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May 15, 2018

U.S. Environmental Protection Agency
Office of Land and Emergency Management Docket
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

via Regulations.gov

Attention: Docket ID No. EPA-HQ-OLEM-2017-0463

Dear Sir or Madam:

The Compliance Monitoring and Enforcement (CME) Task Force within the Hazardous Waste Subcommittee of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) appreciates the opportunity to provide comments regarding the U.S. Environmental Protection Agency's (EPA) proposed rule, Increasing Recycling: Adding Aerosol Cans to the Universal Waste Regulations, published in the Federal Register on March 16, 2018 (83 FR 11654). These comments have not been reviewed or adopted by the ASTSWMO Board of Directors. In addition to these comments, individual State or Territorial programs may also provide comments based on their own State perspectives and experiences.

ASTSWMO is an association representing the waste management and remediation programs of the 50 States, five Territories and the District of Columbia (States). Our membership includes State waste program experts in the management and regulation of solid and hazardous waste.

Overall, the CME Task Force is supportive of the proposed rule, though we do have recommendations regarding puncturing/draining provisions. The attached general and specific comments reflect the input of Task Force members, as well as comments shared by State hazardous waste programs outside of the Task Force membership. The term "State" as used in these comments refers to the States that have provided input to the Task Force.

If you have any questions about these comments, please contact me at 802-522-0386 or steve.simoes@vermont.gov. Thank you for your consideration of this input.

Sincerely,

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Chair, Compliance Monitoring and Enforcement Task Force
ASTSWMO Hazardous Waste Subcommittee

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ATTACHMENT

Comments Submitted by the Compliance Monitoring and Enforcement Task Force of the ASTSWMO Hazardous Waste Subcommittee regarding the Proposed Rule, Increasing Recycling: Adding Aerosol Cans to the Universal Waste Regulations

General Comments

1. Overall the general response to the proposed rule for universal waste (UW) aerosol cans is favorable. However, one part that some States do not support is allowing UW handlers to puncture the aerosol cans received from other UW handlers. There is general agreement that UW handlers should be able to puncture UW aerosol cans generated on-site, but not those received from off-site sources.

   One State points out there are several reasons not to support UW handlers being allowed to puncture and drain UW aerosol cans from off-site sources:

   - First, UW aerosol cans come in a wide variety of waste types, ranging from pesticides, paints, solvents and cleaners, to freons, foamers and acids. There is added concern when can contents are unknown due to missing labels. UW handlers would be allowed to accept thousands of spent aerosol cans as UW and store these wastes for an extremely long time (up to a year). UW handlers may not be set up or permitted for addressing such a wide variety of waste types for worker safety, environmental protection, contingencies, waste compatibility issues, etc. The appropriate UW "person" to puncture and drain UW aerosol cans from off-site sources should be restricted to a UW destination facility. The final preamble or regulations should also place further limits on types of cans allowed to be punctured, such as corrosive cleaners, P-listed acutely hazardous wastes and others listed in the preamble.

   - Second, although the manufacturer of aerosol can puncturing and draining devices will have operating instructions, it has been the State's experience with UW fluorescent bulb crushers that those procedures and suggested maintenance schedules are not always followed. The manufacturer has no control over the users of their devices, such as how those devices are maintained and how the instructions are followed. EPA stated in the proposed rule that one unit they investigated had a design capacity for 600-750 cans before breakthrough of the filtering system occurred, however, that device only processed 187 cans before breakthrough actually did occur, releasing volatile organics into the workplace.

   - Third, it is understood by EPA that the crushing of UW fluorescent lamps is treatment (because it generates waste spent filters that were not associated with the original bulbs). Likewise, puncturing and draining of UW aerosol cans (also generating spent filters) must be viewed as treatment for consistency with the "no treatment" concept of UW. Therefore, besides the original generator, only UW destination facilities should be allowed to conduct puncturing and draining of UW aerosol cans. The UW rules for lamps places emphasis on accumulation and the need for preventing breakage of UW lamps (thus causing release of its contents) by UW handlers. The same consideration should be applied to puncturing and draining of aerosol cans by UW handlers. As worded, the proposed rule will create and allow for situations where UW handlers could act similarly to UW destination facilities.

