TCEQ REGULATORY GUIDANCE
Waste Permits Division
RG-661 • Revised February 2026

Hazardous Waste Management of Confiscated E-cigarettes That Contain Lithium Batteries and Nicotine

Pharmacies managing nicotine replacement therapies and retailers of electronic nicotine devices have a clear set of regulations for managing hazardous waste. However, entities like law enforcement agencies and school districts that confiscate nicotine devices, like illegal e-cigarettes, may not be familiar with these requirements. This document helps explain the handling, storage, disposal, and reporting requirements for confiscated nicotine devices.

Nicotine devices include a wide range of products, including e-cigarettes, vapes, vape pens, e-hookahs, etc. These devices may contain lithium batteries and nicotine, which, when discarded, are considered hazardous waste under the Resource Conservation and Recovery Act (RCRA). Because these devices contain hazardous waste, they should not be thrown away in the trash or in a recycling bin, and should not be poured down a sink, drain, or toilet.

The information in this guidance is specifically tailored to law enforcement agencies, school districts, and other non-manufacturing entities who confiscate nicotine devices and need to understand the hazardous waste regulations that relate to lithium batteries and nicotine. Regarding these regulations, law enforcement agencies and school districts are referred to as "generators" because, as explained in the Hazardous Waste Generation section, they are generating waste when they decide to discard a confiscated nicotine device.

Other entities who generate lithium battery or nicotine wastes, or entities who generate other types of hazardous waste, should refer to TCEQ's Industrial and Hazardous Waste Registration and Reporting webpage[1] for more information. Health care facilities managing hazardous waste pharmaceuticals should refer to TCEQ's Hazardous Waste Pharmaceuticals Management webpage[2].

Hazardous Waste Overview

"Hazardous waste" is a designation given to certain wastes that pose a significant or potential threat to human health and the environment if they are mismanaged or mishandled. Due to its potential threat, RCRA provides the framework for managing hazardous waste from "cradle to grave", which encompasses managing its generation, identification, storage, transportation, and disposal or recycling.

[1] www.tceq.texas.gov/permitting/registration/ihw/overview.html
[2] www.tceq.texas.gov/permitting/registration/ihw/pharm

Nicotine is toxic and is considered an acute hazardous waste, meaning it can pose a significant threat to human health and the environment if mismanaged. Similarly, lithium batteries pose a fire risk, especially when damaged, and are hazardous waste because of their ignitable and reactive characteristics.

Lithium batteries can be managed as universal waste, which is a special category of hazardous waste that has streamlined regulations. More information on universal waste is provided in the Universal Waste section. Please note that in regard to nicotine devices, the universal waste option only applies to lithium batteries. If a battery is not separated from a device that contains a nicotine cartridge, then the universal waste standards do not apply, and the entire device must be handled as hazardous waste and not universal waste.

Hazardous Waste Generation

Under RCRA, a material becomes waste when an entity decides to discard it, or when an entity determines that the material can no longer be used for its intended purpose. When an entity determines that a material is waste, they are considered the generator of the waste, and they must count that amount of hazardous waste towards their monthly generation amounts and generator category. Generator categories are described further in the Hazardous Waste Generator Categories section.

A confiscated nicotine device is not immediately waste, especially if the device is considered evidence, could be resold, or could be returned to the manufacturer. A nicotine device is considered waste when the generator makes a determination that the device will be sent for recycling or disposal.

Hazardous Waste Identification

Generators must identify the classification or category of their hazardous waste. This is called a “hazardous waste determination” under RCRA. To conduct a hazardous waste determination, a generator must use process knowledge or analytical testing to determine the waste’s composition and if constituents in the waste exceed hazard levels.

