

# Newsletter

Hazardous Materials Program  
Waste Management and Prevention Division  
Department of Environmental Conservation

ISSUE 3  
NOV. 2022



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## Avoiding Hazardous Waste Popsicles

In the last issue of the newsletter, the Hazardous Materials Program (Program) covered the importance of having legible, accurate labels on containers holding hazardous waste, and we discussed some of the revisions to the Vermont Hazardous Waste Management Regulations (VHWMR) as they relate to container labelling. With winter weather now upon us, we want to explore container management a bit further here,

with a particular focus on protecting your hazardous waste containers from freezing.

Many hazardous wastes contain water, and water expands when it freezes. This expansion can compromise a container by causing it to bulge or rupture, and ultimately it can lead to a release. With this in mind, all hazardous waste generators, regardless of their generator category, have an obligation to protect their hazardous waste from freezing. As for container management, handlers should ensure that containers holding hazardous waste must be in good condition and must be stored in a manner that does not subject them to physical damage or degradation due to contact with precipitation. Freezable hazardous waste must be managed in a manner that prevents the contents from freezing. Short term storage areas (STSAs) are required to meet specific design standards, some of which are geared to this end. A STSA may be located outdoors *only if* it is within a structure that sheds rain and snow. Furthermore, hazardous wastes that are subject to freezing and expansion must be stored in a heated space sufficient to prevent freezing. Although not specified in the language of the VHWMR, a general best practice in winter is to be particularly mindful of snow plowing and other weather-related groundskeeping activity around your STSA. Note that the regulations require that spill and fire control equipment are on hand in case of a release.

There are also specific types of waste that generators should be mindful of when it comes to wintertime. Spent antifreeze can be managed as a conditionally exempt waste if it will be recycled or reprocessed for reuse, and if it is stored outside, the container management and storage requirements outlined above should be met. If used antifreeze is *mixed with water*, you must ensure that the container is stored in such a manner to protect the contents from freezing. Used oil also has its own set of management standards. This includes the requirement that any container holding a mixture of used oil, or used oil fuel, and water, must be placed in a structure that protects the container from freezing.



**Above:** freezing and expansion of the drum's contents has caused it to rupture (center), resulting in a release to the environment.

# Are You Generating Hazardous Waste?

If your business generates waste, you may have had questions at some point—like when you started operating, or perhaps when you changed a production process—as to what makes up your waste, and whether it is regulated as hazardous waste. The Program is occasionally contacted by generators asking these exact questions. Through various assistance efforts directed at the regulated community, including this newsletter, guidance documents, and onsite visits, the Program aims for generators to operate in compliance with the VHWMR. Despite any guidance generators receive from regulators, their chemical suppliers, or waste haulers, the responsibility of hazardous waste determination lies *solely* with the generator, and both the generator and handlers they do business with are responsible for properly managing hazardous waste from its point of generation to its final point of disposal. This is often referred to as a “cradle to grave” approach to waste management. In order to stay in compliance with the regulations, generators must be able to accurately identify their waste streams and determine whether they are generating hazardous waste. Aside from the Program’s assistance efforts, sometimes the regulations themselves are changed in order to clarify processes and requirements that generators must follow. Such is the case with revisions to the VHWMR that came into effect in early 2022. Before we cover the regulatory revisions related to the hazardous waste determination process, we first offer a brief summary of the process itself.

**“...the responsibility of hazardous waste determination lies *solely* with the generator...”**



## SUMMARY OF THE DETERMINATION PROCESS

Generators should first confirm when and where the waste in question is being generated. This is referred to as the “point of generation.” The point of generation is the place that waste initially accumulates when it is first determined to be waste, before it undergoes any form of treatment, and it is under control of the operator of the waste-generating process. Once the generator has confirmed the point of generation, they must determine whether the waste is exempt from regulation as hazardous waste. [Subchapter 2](#) of the VHWMR outlines the conditional exemptions (Section 7-203) and recycling exemptions (Section 7-204). In general, both conditional and recycling exemptions require the generator to adhere to waste-specific management standards in order to meet the exemption.

If the waste is not exempt, or if the standards for meeting the exemption are not followed, the generator must determine whether the waste meets any of the descriptions of the “listed” hazardous wastes found in Section 7-209. This determination is made by “using generator knowledge”—a concept that has been clarified in the revised VHWMR and will be discussed later in this article. Broadly speaking, the listed wastes include: wastes from non-specific sources (F list), including various solvents (e.g., spent acetone has the waste code F003); wastes from specific sources (K list), such as distillation bottoms from aniline production (waste code K083); acutely hazardous wastes (P list); hazardous wastes which are discarded commercial chemical products (U list); and Vermont listed hazardous wastes (VT list), sometimes referred to as “non-federal” wastes in Vermont.

In addition to the generator considering listed wastes, they should use generator knowledge or, if knowledge is inadequate, testing, to determine whether the waste exhibits any hazardous waste characteristics.

Characteristic hazardous wastes are assigned a “D” waste code that is specific to the characteristic: ignitability (D001), corrosivity (D002), reactivity (D003), toxicity (D004 through D043, depending on the toxic constituent(s)). If the waste is determined to be a listed and/or characteristic hazardous waste, the generator must follow the regulatory requirements found in the VHWMR for managing it as such. The generator must also follow the record-keeping requirements associated with hazardous waste determination that are established in Subchapter 2.