   This State continues by recommending UW handlers be prohibited from puncturing and draining UW aerosol cans they accept from other UW handlers. This will help protect worker safety and prevent

environmental contamination at the UW handler facility. Today, generators can and do puncture and drain the aerosol cans they generate on-site without the need for a UW rule. The waste streams generated from that activity are scrap metal, hazardous waste contents, and the generation of spent filters as a new waste stream. The proposed rule should emphasize that only destination facilities may puncture and drain UW aerosol cans received from off-site. This does not restrict the original generator from puncturing and draining the aerosol cans they generated on-site. As UW handlers, those generators will still be able to accumulate UW aerosol cans received from off-site sources and send on to another UW handler or UW destination facility.

2. Another State offered that generators be allowed to puncture and drain, but not commercial processors, because the generator has more information about the hazards/contents of the can. This commenter also suggested that puncturing and draining be limited to large quantity handlers of universal waste (LQHUW) because they have notification and tracking requirements that small quantity handlers of universal waste (SQHUW) do not have.

3. A third State offered that while the types of hazardous waste generated during the processing of other types of universal waste is consistent and well known, the types of hazardous wastes generated from aerosol can puncturing are more variable. Such wastes could include a variety of characteristic wastes, listed wastes, or any combination thereof. The State is concerned UW handlers that receive aerosol cans from other generators may not be able to properly perform an adequate waste determination on the hazardous wastes subsequently generated, resulting in a greater risk of mismanagement.

4. Currently, destination facilities that recycle universal waste and that do not store that universal waste prior to recycling in accordance with 40 CFR 261.6(c)(2) may be exempt from permitting under existing federal regulations. EPA should provide guidance on the period of time that a destination facility may stage UW aerosol cans before a RCRA storage permit would be federally required.

5. One State suggests that, in the preamble to the final rule, EPA provide a clarification that the RCRA Subpart AA/BB/CC air emission requirements do not apply to units used to puncture and drain aerosol cans.

   That State continues that it understands that a universal waste aerosol can puncturing facility that is also a large quantity generator of hazardous waste is subject to the AABBCC air emissions requirements for volatile organic hazardous wastes stored in tanks and containers (not including satellite accumulation units). However, 40 CFR 261.9 exempts aerosol cans from regulation under 40 CFR parts 262 through 270 of this chapter if managed in accordance with 40 CFR part 273. Therefore, since the puncturing of aerosol cans is an activity proposed to be allowed under the universal waste rules, air emissions generated from the puncturing unit are not regulated under the hazardous waste program. Air emission requirements imposed under the Clean Air Act would be applicable.

6. One State has expressed general opposition to the UW designation. The State notes that the aerosol can could be reactive if there is propellant left, so general conditions of the UW program (storage for over a year by movement from handler to handler) may not be appropriate.

Responses to Specific Requests for Comments

7. **Page 11655, 3rd column, last paragraph. The preamble states: "Note that the expected cost savings is based on the assumption that all eligible states would adopt regulatory changes, once they are finalized. EPA requests comment on this assumption."**

    - The section references the Regulatory Impact Analysis (RIA), which was provided in the docket for the proposed rule. According to the RIA, it is assumed that the liquids from aerosol can puncturing will be disposed of via incineration at a cost of $4,573.11 per ton. It might be prudent to consider that this cost for disposal may increase the likelihood of abandonment of the waste by those who would puncture and drain aerosol cans, thus affecting the calculation of costs and benefits of this action.

    - Given that the rule is optional, it is unlikely that all eligible States will adopt it. Perhaps EPA should determine the percentage of States that have adopted other optional universal waste regulations to get a better estimate of the economic impact of the proposed rule.

    - Such action takes time, and since the rule is less stringent, it may be unrealistic to assume that it would be adopted by every eligible State.

