



OFFICE OF RESOURCE CONSERVATION AND RECOVERY

WASHINGTON, D.C. 20460

January 7, 2026

Theophile Vernhes
TerraCycle
Westgate & Hanger Lane
London W5 1UA
United Kingdom

Dear Mr. Vernhes:

Thank you for your email dated September 4, 2025, in which you asked, “[f]rom a federal standpoint, does the Household Hazardous Waste (HHW) exemption apply to post-consumer e-cigarettes throughout the entire collection and recycling supply chain? Specifically, this includes e-cigarettes collected at drop-off points, aggregated, sorted, with their lithium batteries recovered at our Material Recovery Facility, and finally, the unrecoverable fraction sent for disposal.”

As you know, e-cigarettes have become a very challenging wastestream. They contain lithium-ion batteries, which can catch fire, and nicotine e-liquid, which is toxic and easily absorbed dermally.

Many, but not all, post-consumer e-cigarettes are exempt from the federal Resource Conservation and Recovery Act Subtitle C hazardous waste regulations due to the household waste exclusion in [40 CFR 261.4\(b\)\(1\)](#), which states,

(b) ***Solid wastes which are not hazardous wastes.*** The following solid wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. “Household waste” means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas).

Your company is interested in collecting post-consumer e-cigarettes from households to facilitate the recycling of the lithium-ion batteries and the nicotine e-liquid. This would necessitate the disassembly of the post-consumer e-cigarettes into their primary components: the lithium-ion battery, the nicotine e-liquid, plastic housing/mouthpiece, the heating coil, and a small amount of electronics.

To answer your question, from the federal standpoint, the household waste exclusion applies to the entire collection and recycling supply chain for household waste, provided the exempt household waste is kept separate from regulated hazardous waste. In your case, this means that pre-consumer and post-consumer e-cigarettes from households are excluded from RCRA Subtitle C hazardous waste regulation when collected, stored and transported and treated, e.g., recycled. Likewise, the various wastestreams that are generated from the disassembly, including the non-recyclable components that are sent for disposal, remain exempt from RCRA Subtitle C hazardous waste regulations as household waste, so long as they are kept separate from regulated hazardous waste.

That said, as with all household hazardous waste, EPA strongly encourages the public to keep household hazardous waste out of the household trash, especially any waste that contains lithium batteries like e-cigarettes, and bring it to household hazardous waste collection locations for proper management, which may include recycling or disposal. Some jurisdictions even ban the landfilling of lithium batteries because of the fire risk.

We support TerraCycle's goals of collecting household e-cigarettes to divert them away from municipal wastestreams and to recover the valuable components for recycling and eventual reuse. We caution that your personnel and facilities are still managing solid waste that has hazardous properties, and you should have appropriate worker protections in place, in addition to all applicable state solid waste licenses and/or permits. You should also consult the Department of Transportation's hazardous materials regulations (HMR), which may apply to the transportation of e-cigarettes as well as lithium batteries that have been removed from e-cigarettes.

Finally, please note this letter discusses only the federal hazardous waste regulations. Some states have promulgated regulations that are more stringent than the federal RCRA regulations with respect to household hazardous waste. Under Section 3006 of RCRA, individual states can be authorized to administer and enforce their own hazardous waste programs in lieu of the federal program and they have authority to promulgate regulations that are more stringent than the federal program. All states except for Iowa and Alaska are currently authorized to implement the RCRA Subtitle C hazardous waste program.

If you have any questions about the federal hazardous waste regulations discussed in this memo, please contact Kristin Fitzgerald at (202) 566-0512 or Fitzgerald.Kristin@epa.gov.

Sincerely,

Andrew Baca
Director