For nicotine devices, the generator should make two determinations:

- **If the device contains nicotine**
    - This determination can be based on testing, labels or packaging, or other information the generator has knowledge of.
    - If a generator determines that a device does not contain nicotine, then they are not required to manage the waste as acute hazardous waste, though other ingredients in the device may require special handling. Additionally, the lithium battery must still be handled as either non-acute hazardous waste or universal waste.
- **If the lithium battery or nicotine cartridge can be removed or separated from the overall nicotine device**

- If the lithium battery or nicotine cartridge can be removed, the generator has two waste streams, nicotine waste and lithium battery waste, and these two waste streams should be managed separately.
    - When lithium batteries are separated from the nicotine cartridge, the battery can be managed as universal waste, described in the Universal Waste section, which often has less costly disposal options.
    - If the lithium battery and nicotine cartridge cannot be separated, the lithium battery is considered non-acute hazardous waste and cannot be considered universal waste. Nicotine is always considered acute hazardous waste.

The generator should keep records that demonstrate a correct hazardous waste determination was made. Examples of records include product packaging, manufacturer information, other data about the composition of the nicotine device, and any decisions made based on this documentation.

Hazardous Waste Generator Categories

Under RCRA, entities that generate hazardous waste are classified based on the monthly amount of hazardous waste they generate. There are three categories of generators: very small quantity generator (VSQG), small quantity generator (SQG), and large quantity generator (LQG). Requirements for registering, storing, handling, and transporting hazardous waste depend on the generator's category.

A waste generation category is determined based on the monthly amounts consistently generated, unless the waste is due to an episodic waste event. Review the Episodic Waste Generation section for what to do when a one-time or episodic waste generation event occurs that would cause a generator to go up to a higher category.

Generally, law enforcement agencies and school districts should be classified as VSQGs if they ship waste offsite regularly and follow the episodic waste requirements. The number and frequency of shipments offsite needed to retain VSQG status will depend on the amount of nicotine devices a generator collects on a daily or monthly basis. To stay a VSQG, a generator must stay below 2.2 pounds of nicotine and 220 pounds of lithium battery waste in a month and follow the episodic waste requirements when major or one-time confiscation events occur.

To determine a generator's category, calculate the total weight of nicotine and the total weight of lithium batteries, and for each, find the corresponding hazardous waste generator category. Your overall category for both will correspond to whichever category is larger. For example, if you had 200 pounds of lithium batteries and 3 pounds of nicotine generated, the category for the lithium batteries would be "Very Small Quantity Generator" and the category for the nicotine would be "Large Quantity Generator." Your overall category would correspond to the larger category, "Large Quantity Generator" in this case. Table 1 lists generator categories based on waste types and amounts to help you determine the corresponding categories for each waste type.

Table 1: Hazardous Waste Generator Categories for Lithium Batteries and Nicotine (Calculated Per Month)

Waste Type	*Very Small Quantity Generator (VSQG)*	*Small Quantity Generator (SQG)*	*Large Quantity Generator (LQG)*
Lithium batteries* (Non-acute hazardous waste generated)	Less than 220 pounds (100 kilograms)	More than 220 pounds (100 kilograms) but less than 2,200 pounds (1,000 kilograms)	More than 2,200 pounds (1,000 kilograms)
Nicotine (Acute hazardous waste generated)	Less than 2.2 pounds (1 kilogram)	Less than 2.2 pounds (1 kilogram)	More than 2.2 pounds (1 kilogram)

*Lithium batteries that are not being managed as universal waste or that have not been separated from a nicotine cartridge.

Two important notes about these generator categories:

1. Acute hazardous waste (nicotine) and non-acute hazardous waste (lithium batteries) have independent categories determined by the quantities generated. The generator must pay attention to both amounts to determine their overall category.
2. The amount of hazardous waste is based on the separate weights of the nicotine cartridge and lithium batteries, not the combined weight of both wastes, nor the combined weight of the overall nicotine device. In other words, the weight of nicotine is based on the amount of nicotine in the device and does not include the weight of the lithium battery.

Whenever possible, the generator should separate the nicotine cartridge from the lithium battery and store them in separate containers. When separated from nicotine, a battery can be handled as universal waste instead of hazardous waste.

If a generator cannot separate a nicotine cartridge from a lithium battery, then the lithium battery must be handled as non-acute hazardous waste (not universal waste), though the generator can still calculate their generator category based on the weight of each individual component and not the overall weight of the nicotine device.