8. **Page 11656, 1st column, 3rd full paragraph.** The section of the preamble includes a description of a *typical* [emphasis added] aerosol can. However, the description does not limit the size of the container to a handheld device. To prevent the inclusion of larger devices (e.g., compressed gas cylinders and propane cylinders as described on page 11660 of the proposed rule), it is suggested that the definition limit the size of the cans to handheld devices only. As an alternative, the definition could include a volume limit like Utah's 24-ounce limit as described on Page 11660 of the proposed rule.

9. **Page 11656, 1st column, last paragraph. The preamble states: "However, when aerosol cans are mismanaged, particularly when exposed to excessive heat, the resulting increase in internal pressure can reach a point beyond the design strength of the can, thereby causing it to burst and release its contents. At the point of bursting, the contents of the can have been heated to a temperature and pressure far above ambient environmental conditions, causing the contents to rapidly vaporize and be forcefully released. One or more of the following may occur when a can bursts as a result of over-heating: (1) If the propellant or product are ignitable, the contents of the can may readily catch fire as they are released and exposed to atmospheric oxygen, creating a rapidly burning vapor ''fireball''; (2) the bottom of the can may detach as a result of a manufacturing defect or an external force, causing the upper part of the can to become a projectile; or (3) the can may fragment as it bursts, releasing metal shards."**

    - EPA should state if this scenario meets the definition of reactivity and aerosol cans should therefore be considered reactive under normal conditions or only when mismanaged. This question has been debated by regulators and the regulated community at length and a clear EPA position would help generators and handlers make accurate and consistent waste determinations.

    - More specific safety measures should be included in the rule to prevent the types of reactions described in the preamble (e.g., not storing in excessive heat or with other materials that may cause a reaction).

- This section also describes the results of mismanaging aerosol cans, particularly when they are exposed to excessive heat. Given the particularly high risk of the cans bursting when exposed to heat, it is recommended that language, such as that found in § 262.17(a)(1)(vi)(B), be added to § 273.13(e) and § 273.33(e) to clearly address this issue for small and large quantity handlers of aerosol cans, regardless of whether they choose to puncture and drain.

10. **Page 11656, 3rd column, last paragraph. The preamble states: Hazardous waste aerosol cans that contain pesticides are also subject to the requirements of (the) Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), including compliance with instructions on the label. *In general, the statement on aerosol pesticide product FIFRA labels prohibits the puncturing of cans.*" (emphasis added) That section of the preamble goes on to discuss a 2004 EPA determination "…that puncturing aerosol pesticide containers is consistent with the purposes of FIFRA and is therefore lawful pursuant to FIFRA… provided certain conditions are met…"**

    - While EPA has determined that puncturing of aerosol pesticide containers is lawful, it should be explained further in the preamble why FIFRA labels ("in general") state that puncturing is prohibited.

    - Since there is also a universal waste category for waste pesticides, EPA should address if a handler can manage that waste under the less stringent provisions of the aerosol can requirements or if they must meet the provisions for both waste pesticides and aerosol cans.

11. **Page 11658, 2nd column, end of 1st paragraph. The preamble states: A summary of how the criteria in 40 CFR 273.81 apply to aerosol cans is described below. EPA solicits comment on this analysis.**

    Page 11658, 3rd column, 4th paragraph. The preamble states: 5. Risks Posed by the Waste During Accumulation and Transport Should Be Relatively Low Compared to the Risks Posed by Other Hazardous Waste, and Specific Management Standards Would Be Protective of Human Health and the Environment During Accumulation and Transport (40 CFR 273.81(e))

    Page 11658, 3rd column, 5th paragraph, second sentence. The preamble goes on to state: "As long as they remain intact, therefore, EPA expects that hazardous waste aerosol cans would present a lower risk as compared to other types of hazardous waste that are not contained as-generated under normal management conditions. In addition, the ignitability risk posed during accumulation and transport is addressed by standards set by the Department of Transportation, Office of Safety and Health Administration, and local fire codes. These standards include requirements for outer packaging and can design, including limits on the amount of flammable gas and general pressure conditions. Finally, as discussed below, the proposed management standards for aerosol cans that are punctured and drained at the handler would address the ignitability risk, and help prevent releases, and thus EPA believes that the risks posed by the activities proposed are addressed by the universal waste designation. "

