



## Fact Sheet For Electronic Cigarette (E-cigarette) Retailers

Over the last 10 years, electronic cigarettes (“e-cigarettes”), and the nicotine solutions they vaporize (“e-juice”), have become extremely popular with people as alternatives for tobacco. For the majority of this time, retailers (“vape shops”) have been largely unregulated by state and federal agencies. Recently, environmental regulatory agencies have been inspecting these businesses to determine their compliance with hazardous waste regulations.

This fact sheet has been developed by the NMED’s Hazardous Waste Bureau (HWB) to offer regulatory guidance to e-cigarette retailers, and manufacturers of e-cigarettes and e-juice. This fact sheet focuses on waste handling and disposal requirements, and does not address other regulatory issues such as Food and Drug Administration (FDA) rules.



### Nicotine is a Poison, and an Acutely Toxic Hazardous Waste

Nicotine is a chemical found in the nightshade plant family, and acts as a stimulant drug in humans. Nicotine is the main active ingredient in tobacco, which became popular as a recreational drug by the year 1650. It was also used as an insecticide until the 1970s. Exposure to the chemical in concentrated forms can cause vomiting, convulsions, and damage to the nervous system. Nicotine’s LD50 (the dose at which half of those exposed die) is 50 mg/kg of body weight for either ingestion or skin contact.

The Environmental Protection Agency includes nicotine on its list of acutely toxic hazardous wastes. This designation places nicotine, and all solutions containing nicotine as the sole active ingredient, in the same category of the most stringently regulated waste chemicals. As an acutely toxic hazardous waste, waste nicotine cannot be disposed of with the municipal solid waste/regular trash pickup and must be disposed of properly at a permitted hazardous waste disposal facility or other state authorized facility.



### Types of Hazardous Waste Commonly Found at E-Cigarette Shops:

- **Expired, discontinued, or otherwise unsellable nicotine solutions** - This includes pre-packaged e-juice cartridges, pre-packaged e-juice refill containers, ‘house blend’ e-juice (e-juice mixed at the store from unblended nicotine solution, glycerin and flavoring), and nicotine solution.
- **Damaged containers of e-juice or other nicotine solutions.**
- **Empty containers of: e-juice, e-juice cartridges, house blend containers, and nicotine solution.**
- **Rinse water from cleaning out empty house blend containers,**
- **Spill cleanup materials (rags, towels, absorbent, etc.) and debris contaminated by nicotine solution spills.**
- **Contaminated gloves and other protective equipment**
- **Spent e-cigarette heating coils.** (Due to chromium in the coils)
- **Spent e-cigarette batteries.** (Tendency to catch fire or explode if mishandled)
- **Spent e-cigarette LED lights.** (Lead is found in many LEDs)



## Managing your Hazardous Waste:

E-Cigarette stores should be able to maintain Conditionally Exempt Small Quantity Generator (CESQG) status by generating less than 2.2 lbs of nicotine related waste or less than 220 lbs of other hazardous waste per month\*. **CESQGs only have three basic requirements that they must meet:**

1. Be knowledgeable of all of your Hazardous Wastes generated
2. Do not accumulate more than 2.2 lbs. of acutely toxic hazardous waste, or 220 lbs. of nicotine solution cleanup waste, on site at any time
3. Properly dispose of your hazardous wastes at locations authorized by the EPA or the state.

\*If you are unable to meet the generation and/or storage limits provided above, please refer to the fact sheet titled "Hazardous Waste Generator Categories" to determine which regulatory standards apply.

## Best Management Practice for Managing Hazardous Waste:

- Ensure your employees have quick access to safety information and protective clothing (e.g. gloves).
- Develop and communicate a plan for spills, employee exposure, fires and other emergencies
- Obtain containers for hazardous waste storage
- Keep nicotine solution waste and empty nicotine solution containers in a separate container from other hazardous wastes.
- Label the containers as hazardous waste.
- Keep a stock of spill cleanup absorbent on site.
- In case of a damaged container or spill of e-juice: ensure the area is well ventilated and that employees have proper protective clothing. Use absorbent to soak up liquids, place any broken containers in an outer container with absorbent and securely close and/or tape it up, remove any contaminated debris, and properly containerize and dispose of all wastes.
- For larger spills, consider using a hazardous waste management company for cleanup.
- Ensure that you researched a hazardous waste disposal company, or some other legal disposal method, to dispose of waste.



## Pollution Prevention ideas to minimize the amount of hazardous waste generated:

1. Sell any e-juice that is still usable - If an e-juice or house blend can still be sold, then it is still a product and does not need to be counted as waste.
2. Return e-juice to the manufacturer before it expires: Unexpired E-juice that cannot be sold can be returned to the manufacturer and not counted as waste. Once it expires, the e-juice must be handled as hazardous waste if it contains nicotine.
3. Use loss prevention strategies to prevent spills and breakage: Consider employee handling training, flooring options and other strategies for minimizing the likelihood of breakage and spills.
4. Consider discontinuing mixing of house blends: The mixing and use of house blend nicotine solutions can generate more waste than operating as a retailer only. This includes empty containers of unblended nicotine solution, rinse water from cleaning the house blend squirt bottles, and paper towels and gloves from casual spillage of house blend e-juice while blending or filling up e-juice cartridges.
5. Spent e-cigarette heating coils may be managed as scrap metal. Batteries and LEDs may be managed as Universal Waste as long as they are recycled: If you are able to find recycling vendors, you don't need to count scrap metal or universal waste batteries and LEDs as hazardous wastes.

**If you have questions related to hazardous waste nicotine vaping products, their management or other hazardous waste issues, please call the New Mexico Environment Department's Hazardous Waste Bureau at 505-476-6000 or toll free at (866) 428-6535.**