

# Shoptalk

WINTER 2023

**LITHIUM-ION  
BATTERIES**  
ARE CAUSING  
MORE FIRES

**GREAT TIPS**  
ON HOW TO  
PREPARE FOR  
YOUR NEXT  
INSPECTION





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WHAT'S **NEW** WITH  
**DANGEROUS WASTE** TODAY?

# Be ready for your next inspection

CHRISTA COLOUZIS

Imagine, you've just settled in with your coffee and you get an urgent call: "Ecology inspectors are here!" Are you ready to be inspected? If you want to be prepared, this article is for you!

## Labels

Maybe you know the regulations—but did you know that [labeling requirements](#)<sup>1</sup> changed in 2019? Labels must include:

- The words **hazardous waste** or **dangerous waste** in letters ½ inch high or readable from 25 feet.
- The waste's **hazard** (flammable, corrosive, toxic, or reactive).
- The **date** you first put waste into the container, if the container is in a central accumulation area.

Now, don't worry! If you have waste containers 1 gallon or smaller, labels for those should be sized to fit the container. This labeling guidance is required for medium quantity generators and large quantity generators, but optional for small quantity generators. We still encourage everyone to label this way as a best management practice.

## Lids

Another important thing: Keep your waste containers **closed**. And that doesn't mean the lid is just placed on top. The lid needs to be latched or screwed on and bungs need to be screwed in. If your waste containers are closed properly and labeled correctly, you are well on your way to inspection success!



## Records

How did you decide what to put on the waste label? The process you went through to figure out why your waste was hazardous is called [waste designation](#).<sup>2</sup> You need to keep notes about how you decided what waste codes apply. Why? Because inspectors often ask to see those, and not having these records is a violation.

## Lamps, batteries, and ballasts

And finally, if you want to nail your inspection, you've got to manage your universal waste correctly, too. Fluorescent lamps, batteries, and mercury-containing equipment are hazardous wastes unless you manage them as universal waste.

By far, the most mismanaged universal wastes are [fluorescent lamps](#).<sup>3</sup> These must be kept in a **closed** box, labeled with:

- The words **Universal Waste Lamps, Waste Lamps, or Used Lamps**.
- The **date** you first put a lamp into the box.

Try using blue painter's tape to keep partially full boxes closed when you are not adding more lamps. That way they can easily be opened and resealed when you add more lamps.

Here are a couple more pro tips:

- Keep a roll of that blue tape and a sharpie in the universal waste storage area.
- Write **FULL** on full boxes so it is easy to find a box with room.

## Ready for action

So, what should you do if an inspector finds a violation? If you can, fix it right then and there (they love that). These are just some of the most common violations that we find. See Ecology's website for more information about how to [prepare for an inspection](#).<sup>4</sup> ♦

***If your waste containers are closed properly and labeled correctly, you are well on your way to inspection success!***







# Lithium-ion batteries: A hot topic

DEE WILLIAMS & JESSICA FISCHBERG

**Batteries have become a mainstay in our lives, found in everything from electric cars to cell phones, laptops, cordless tools, and the like. That means there are more used batteries than ever before—batteries that need to be safely stored until they can be recycled, not tossed in the trash or mixed with other recyclables.**

## What's the problem?

Over the past few years, we've seen a significant uptick in the number of fires at Washington landfills, metal recycling yards, and retail locations with used battery drop-off services. Why? Relatively new, high-energy lithium-ion batteries are finding their way into the waste stream. Unfortunately, these types of batteries can catch fire or explode when they're damaged or overheated.

A lot of modern electronics use lithium-ion batteries because they're small, rechargeable, store a lot of power, and are generally safe to use. However, their high energy density makes them more likely to experience thermal runaway when damaged or defective, which leads to a fire or explosion. When thrown into garbage or recycling, they're likely to be damaged among the tons of waste and heavy equipment. Fires started by lithium-ion batteries are a huge risk to public health and

the environment, and they cause significant damage to publicly funded infrastructure.

Though lithium-ion batteries are particularly dangerous, all types of batteries have the potential to start fires if the positive and negative terminals are connected by a conductive material (such as metal). This discharges electricity that can start a fire. Nine-volt batteries are especially susceptible to this, because the two terminals are on the same end of the battery, making it easy for them to touch something conductive.