    - Beyond these standards, additional measures for shipping and accumulation designed to minimize potential mixing of incompatible wastes and potential for causing a reaction should be included. While measures are proposed to prevent waste from leaving the aerosol can, some leakage will be inevitable. Commenters suggest *requiring* separation of incompatible wastes rather than *allowing* separation. Commenters also recommend requiring storage areas to meet temperature requirements to reduce the likelihood of a strong reaction.

- While there is agreement with having these management standards codified, additional language is needed to clarify that after the aerosol can is punctured, it can no longer be managed as universal waste. For hazardous waste generators, management of the removed product and/or propellent should be presented to clarify that this subsequent management is not part of universal waste handling. Most small quantity generators (SQGs) and large quantity generators (LQGs) will only be handling their own aerosol cans and not universal waste aerosols received from others. If the intent is to allow management of aerosol cans as universal waste on-site prior to on-site puncturing and then making determinations on the separate waste streams, this should be made explicit in the rule.

12. **Page 11660, 1st column, 2nd paragraph. The preamble states: EPA also intends this definition to be limited to sealed containers whose intended use is to dispense a material by means of a propellant or compressed gas. Aerosol cans are designed to contain those materials until they are intended for release and to present minimal risk during normal storage and transport. Other types of containers, including compressed gas canisters and propane cylinders, present a greater risk than aerosol cans and would not be included.**

    - If this is the intention, it should be clearly stated in the final regulation, not just as part of the preamble. The proposed definition leaves room for interpretation and the intent stated in the preamble to limit the definition to specific sealed containers is therefore unenforceable.

13. **Page 11660, 1st column, 3rd paragraph. The preamble states: EPA requests comment on whether to include a size limit of twenty-four ounces or other type of limitations on the types of aerosol cans that would be eligible for the federal universal waste rule, including any information on how such a limit would be necessary to ensure safe management of aerosol cans. EPA also requests comment on the appropriate scope of the definition of ''aerosol can'' and the types of materials that should fall under it.**

    - A number of States support a size limit, and either a 24 ounce or 1-liter limit seem appropriate. The 49 CFR 172.101 Hazardous Material Table identifies five categories of aerosol cans, and for each category, specifies "each not exceeding 1 L capacity". While "typical" aerosol cans are not large, any size could fall within the proposed definition. An example of such product containers are the large spray foam containers (generally 2- to 4-gallon capacity) that may be purchased from home improvement stores.

    - One State offered that it does not believe there should be a size limitation on the aerosol cans eligible for the universal waste regulations.

    - Commenters also strongly encourage adding language to limit applicability to "manufactured" aerosol cans. A quick internet search produces videos of "homemade" aerosol cans as well as hand-pump pesticide applicators, which both meet the proposed definition.

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

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

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

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

14. **Page 11660, 2nd column, 3rd paragraph. Preamble discussion about *empty* aerosol cans and *point of generation*.**

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

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

- Also, this rulemaking presents the opportunity for EPA to define that a punctured and drained aerosol can is a RCRA empty container. This can be accomplished by adding a provision to 40 CFR 261.7 that states that an aerosol can is empty when it has been punctured and drained. This provision should apply to cans that hold characteristic or listed wastes. By declaring the punctured can a new point of waste generation, thus requiring the container to be evaluated to determine whether it still contains a hazardous waste or whether the container itself is a hazardous waste, negates the regulatory streamlining offered by classifying aerosol cans as a universal waste and needlessly makes the rule complicated and confusing to implement. Further, no additional environmental protection is realized or gained by imposing that each emptied aerosol can be evaluated.