Determining Weights

Measuring the exact weight of lithium batteries and liquid nicotine can be tricky, especially when a confiscated device cannot be separated into its individual parts. Here are a couple of suggestions generators can use to determine the weights of waste when they are unable to measure an intact confiscated device.

- Multiply volume by density to determine the weight of liquid nicotine. According to the National Institute for Occupational Safety and Health's Emergency Response Safety and Health Database[3], the density of nicotine is

[3] www.cdc.gov/niosh/ershdb/emergencyresponsecard_29750028.html

1.01g/cm^3 or 1.01 g/ml. If you have 100 ml of nicotine, then you would have 101 grams of nicotine or 0.101 kilograms (0.223 pounds).

Volume × Density = Weight

100 ml of nicotine × 1.01 g/ml = 101 g

- Measure a subset of confiscated lithium batteries or liquid nicotine and then extrapolate to determine your totals. For example, if you have 50 lithium batteries of different sizes and types, gather a statistically representative sample and calculate the average weight of those batteries, then multiply that average by the total number of batteries.
    - A statistically representative sample reflects the characteristics of the larger group. For the battery example, you will want to include small, medium, and large batteries, since those batteries will have different weights.
- Determine weights (for batteries) or volumes (for nicotine) from reference materials and then extrapolate to determine your total. Reference materials can include labels or packaging, manufacturer guidance, or other credible sources.

  The Environmental Protection Agency's guidance on e-cigarette disposal for schools and small businesses[4] provides the following examples:

    - **Lithium batteries** – To exceed 220 pounds of non-acute hazardous waste, it takes about 2,000 of the 18650-type lithium-ion batteries.
    - **Nicotine liquid** – To exceed 2.2 pounds of acute hazardous waste, it takes:
        - More than 1,000 Juuls (with less than one milliliter of e-liquid in each Juul pod).
        - More than 76 Elf Bars (with 13 milliliters of e-liquid in each Elf Bar).
        - More than 200 full 5-milliliter vials.
- Reminder that you should only count the weight of lithium batteries or liquid nicotine and not the weight of the storage container nor the plastic nicotine cartridge.

For help with calculating the weights of liquids or extrapolating total weights from a sample, please contact the Industrial and Hazardous Waste Permits Section at ihwper@tceq.texas.gov or 512-239-2335.

Episodic Waste Generation

When a VSQG or SQG experiences an influx of waste in one month, they can maintain their VSQG or SQG status by treating the influx as an "episodic waste generation event." An episodic waste generation event is a non-routine activity that causes a generator to exceed the VSQG or SQG limits. Episodic waste generation would allow a

[4] www.epa.gov/hw/how-safely-dispose-e-cigarettes-information-schools-and-small-businesses

school district or law enforcement agency to maintain VSQG status even if more than 2.2 pounds of nicotine or 220 pounds of batteries were confiscated during a large-scale collection event.

Examples of episodic waste generation events:

- As a VSQG, a school district has a transporter pick up nicotine waste every six months to stay below the 2.2 pounds for acute hazardous waste. However, at the beginning of the school year, staff confiscated a larger volume than in previous months and it resulted in more than 2.2 pounds of nicotine stored onsite. The school district could submit an unplanned episodic generation event request to allow them to remain a VSQG.
- As a VSQG, a law enforcement agency regularly collects only a small number of nicotine devices per month and sends their waste to their headquarters through LQG consolidation. The law enforcement agency confiscates several thousand nicotine devices from several retail stores. The law enforcement agency could submit an unplanned episodic generation event request and remain a VSQG.

Generators are allowed one planned and one unplanned episodic waste generation event per calendar year. If a school district or law enforcement agency has more than one unplanned event, contact the Industrial and Hazardous Waste Registration and Reporting Program at epigen@tceq.texas.gov or visit TCEQ's Episodic Waste Generation webpage[5].