## What can you do?

EPA recently updated its [used lithium-ion batteries guide](#),<sup>5</sup> which offers a thorough overview of rules and common sense practices, such as:

- Never put batteries in the trash or with regular recycled items. Even dead batteries have enough energy left to start fires.
- Manage your batteries as universal waste. [Universal waste](#)<sup>6</sup> is a dangerous waste category that allows all businesses to handle several common types of dangerous waste under simplified rules. If you manage these materials as universal waste, they aren't counted toward your generator category or reported on your Dangerous Waste Annual Report.

- Recycle your used batteries using an approved service. [1-800-Recycle](https://www.1-800-Recycle.com)<sup>7</sup> is both a hotline and an online tool that connects you or your business to recycling services across Washington.
  - o There are mail-in recycling options from places like Battery Solutions, Big Green Box, Call2Recycle, Clean Earth, TerraCycle, and Waste Management. The types of batteries eligible for mail-in recycling vary by vendor.
- o It may be difficult to remove batteries from certain devices such as cell phones and tablets; you might need to recycle the entire device. E-Cycle Washington offers small businesses and residents free recycling of specific electronics, including laptops, tablets, and e-readers that may contain batteries.
  - Prevent electrical discharge in your battery collections.
    - o Place each spent battery in a separate plastic bag or container.
  - o Place non-conductive tape (such as electrical or duct tape) over the battery terminals.
- Place damaged, defective, or recalled batteries in sand or kitty litter. A damaged battery may appear cracked, bloated, puffy, or swollen. You can get kits for disposing of damaged batteries from hazardous waste management companies and battery recycling vendors. ◆



*An example of a fire in a warehouse caused by a lithium-ion battery.*



## PCBs can be found in...



**Duct sealants**



**Asbestos**



**Caulk**



**Light ballasts**



**Paint**

# PCBs in building materials: New guide and cost estimating tool

PAUL BIANCO & AMY LEANG

## Why are PCBs in building materials a problem?

Polychlorinated biphenyls (PCBs) are a group of human-made chemicals that were added to some building materials for most of the twentieth century. They improved material flexibility, adherence, and stability. They were later found to cause harmful health effects and build up in humans and animals.

While EPA banned PCB manufacturing in 1979, PCBs remain in buildings built or renovated before or around this time. They've been found in building materials throughout Washington.

PCB-containing building materials pose health risks and contaminate stormwater, soils, sediments, and indoor air. They can be released into the environment and affect people, particularly when it rains or during demolition and renovation.

## How are we working to address some of these concerns?

We put together a team that's working on a [National Estuary Program-funded project](#)<sup>8</sup> to address the issue of PCBs in building materials. The project acts directly on recommendations from our [PCB Chemical Action Plan](#).<sup>9</sup>

As part of this work, we published a guide and interactive cost estimation tool in October 2022. These can help property owners, contractors, and consultants:

- Identify and characterize PCBs in building materials.
- Abate and properly dispose of PCB sources safely when demolishing and renovating.
- Understand the potential costs associated with these activities.
- Understand the Toxic Substances Control Act (TSCA) and Washington state regulatory requirements.



## Available resources and next steps

These resources are currently available:

- PCBs in building materials: [How to Find and Address PCBs in Building Materials](#).<sup>10</sup>
- Cost estimate tool instructions: [How to Estimate Abatement Project Costs for PCBs in Building Materials](#).<sup>11</sup>
- Cost estimate tool: [PCBs in Building Materials Cost Estimating Excel Spreadsheet](#).<sup>12</sup>

We're working on a few more tools and resources, to be completed this summer:

- Two focus sheets:
  - How to inventory possible PCB-containing building materials for owners.
  - Best management practices (BMPs) for stormwater management around buildings with PCBs.
- A webinar training.
- An interactive webpage.
- A program proposal and next steps Ecology could take to directly address PCBs in building materials.

Find additional information, existing regulations, and tips on our [PCBs in building materials webpage](#).<sup>13</sup>

For more information about Ecology's work on PCBs in building materials, contact Myles Perkins at [myles.perkins@ecy.wa.gov](mailto:myles.perkins@ecy.wa.gov) or 425-457-2514. ◆





# Reporting season is here

SHAWNA GRIFFIN & ASHLEY HILLIS

**Reporting season is here. Dangerous waste annual reports<sup>14</sup> and Tier Two reports are due by March 1.**

## What's new with dangerous waste annual reports this year?

Read our [Dangerous Waste Annual Reporting Guide](#)<sup>15</sup> for more details about all of this year's updates.

### **Full manifest tracking number.**

TurboWaste (the dangerous waste annual reporting tool) now requires the full alphanumeric Uniform Hazardous Waste Manifest tracking number.