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

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

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

15. **Page 11661, first column, 3rd paragraph. The preamble states: EPA is proposing that puncturing and draining activities must be conducted by a commercial device specifically designed to safely puncture aerosol cans and effectively contain the residual contents and any emissions thereof.**

    - What does "effectively contain" mean with respect to emissions, and how is that to be evaluated by handlers and inspectors?

16. **Page 11661, second column, 2nd paragraph. The preamble states: "…the Agency has previously investigated the performance of at least one aerosol can puncturing and draining device through EPA's Environmental Technology Verification (ETV) program. The ETV review demonstrated one type of drum-top puncturing and draining system was effective in processing at least 187 cans before breakthrough of volatile chemicals occurred, which was significantly less than the 600 – 750 cans recommended by some manufacturers. The drum that contained the drained liquid from the aerosol cans was also never more than 25% full before breakthrough occurring. These findings were contrary to manufacturer recommendations of ensuring the container is not filled past 70% full in order to avoid breakthrough… In addition, the ETV program found that halogenated compounds (e.g., chlorinated solvents) were found to be incompatible with the seal and gasket materials."**

    - Based on this discussion, as well as anecdotal information about the wide range of puncturing and draining devices currently available on the market, the only ways to ensure puncturing and draining activities are *containing* emissions are to either implement an air monitoring program with recordkeeping requirements or ensure that the devices used are equipped with "end of life" filters that show when breakthrough is occurring.

17. **Page 11661, second column, last paragraph. The preamble states: "Therefore, EPA is proposing that handlers must establish a written procedure detailing how to safely puncture and drain universal waste aerosol can (including operation and maintenance of the unit; segregation of incompatible wastes; and proper waste management practices to prevent fires or releases), and ensure employees operating the device are trained in the proper procedures."**

    - One State is requesting clarification in the proposed rule under § 273.13 (e)(1), which states "Universal waste aerosol cans must be accumulated in a container that is structurally sound, compatible with the contents of the aerosol cans, and lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions". It is unclear if accumulation containers are to be "closed containers" to minimize release risks as is required of containers for other universal waste streams.

    - While EPA states on page 11661 (second column, top paragraph): "Operators of puncturing and draining devices are also instructed to ensure that the container remains closed, …,", there is no proposed requirement to keep containers closed.

18. **Page 11661, last column and sentence. The preamble states: EPA is requesting comment on establishing additional regulatory requirements for can draining devices and limits on aerosol cans that may pose compatibility problems and that may be punctured and drained under the proposed rules.**

- One State suggests adding language to clarify that once a can has been punctured, neither the can nor the collected contents remain universal waste. The State elaborates that the handler has generated at least two distinct waste streams and must make accurate hazardous waste determinations on both. Moreover, if the contents from different types of cans are mixed in the same collection container, a more complicated determination will result. Since the contents of various types of containers are likely to be combined, the ultimate waste determination is more likely to be inaccurate unless EPA emphasizes this point.

- In the preamble, while EPA proposes that puncturing and draining activities must be conducted using a commercial device, this language does not carry through to the definition. If not specifically stated, this opens the door to "homemade" devices which would not have the instructions, recommendations, safety testing, and testing on emissions capture that commenters believe are necessary to protect human health and the environment. As such, these commenters recommend revising the proposed definition as follows: "Conduct puncturing and draining activities using a *commercially manufactured* device specifically designed to safely puncture aerosol cans and effectively contain the residual contents and any emissions thereof."

- If the safety depends on the design of the cans to contain product, perhaps storage conditions need to be product-like in some ways, for example, noting the maximum temperature, indoors/under cover from rain, sun.

- A few States recommend requiring that a maintenance record be kept to document maintenance activity (including filter changes) and monitoring for breakthrough (that, at a minimum, are consistent with the manufacturer's recommendations). Those States also recommend that a record be kept documenting the contents of punctured/drained cans to demonstrate that incompatibles have not been mixed and to help facilitate proper waste determinations.

- One State suggests that the type of device used to puncture aerosol cans be revised to also allow the use of puncturing devices that are custom designed or retrofitted to puncture aerosol cans according to accepted engineering practices based on established codes, standards, published technical reports, or similar peer reviewed documents, to puncture or crush and empty aerosol containers within an enclosed compartment.