Under the episodic waste generation rules, an entity must:

- Submit the required TCEQ form, Unregistered/Inactive Episodic or Short-Term Generator Notification[6] *(*TCEQ-00757):
    - At least 30 days before a planned event.
    - No later than 72 hours (3 days) after an unplanned event.

  Note – The episodic generation event does not have to be timed for 30 days before or 3 days after the large-scale confiscation event if those nicotine devices are considered evidence. For law enforcement agencies or school districts, the episodic event can start when the large-scale collection event occurs, or later when nicotine devices collected during a large-scale collection event are no longer needed as evidence and the generator is ready to dispose of the devices.
- Store episodic waste in containers labeled as "Episodic hazardous waste" and "Toxic" for nicotine wastes, "Ignitable" for lithium battery waste, or with all three terms if the lithium batteries and nicotine have not been separated. Additionally, include the date that the episodic event began.

  Note – Episodic waste must be stored separately from nicotine device waste collected during normal or daily operations.
- Use a TCEQ-registered transporter to ship hazardous waste to a TCEQ-authorized disposal or recycling facility. Use a hazardous waste manifest and keep records for three years.

[5] www.tceq.texas.gov/permitting/registration/ihw/episodic
[6] www.tceq.texas.gov/downloads/permitting/waste-registration/forms/ihw/00757.pdf

Note – The VSQG Requirements section states that VSQGs may self-transport their hazardous waste, which is allowed for hazardous waste collected during a VSQG's normal or daily operations. Hazardous waste generated through an episodic event must be transported by a TCEQ-registered transporter.

- Send the waste offsite within 60 days of the start of the episodic event.

Storing Nicotine Devices as Waste

When discarded, nicotine devices should be stored in properly constructed containers that prevent leaks and that can be sealed (i.e., it has a lid or can be closed; not open topped). Example containers include plastic or metal bins or buckets, plastic lined cardboard boxes, and sharps containers.

Keep containers closed, except when adding or removing waste.

The container should be labeled. Generators can purchase pre-printed labels, make their own labels, or write directly on the container as long as the writing is legible and does not smear, even during handling and transport.

The label should include the date that waste was first placed into the container and additional text based on the type of waste in the container:

- **Nicotine waste container** – Use this container to store nicotine cartridges or nicotine devices where the batteries have been removed. This container should be labeled with "Hazardous waste" and "Toxic" and include the date that waste was first added to this container.
- **Lithium battery container** – This container depends on how the generator is managing lithium batteries that have been separated from nicotine devices.
    - **Hazardous waste container** – Use this container to store lithium batteries managed as non-acute hazardous waste. This container should be labeled with "Hazardous waste" and "Ignitable" and include the date that waste was first added to the container.
    - **Universal waste container** – Use this container to store lithium batteries managed as universal waste. The container should be labeled with "Universal Waste – Batteries" and include the date that waste was first added to this container.
- **Lithium battery and nicotine container** – This container should be used for storage of nicotine devices where the nicotine cartridge and battery have not been separated. Nicotine devices that still contain both the nicotine cartridge and lithium battery should be stored separately from separated nicotine cartridges or separated lithium batteries. This container should be labeled with "Hazardous waste" and "Toxic and Ignitable" and include the date that waste was first placed in the container.

Note – These containers should only be used for nicotine devices and not other hazardous waste or regular office waste. If regular office or business waste is disposed of in these containers, it must be considered hazardous waste and could increase the entity's generator category and overall disposal cost.

VSQG Requirements

Generators that fall into the VSQG category do not need to register their waste generation with TCEQ, but must comply with four basic waste management requirements:

- **Monthly Generation** – Do not generate more than 2.2 pounds of acute hazardous waste or 220 pounds of non-acute hazardous waste per month, except for with an episodic waste generation event.
- **Storage** – Do not store more than 2.2 pounds of acute hazardous waste or 2,200 pounds of non-acute hazardous waste on-site at any time, except for with an episodic waste generation event.
    - To stay below the VSQG storage limits, a generator may have to ship waste offsite more frequently, depending on the amounts collected during normal operations.
- **Transportation** – VSQGs may either use a TCEQ-registered hazardous waste transporter, or they may self-transport their own hazardous waste. If a VSQG is transporting its own hazardous waste, certain U.S. Department of Transportation requirements apply. Contact the Industrial and Hazardous Waste Permits Section at ihwper@tceq.texas.gov for more information.
- **Disposal Options** – Send hazardous waste to a TCEQ-authorized disposal or recycling facility. More information about disposal options is presented in the Hazardous Waste Disposal Options section.