**New NAICS codes.** The federal government oversees the North American Industry Classification System ([NAICS](#)<sup>16</sup>), and they update NAICS codes every 5 years.

**Updated code validations.** We updated validation on source codes G22–G24.

## How to get dangerous waste annual report help

Contact the annual reporting team at [turbowaste@ecy.wa.gov](mailto:turbowaste@ecy.wa.gov) or 800-874-2022 if you need help.

- Check out our instructions on [setting up your TurboWaste account](#).<sup>17</sup>
- Manage and view your manifest data by registering for e-Manifest on [EPA's RCRAInfo website](#).<sup>18</sup>

## What's new with Tier Two reports this year?

**New features.** We've made it easier to report your addresses and contacts. Instead of copying and pasting information between sections or entering the information manually, you can just click a button.

- Select the button with the section name you want to copy from, and the information will auto-populate.
- You can also select the clear button and it will delete the information from that section.

**New NAICS codes.** We updated the Tier Two online NAICS code drop-down menu and NAICS code lookup so they reflect the 2022 NAICS code updates.

**Updated instructions.** We updated the instructions you see in Tier Two online. We focused on making them easier to understand to provide a better experience for our users. We welcome your feedback for future updates (send it to [epcra@ecy.wa.gov](mailto:epcra@ecy.wa.gov)).

### **Updated logos and color contrast.**

Tier Two online now shows our current Ecology logo and an improved State Emergency Response Commission (SERC) logo. We also updated the color contrast to make it easier for all users—no matter what spectrum of color they see.

## How to get Tier Two help

For more information, please visit our [Tier Two reporting webpage](#).<sup>19</sup> You can also contact the Tier Two reporting team at [TierTwoOnline@ecy.wa.gov](mailto:TierTwoOnline@ecy.wa.gov) or 800-633-7585, option 1.

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## Protecting your information

To add security, we use SecureAccess Washington (SAW).<sup>20</sup> The Dangerous Waste Annual Report also uses an Electronic Signature Agreement (ESA).

**SAW.** You'll need to create a SAW account if you don't have one already. Once you've logged in, you can add these services to your account:

- Dangerous waste reporters: apply for the TurboWaste service.
- Tier Two reporters: apply for the Tier Two service.

If you have any trouble accessing SAW, please contact SAW's Help Team.<sup>21</sup>

**ESA.** Electronic signatures are required on your Dangerous Waste Annual Report. All authorized representatives must submit an ESA if you're submitting Dangerous Waste Annual Reports and notifications electronically. ◆



# Toxics Release Inventory reports due July 1, 2023

DIANE FOWLER

**NEW for this year: Report four additional PFAS chemicals.**

**NEW for next year: Track twelve additional chemicals.**

**Does your facility file TRI reports annually? If so, read on for important new details.**

## **New PFAS for the 2022 reporting year**

The Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals. The U.S. Environmental Protection Agency (EPA) added [four new types of per- and polyfluoroalkyl substances \(PFAS\)](#)<sup>22</sup> to its list of chemicals covered by TRI for 2022:

CAS Number	Chemical Name
375-73-5	Perfluorobutane sulfonic acid
45187-15-3	Perfluorobutanesulfonate
29420-49-3	Potassium perfluorobutane sulfonate
203743-03-7	2-Propenoic acid, 2-methyl-, hexadecyl ester, polymers with 2-hydroxyethyl

If your business is in a TRI-covered industry, determine if the newly added PFAS are present in the products you manufacture, import, process, or use. If you meet the 100-pound PFAS reporting threshold, you'll need to report these chemicals by July 1. Businesses must complete this chemical inventory as part of the Emergency Planning and Community Right-to-Know Act.

PFAS are a large group of manufactured chemicals that don't break down naturally. Visit our [PFAS webpage](#)<sup>23</sup> for more information.

*Continued on next page.*

## Plan now for the 2023 reporting year

Twelve additional chemicals were [recently added](#)<sup>24</sup> to the list for 2023:

CAS Number	Chemical Name
683-18-1	Dibutyltin dichloride
96-23-1	1,3-Dichloro-2-propanol
75-12-7	Formamide
1222-05-5	1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylcyclopenta[g]-2-benzopyran (HCCB)
111-41-1	N-Hydroxyethylethylenediamine
5064-31-3	Nitrilotriacetic acid trisodium salt
140-66-9	p-(1,1,3,3-Tetramethylbutyl) phenol
87-61-6	1,2,3-Trichlorobenzene
2451-62-9	Triglycidyl isocyanurate
115-96-8	Tris(2-chloroethyl) phosphate
13674-87-8	Tris(1,3-dichloro-2-propyl) phosphate
25155-23-1	Tris(dimethylphenol) phosphate

Prepare now by tracking and collecting data on these twelve chemicals during 2023. Reports for these chemicals are due July 1, 2024.

