercial chemical products are themselves fuels. EPA has clearly stated that an entity that is recovering propane and butane fuels from aerosol cans is covered under the solid waste exclusion in 40 CFR 261.2(c)(2)(ii).\(^6\) Hence, it is clear that, as to the person actually recovering the fuel, such cans are not solid wastes. However, EPA has provided confusing guidance for persons, including the fuel recycler, who accumulate or store these cans prior to the fuel being recovered. For example, while EPA has stated that the solid waste exemption for scrap metal applies at the point of generation\(^7\) (arguably the retail facility in this discussion), EPA has also stated that aerosol cans destined for recycling are subject to the scrap metal exemption only once they are punctured and drained.\(^8\) Based on this guidance from EPA, it is unclear whether persons accumulating aerosol cans must puncture and drain aerosol cans at their facilities prior to storing or transporting them in order to avail themselves of the fuel exemption. Walmart believes that a proper reading of 40 CFR 261.2(c) is that they do not.

40 CFR 261.2(c) states that “materials are solid wastes if they are recycled – or accumulated, stored, or treated before recycling – as specified in paragraphs (c)(1) through (4) of this section.” Paragraph (c)(2)(ii), entitled “Burning for Energy Recovery”, states “however, commercial chemical products listed in §261.33 are not solid wastes if they are themselves fuels.” Hence, Paragraph (c)(2) excludes aerosol cans from being a solid waste both during recycling and while they are being accumulated, stored, or treated prior to being recycled.

If the recycler who recovers fuel from aerosol cans is covered by the exclusion in 40 CFR 261.2(c)(2)(ii), then it is simply logical that generators who accumulate, store and then transport the same aerosol cans to the recycler for the very purpose of recovering the fuel

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\(^6\) See RO 11717  
\(^7\) See RO 14277  
\(^8\) See RO 11780
should likewise be eligible to avail themselves of the exclusion at the point of generation. EPA has already taken this approach for spent lead acid batteries.

Instead of storing and manifesting aerosol cans in Category #2 as hazardous waste, Walmart would prefer to send these cans to authorized facilities to have the fuel recovered and used as a substitute for virgin fuels. Attached as Exhibit 2 is information from GRR Attalla, Inc. (GRR) regarding their authorized aerosol can processing facility in Alabama. GRR has proposed to take aerosol cans from Walmart that contain fuel propellants and utilize the fuel as a substitute for natural gas in their drum reconditioning facility.

Management of Aerosol Cans in Category #3

The aerosol cans in Category #3, like Category #2, contain fuel propellants, however, the contents of the can are also hazardous, either by characteristic or listing. Presuming EPA agrees that generators of aerosols cans in Category #2 can avail themselves of the exclusion in 40 CFR 261.2(c)(2)(ii), the question then arises whether generators of aerosol cans containing another hazardous constituent, such as the contents of aerosol cans in Category #3, can also rely on the fuel exclusion. Similar to the discussion related to Category #2, Walmart proffers that aerosol cans in Category #3 also contain fuels that are destined to be used as fuel, and hence should not yet be deemed a solid waste when they are stored and sent to be used as fuel. Rather, the facility that receives the aerosol cans in Category #3 will become the generator of separate streams of materials upon processing, with some streams being excluded (i.e. fuel) and some streams being regulated (i.e. contents). GRR has presented authorized processes in Exhibit 2 that address all components of aerosol cans, including the propellant, the contents, and the metal can.

Management of Aerosol Cans in Category #4

The 19% of aerosol cans represented by Category #4 utilize either ignitable propellants that are not traditional fuels or have contents that may be hazardous by characteristic or listing. Despite a facility such as GRR having the means to legitimately recycle all components of aerosol cans in Category #4, Walmart is not aware of any current basis under RCRA for generators not to manage these aerosol cans as solid waste, and consequently hazardous waste. However, to the extent the 2008 DSW rule would allow such activities, which is unclear, it appears that the proposed amendments to the DSW rule might undo such capabilities.

At a minimum, if EPA could provide needed clarity regarding the management of aerosol cans in Categories #1-#3, then Walmart would have a basis to approach our supplier

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9 It is unclear whether the 2008 DSW rule or the currently proposed amendments to the DSW rule impact this analysis. However, to the extent the DSW rule covers used or unsaleable consumer products destined for recycling, any efforts to amend the DSW rule such that aerosol cans or other consumer products sent for recycling must be stored, transported, and counted as hazardous waste will deter and impede recycling efforts.
10 See 40 CFR 266.80
11 See page 16 of GRR presentation in Exhibit 2.
12 Prior to the physical separation of the components of the aerosol at the fuel recycler, the entire aerosol must be subject to the exemption because it is a single commercial chemical product.
community regarding the production of consumer products that are more amenable to recycling opportunities along with reduced regulatory burdens and implications.

**Transportation of Aerosol Cans**

A concern that has been expressed by EPA is that hazardous materials that fall outside of the hazardous waste manifesting requirements under RCRA will be wholly unregulated and endanger public health and the environment during transportation. This is simply not the case with aerosol cans. The Department of Transportation’s hazardous materials regulations implemented by the Pipeline Hazardous Materials Safety Administration oversee the safe transportation of hazardous materials such as compressed gases in aerosol cans. The regulations at 40 CFR 171, et seq., provide adequate safety and tracking measures through the maintenance of required shipping papers, labeling, and marking of aerosol cans which are regulated as Class 2 Hazardous Materials. Hence, these DOT rules apply to the shipping of all aerosols regardless of their RCRA status as solid or hazardous waste.

**Conclusion**

Walmart asks that EPA provide clarity that aerosol cans containing consumer products do not fall within the definition of “reactive” under 40 CFR 261.23(a)(6). Further, Walmart requests a regulatory interpretation of the solid waste exclusion for fuels in 40 CFR 261.2(c)(2)(ii) that generators storing and then transporting aerosol cans with traditional fuel based propellants to a third party for the purposes of utilizing the fuel as a fuel may avail themselves of the exclusion.

By providing this needed clarification to Walmart and the retail sector, EPA can help ensure that Walmart alone may eliminate more than 3 million pounds of hazardous waste annually, which is about 80% (Categories #1–#3) of the waste aerosol cans currently managed and largely incinerated as hazardous waste. Instead, the materials in aerosol cans may be beneficially reused, conserving energy and natural resources. Across the retail sector, millions of pounds of fuel will be used for its intended purpose instead of being land-filled or incinerated. Additionally, the scrap metal from all of the cans will be recycled.

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13 See generally, 40 CFR 172.101. When not destined for retail sale, liquidation, or donation, the consumer product aerosol cans discussed herein are generally transported as either 2.1(flammable) or 2.2 (non-flammable) compressed gases. Aerosol cans intended for retail sale, liquidation, or donation, are typically deemed “consumer commodities” and fall within a lesser class of regulated hazardous materials known as “ORM-D” or “other regulated material – domestic.” Walmart believes that the aerosol cans discussed in Categories #1–#4 would not currently meet the definition of ORM-D and would be transported as fully regulated, Class 2, hazardous materials, thereby providing significant safeguards and tracking mechanisms.