Waste Consolidation from VSQGs

VSQGs that are part of a larger organization can consolidate their VSQG hazardous waste at an LQG within their organization. For example, a school district can have their smaller schools send their VSQG wastes to the vehicle maintenance facility if the maintenance facility is registered with TCEQ as an LQG. Or a city law enforcement agency can send their VSQG waste to its city's road maintenance department if it is registered as an LQG. The VSQGs can continue to follow the VSQG requirements and only one facility must meet the LQG requirements.

LQGs can accept unlimited amounts of waste from VSQGs under the control of the same entity, but both the VSQG and LQG must meet certain requirements when performing VSQG consolidation. Learn more about VSQG hazardous waste consolidation on TCEQ's VSQG Hazardous Waste Consolidation webpage[7].

Requirements for VSQGs Sending Waste to an LQG:

- VSQGs must label their containers of hazardous waste with "Hazardous waste" and "Toxic" for nicotine waste, "Ignitable" for lithium battery waste, or with all three terms if the lithium batteries and nicotine have not been separated.
- VSQGs may self-transport their own hazardous waste and do not have to use a TCEQ-registered transporter, but certain U.S. Department of

[7] www.tceq.texas.gov/permitting/registration/ihw/vsqg-lqg-consolidation

Transportation requirements apply. Contact the Industrial and Hazardous Waste Permits Section at ihwper@tceq.texas.gov for more information. The VSQG is responsible for ensuring their waste was received at their associated LQG.

Requirements for LQGs Receiving Consolidated Waste:

- Update their TCEQ solid waste registration to indicate VSQG hazardous waste consolidation, prior to beginning consolidation activity, and create a unique waste code for the VSQG waste.
- Label the hazardous waste container with the date the VSQG waste was received. The LQG must send the VSQG hazardous waste to a TCEQ-authorized recycling or disposal facility within 90 days of the accumulation start date.
- Ship the hazardous waste using a TCEQ-authorized transporter and with a hazardous waste manifest.
- Maintain records, for three years, that identify the name, address, and contact information for the VSQG, and include a description of the hazardous waste, along with quantity and date received.
- Report any VSQG waste on the LQG's annual waste summary.

SQG and LQG Requirements

The requirements for SQG and LQG generators collecting confiscated nicotine devices include:

- **Registering with TCEQ –** SQGs and LQGs must obtain a TCEQ solid waste registration and an EPA ID number (also obtained through TCEQ). Visit TCEQ's Industrial and Hazardous Waste Registration and Reporting webpage[8] for more information and the necessary forms.
- **Storage Timeframes –** SQGs and LQGs have storage timeframes based on when waste was first added to an empty container. The stored waste must be shipped offsite to an authorized facility within these timeframes:
    - **SQGs** – 180 days
    - **LQGs** – 90 days
- **TCEQ Reporting and Fees –** SQGs and LQGs must submit annual waste summaries. More information on annual waste summaries is provided on TCEQ's Industrial and Hazardous Waste Reporting webpage[9]. Additionally, SQGs and LQGs must pay a waste generation fee based on the amount of hazardous waste they generate. The fee is based on their annual waste summary. More information about the hazardous waste generation fee is provided in the *Waste Generation Fee*[10] *(RG-038)* guidance document.