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

  The State suggests allowing the handler to have satellite accumulation areas in the work area where aerosol cans are initially generated and collected. The collection container shall not have

a capacity greater than 55 gallons and once the container is full it needs to be moved to the universal waste storage area. Once in the storage are, the one-year storage time limit begins for the aerosol cans. This provision is intended to provide additional streamlining of the tracking requirements with no reduced protection.

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

19. **Page 11662, 1st column, 2nd paragraph. The preamble states: EPA is requesting comment on limiting puncturing and draining practices to handlers that are not commercial processors (i.e., a person that processes aerosol cans received from other entities in exchange for compensation).**

- The term "commercial processors" should be defined in the final rule. Based on the parenthetical statement, it is not clear how one distinguishes a "commercial processor" from any handler who punctures/drains aerosol cans since most handlers are compensated for receiving (and managing) universal wastes from other entities.

- One State recommends adding language to the proposed regulations that would prohibit "commercial processors" from puncturing universal waste aerosol cans. In addition, that State recommends that EPA define the term "commercial processor" within the regulations or use other words, such as "any handler other than the original generator of the aerosol cans or the destination facility" to describe the prohibition.

- It should also be noted that while large scale "commercial processers" may be managing larger quantities of cans and a wider variety of materials, they also are likely to be using more sophisticated puncturing/draining equipment than generators, and more experienced and knowledgeable about the abilities and limits of that equipment. Larger processors are also more likely to be familiar with the universe of materials in aerosol cans and which of those materials are incompatible and which materials may have an adverse impact on the seals/gaskets of puncturing/draining equipment.

- One State pointed out that as noted in Appendix B of the RIA, entitled "Puncturing Options", EPA is concerned about the potential for large buildups of aerosol cans at handlers that may not be properly equipped to puncture and drain such a large quantity of cans. While this is a major concern, another issue is whether the rule, as currently written, adequately protects against a situation where a handler accepts a large quantity of cans, removes and sells the scrap metal, and accumulates a large quantity of liquid waste that must be managed as hazardous, but does not properly dispose of it.

  The approach of limiting puncturing and draining practices to handlers that are not commercial processors is preferred (unless permitted as a RCRA Subtitle C hazardous waste treatment facility), as it may help reduce the potential stockpiling or abandonment of large quantities of waste, which increases the risk of mismanagement and/or abandonment of the waste.

- If EPA decides not to include this provision requiring a permit for commercial handlers, then language should be added to ensure that any handlers receiving aerosol cans from another handler segregate incompatibles to ensure that incompatible wastes are not placed in the same container after cans are punctured.

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

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

20. **Page 11662, 3rd column, Section 4 (Applicability of Land Disposal Restriction Requirements).**

- This section describes how Land Disposal Restriction (LDR) requirements are to be addressed for both handlers and destination facilities and suggests that aerosol cans be exempt for handlers and transporters. While this approach makes sense, the section does not explain the scenario where universal waste handlers that puncture cans will become hazardous waste generators and must comply with the applicable requirements of 40 CFR Part 268. To address this concern, it is suggested that the potential applicability of the LDR restrictions be highlighted in the final rule.

  In addition, it is suggested that the emphasis on compliance with 40 CFR Part 268 be included within the proposed regulatory language on page 11666 of the proposed rule. Specifically, 40 CFR 273.13(e)(3)(v) as proposed requires handlers to (1) conduct a hazardous waste determination and (2) manage any hazardous waste generated as a result of puncturing and draining in compliance with all applicable requirements of 40 CFR parts 260 through 272. Additionally, it is suggested that the citation include a specific reference to 40 CFR Part 268 - Land Disposal Restrictions.