One of these chemicals, HCCB, is considered persistent, bioaccumulative, and toxic (PBT). It has a 100-pound reporting threshold. The remaining eleven chemicals are reportable if you import, manufacture, or process more than 25,000 pounds or use more than 10,000 pounds.

The National Defense Authorization Act (NDAA) may add new chemicals to the TRI list annually. The [current TRI chemical list](#)<sup>25</sup> contains 856 individual chemicals and 33 chemical categories. This includes 180 unique PFAS chemicals.

Chemicals covered by TRI are those that cause cancer or other chronic human health effects, significant acute human health effects, or significant adverse environmental effects.

Visit EPA's website to learn more about [TRI reporting requirements](#).<sup>26</sup> ◆



SMALL CHANGES, **BIG** RESULTS:  
OPPORTUNITIES AND  
**SUCCESS STORIES**



# Now offering spray painting efficiency training

MEGAN HILLYARD

**Did you know that an efficient spray painting technique reduces costs and toxic air emissions? Take advantage of the virtual reality (VR) training opportunity we're offering to businesses, so you can save money while protecting public health and our environment.**

We're partnering with the [Pollution Prevention Resource Center \(PPRC\)](#)<sup>27</sup> to provide training to qualified businesses at no cost. This half-day training, conducted in a classroom or in a paint shop, includes a hands-on VR simulation to create a realistic learning environment. With VR, you can replicate the real world in a safe setting, which allows you to gain the necessary skills and knowledge without the risk of exposure or further impact to the environment. This training also satisfies EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements for businesses that use paint containing hazardous air pollutants (HAPs).

## What you will learn

In this training, you'll learn how to improve the efficiency of manual spray coating operations. Some of the main training elements include:

- Gun adjustment (to achieve proper air and fluid pressure).
- Equipment maintenance.
- Calibration.
- Spray gun distance and orientation.
- Spray overlap and edge painting techniques.

## Benefits

In addition to the benefits of a VR training environment that increases engagement and learning, there are several health, environmental, and cost benefits associated with this training. Exposure to HAP-containing paints can cause adverse health impacts such as kidney failure and nerve damage. The chemicals in these paints can also increase hazardous air emissions levels and the amount of hazardous waste generated.

Improved spray efficiency can reduce liability and save an industrial facility as much as \$40,000 annually in material usage costs. Even the most experienced painters have shown to improve their efficiency by as much as 25 percent after taking this training!

## Who to contact

Contact Ken Grimm ([kgrimm@pprc.org](mailto:kgrimm@pprc.org)) or Mikey Strauhal ([mstrauhal@pprc.org](mailto:mstrauhal@pprc.org)) to see if your company qualifies for this training. ♦



HELPFUL **GUIDANCE** FOR  
DANGEROUS WASTE GENERATORS



# Featured: The ultimate guide to designating dangerous waste

We just published a new guide called [Dangerous Waste Designation](#)<sup>28</sup> that explains the fundamental principles of the dangerous waste designation process. It includes examples and scenarios to help you practice what you've learned. [Request your printed copy](#)<sup>29</sup> today!



## Guides

- [Dangerous Waste Designation](#)<sup>28</sup>
- [Does my business generate dangerous waste? A guide for small quantity generators](#)<sup>30</sup>
- [Dangerous Waste Annual Reporting Instructions](#)<sup>31</sup>
- [Dangerous Waste Guidance for Pre-Impregnated Resin Composites](#)<sup>32</sup>
- [How to Find and Address PCBs in Building Materials](#)<sup>33</sup>



## Reports

- [Chemicals in Cosmetics Used by Washington Residents](#)<sup>34</sup>



## Fact Sheets

- [Focus on Aerosol Can Management](#)<sup>35</sup>



# IMAGE CREDITS

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# ENDNOTES

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## Accommodation requests

To request an ADA accommodation, contact Ecology at 360-407-6700 or [hwtrpubs@ecy.wa.gov](mailto:hwtrpubs@ecy.wa.gov), or visit [ecology.wa.gov/accessibility](https://ecology.wa.gov/accessibility). For Relay Service or TTY, call 711 or 877-833-6341.