[8] www.tceq.texas.gov/permitting/registration/ihw
[9] www.tceq.texas.gov/permitting/registration/ihw/waste_reporting.html
[10] www.tceq.texas.gov/downloads/permitting/waste-registration/pub/rg-038-waste-generation-fee.pdf

- **Manifests and Transportation Requirements** – SQGs and LQGs must ship hazardous waste using a TCEQ-registered transporter and with a uniform hazardous waste manifest. Texas regulations allow hazardous waste handlers the choice of using paper manifests, electronic manifests (e-manifests), or a hybrid of the two. More information on the uniform hazardous waste manifest is available on TCEQ's Uniform Hazardous Waste Manifest webpage[11].
- **Staff Training and Emergency Procedures** – SQGs and LQGs must develop a pollution prevention plan, designate an on-call emergency coordinator, and coordinate with local emergency responders. See TCEQ's *Guide to Pollution Prevention Planning*[12] (RG-409) for more information. Additionally, SQGs and LQGs must list employee positions related to hazardous waste management, document staff training, and describe training for each designated position.

  LQGs must develop a contingency plan and submit a quick reference guide for their contingency plan to local emergency responders.
- **Record-Keeping Requirements** – SQGs and LQGs must keep records of their monthly waste generation and documentation demonstrating that the waste was sent for disposal at a properly-authorized facility. Additionally, they must maintain documentation that supports their identification of waste as hazardous, and keep this documentation for at least three years after that waste was sent offsite for disposal. LQGs must keep records of personnel training, including descriptions of the training provided and records of the training given to each employee.
- **Disposal Options** – Send hazardous waste to a TCEQ-authorized disposal or recycling facility. More information about disposal options is presented in the Hazardous Waste Disposal Options section.

Hazardous Waste Disposal Options

Hazardous waste must be sent to a TCEQ-authorized hazardous waste management facility. TCEQ maintains a list of commercial hazardous waste disposal facilities[13], however, not all entities on this list can accept nicotine waste. Contact the Industrial and Hazardous Waste Permits Section at ihwper@tceq.texas.gov for a nicotine-specific commercial facilities list.

If your city or county organizes household hazardous waste collection events, check with the contracted entities that manage your city or county's hazardous waste transportation and disposal. A school district or law enforcement agency is NOT considered a "household," but may coordinate and contract with the same transporter and disposal facility.

[11] www.tceq.texas.gov/permitting/registration/ihw/epa_waste_manifest_system.html
[12] www.tceq.texas.gov/downloads/p2/wrpa/rg-409.pdf
[13] www.tceq.texas.gov/goto/commercial-ihw

Universal Waste

Under RCRA, batteries, including lithium batteries, are considered universal waste, and have a streamlined set of requirements for waste management. Universal waste does not impact a generator's category (VSQG, SQG, LQG).

When managing universal waste, generators must:

- Store universal waste for less than a year and keep records that identify the generator's name, address, and contact information, as well as a description of the waste, including the type and quantity of waste and the date it was received.
- Store less than 11,000 pounds of universal waste at any one time.
- Store universal waste in appropriate containers, labeled "Universal Waste – Batteries."

Please contact TCEQ for a list of requirements if you plan to store more than 11,000 pounds of universal waste.

There are several disposal options for universal waste:

1. Send the universal waste to a commercial universal waste handler or destination facility. Contact Industrial and Hazardous Waste Permits at ihwper@tceq.texas.gov for a list of facilities that are authorized to accept universal waste commercially.
2. Search online for entities that accept batteries for recycling, for example, Call2Recycle[14] can help you locate facilities that may take lithium batteries.

Things Not to do with Nicotine Devices

Due to the risks associated with lithium batteries and nicotine, generators should not:

- Pour liquid nicotine down a drain.
- Put nicotine devices, nicotine cartridges, or lithium batteries in the trash or in recycling bins. This poses a significant fire risk and a risk to workers handling the waste.
- Bring nicotine devices to Drug Enforcement Administration take-back days or household hazardous waste collection events. School districts and law enforcement agencies are not considered households and cannot participate in these events.

[14] www.call2recycle.org/

Contact Information

For more information on hazardous waste generation, storage, transportation, and disposal, please contact the Industrial and Hazardous Waste Permits Section at ihwper@tceq.texas.gov or 512-239-2335.