Specific Comments regarding Proposed Rule Language

21. **Pages 11665 and 11666, § 273.6 and § 273.9.**

There appears to be a lack of clarity between the definition of "aerosol can" in § 273.9 and the applicability statement in § 273.6(b). The definition states that an aerosol can is a container holding a gas under pressure and material (product) which is dispensed via a valve. The applicability statement indicates that an "aerosol can" is or is not a hazardous waste under certain prescribed circumstances. It is our opinion that the aerosol can is a container which may or may not hold regulated hazardous waste in liquid or gaseous form.

22. **Page 11665, § 273.6(b)(1).**

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

23. **Page 11665, § 273.6(b)(2).**

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

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

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

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

24. **Page 11665, § 273.6(b)(4).**

- One State does not support EPA's proposal to exclude leaking or damaged aerosol cans from being classified and managed as universal wastes. That State supports that leaking or damaged aerosol cans be eligible to be classified and managed as universal wastes.

  The State believes that excluding damaged or leaking aerosol cans from the universal waste program complicates implementation of the universal waste rule for the handler and makes the rule less understandable. Also, the exclusion of leaking/damaged cans offers minimal additional

environmental protection since the universal waste rules offer consistent and comparable environmental protection as compared to the hazardous waste generator rules.

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

25. **Page 11666, § 273.13(e)(1) /Page 11667, § 273.33(e)(1). The proposed regulations states: Universal waste aerosol cans must be accumulated in a container that is structurally sound, compatible with the contents of the aerosol cans and lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions**

    - Since aerosol cans may contain a wide array of products, we believe the accumulation requirements for SQHUWs and LQHUWs should be revised to specify that waste aerosol cans containing incompatible materials should not be accumulated in the same container.

26. **Page 11666, § 273.13(e)(3) /Page 11667, § 273.33(e)(3). The proposed regulations states: A (small/large) quantity handler who punctures and drains their aerosol cans must recycle the empty punctured aerosol cans…**

    - It should be noted that scrap metal recycling is not universally available. If recycling is not available in a region, does that mean that puncturing/draining of aerosol cans is not an option in that region? There needs to be further discussion of this requirement in the preamble of the final rule.

      Although the proposed rule states (in 40 CFR 273.13(e)(3) for SQHUW) the UW handler can puncture "their" aerosol cans, the text is not clear that the term "their" includes UW aerosol cans accepted from off-site sources. The final rule language should be clear as to whether "their" includes off-site sources.

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

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

27. **Page 11666, § 273.13(e)(3)(ii) /Page 11667, § 273.33(e)(3)(ii). The proposed regulations states: Establish a written procedure detailing how to safely puncture and drain (a) universal waste aerosol can (including proper assembly, operation and maintenance of the unit, segregation of incompatible wastes, and proper waste management practices to prevent fires or releases) …**

    - Not only should a written procedure be established, it is recommended to add the words "and follow" so the revised requirement would read: "Establish and follow a written procedure detailing how to safely puncture…."

    - There is a further recommendation to revise this requirement as follows: "…safely puncture and remove the contents from universal waste aerosol cans and ensure the capture and containment of all resulting liquid and gaseous waste materials."

    - The rule should also require that the written procedure address prevention of filter breakthrough, ensuring compatibility of commingled liquids, and ensuring the compatibility of the contents of punctured cans with the puncturing and draining equipment.

28. **Page 11666, § 273.13(e)(3)(iii) /Page 11667, § 273.33(e)(3)(iii). The proposed regulations states: Ensure that puncturing of the cans is in a manner designed to prevent fires and to prevent the release of any component of universal waste to the environment. This includes, but is not limited to, locating the equipment on a solid, flat surface in a well ventilated area.**

    - The proposed regulation § 273.13/33 (e)(3) allows handlers to puncture aerosol cans provided they "effectively contain the residual contents and any emission thereof". This implies that all hazardous waste gases will be collected or captured during the activity. If so, one State asks why puncturing equipment must be located in a well ventilated area?

    - Another State suggests that puncturing and draining equipment be vented outside to the atmosphere.

29. **Page 11666, § 273.13(e)(3)(iv) /Page 11667, § 273.33(e)(3)(iv).**

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

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