## Steps for Making a Hazardous Waste Determination

1. Determine the point of generation.
2. Determine whether the waste is exempt from regulation as hazardous waste.
3. If not exempt, determine whether the waste meets any of the descriptions of the listed hazardous wastes.
4. Determine whether the waste exhibits any hazardous waste characteristics.
5. If the waste is determined to be hazardous waste, follow the regulatory requirements.

available for all materials used in the process or that otherwise contribute to the waste. Such information may be provided on labels or Safety Data Sheets (SDSs). Generators should be aware, however, that this information only represents raw materials and may not accurately represent what will end up in your waste. This is especially relevant when it comes to determining if the regulatory level for a toxicity characteristic constituent is exceeded. In using generator knowledge to determine whether waste meets a hazardous waste listing or exhibits hazardous waste characteristics, generators must be able to demonstrate the basis for their claim. Generator knowledge may relate to waste origin or composition, the production process, feedstocks, intermediates, by-products, chemical or physical properties of the chemicals used, and/or testing that illustrates properties of the waste. Generators should know that not all products that are marketed as environmentally friendly are non-hazardous. Whenever there is any doubt, it is a best practice to perform analytical testing.

Another change to the VHWMR relates to record-keeping. All generators, regardless of their notification category, are now required to maintain records of their waste determinations. Records must identify the waste and whether it is hazardous or non-hazardous. Further, records must support the generator’s determination; if any testing or sampling was done, the results should be retained with the records. For example, if a generator sends their waste to a lab to test it for ignitability, and they determine that their waste is ignitable based on the results of the test, they should retain that information to support their hazardous waste determination. Being able to substantiate that a waste is non-hazardous, if that is what a generator has determined, is just as important as being able to show that it is hazardous, as the determination will likely inform the approach to handling the waste. Records must be maintained for at least three years after the hazardous waste is sent to a treatment, storage, or disposal facility (TSDF). Very small quantity generators (VSQGs) that send hazardous waste to a solid waste

## RELEVANT CHANGES TO THE VHWMR

Generators should note that revisions to the VHWMR have further clarified what it means to “use generator knowledge” in making a waste determination. In order to use generator knowledge, sufficient information regarding the process that generates the waste must be

district must also meet the three-year requirement. If a business is generating the waste on an ongoing basis, and therefore shipping it offsite on a recurring basis, this means they should maintain their determination records on an ongoing basis.

**“All generators, regardless of their notification category, are now required to maintain records of their waste determinations.”**

For additional information on this topic, please refer to the fact sheet noted at the end of this issue. You may also contact the Program directly with any questions.

## Keep an Eye Out

### TOXIC USE AND HAZARDOUS WASTE REDUCTION (TUHWR) PLANNING

Businesses that are required to participate in TUHWR (formerly referred to as Pollution Prevention or “P2”) planning should know that the next three-year planning cycle begins July 1, 2023. Please be aware that the planning process will be undergoing some changes leading up to this date, particularly regarding the forms that planners are required to submit (e.g., planning worksheets, annual progress reports). We will broadly communicate the specific changes, as well as the general aspects of the planning process, in the near future. For now, if you are interested in TUHWR planning, are unsure of whether you are required to plan, or simply want to learn more, please visit the Program’s [TUHWR webpage](#).



### FEE PAYMENTS

Please be aware that in May of 2021, the Agency of Natural Resources (ANR) began transitioning to electronic payments for required fees. The move to require electronic payments is expected to save the state time and resources, increase data accuracy, and improve compliance. Starting in April of 2023, the Hazardous Materials Program will no longer be accepting payments in the form of paper checks; paper checks received by the Program will not be processed and will be returned to the sender. This electronic payment requirement applies to annual Hazardous Waste Generator Registration Fees, permit modification fees, and TUHWR fees. Those that cannot comply with this new online payment requirement may request a waiver that will allow continued use of paper checks. However, waivers will only be issued to payers that meet specific criteria. We will share additional information about these changes over the course of the next several months.

## New Guidance Resources

The Program continues to update the [Resources for Hazardous Waste Handlers](#) webpage to keep information consistent with revisions to the VHWMR that came into effect in February 2022. There are many existing resources that require changes, as well as several new topics to cover, so the webpage will continue to be populated as new information becomes available. Below are the resources that have been posted on our website since the last issue of the Newsletter was distributed in August. Please visit the webpage for the exhaustive list:



## GUIDEBOOKS

**SQG Guidebook and Self-Evaluation Checklist:** replaces the previous version of the Hazardous Waste Self-Evaluation Guidebook for Vermont Small Quantity Generators and is intended to provide general guidance to assist small quantity generators (SQGs) in maintaining compliance with the VHWMR. The guidebook includes a self-evaluation checklist along with instructions and explanations.



## FACT SHEETS

**Conditional Exemptions:** provides an overview of wastes that are exempt from regulation as hazardous waste if specific management requirements are met.

**Contaminated Wipes:** explains the criteria that reusable wipes must meet in order to be exempt from regulation as hazardous waste and provides an overview of the process for managing them under the conditional exemption.

**Making a Hazardous Waste Determination:** outlines the process for evaluating whether a waste is regulated as a hazardous waste under the VHWMR.

**Managing Aerosol Cans as Universal Waste:** defines what constitutes an aerosol can and explains the requirements for managing waste aerosol cans as universal waste.

**Recycling Exemptions:** provides an overview of wastes that are exempt from regulation as hazardous waste if they are recycled and specific management requirements are met.



## WEBINAR

The Program held a webinar on August 11, titled, "An Overview of Recent Changes to the VHWMR." Speakers discussed changes to the regulations with a particular focus on hazardous waste identification; generator category determination; management standards for generator categories; and alternative management standards associated with conditional exemptions, episodic events, and universal waste. If you are a hazardous waste generator in Vermont, a hazardous waste handler, or are simply interested in learning more about the VHWMR, you are encouraged to access the [Webinar Recording](#) and the [Presentation Slides](#).

FOR MORE INFORMATION PLEASE CONTACT:

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