

# **Transcript of “Overview of Hazardous Waste Compliance at Healthcare Facilities”**

## Slide 1 - Introduction

Hello, and welcome to an overview of hazardous waste compliance at healthcare facilities. My name is Jennifer Strause, I am a hazardous waste specialist with the Montana Department of Environmental Quality, and I will be your guide through this presentation. The contact information for my office is listed on the last slide and you are welcome to contact our team at any time with your questions. For the purposes of this presentation, healthcare facilities include hospitals, pharmacies, and any other places that distribute or dispense prescription or over-the-counter pharmaceuticals.

## Slide 2 - Overview

During this presentation, we will talk about different types of hazardous waste, some of the common hazardous wastes found at healthcare facilities, basic management of hazardous waste, and what we look for during a hazardous waste inspection. We also have resources and contact information for you to find out more about hazardous waste.

## Slide 3 – Do I have hazardous wastes?

All businesses, industries, households, medical offices, government entities, and schools generate waste. But how do you know if it is hazardous waste? In the next few slides, we will talk about different types of waste and which ones are considered to be hazardous waste.

## Slide 4 – All Waste Generators MUST...

The first thing to know about hazardous waste is that all entities that generate waste are responsible for determining if the waste that they generate is considered hazardous waste, regardless of how much they generate. Hazardous waste determinations can be made either by using knowledge of the components and processes that generate the waste or through laboratory testing. Waste generators are also responsible for ensuring proper disposal of all wastes, both hazardous and non-hazardous.

## Slide 5 – Hazardous Waste is NOT...

The term hazardous waste brings to mind lots of things. But what is considered a hazardous waste by the US EPA and Montana DEQ is very specifically defined in the regulations. Let’s start with what is NOT considered a hazardous waste. Radiological wastes are governed by the US Department of Energy and are not considered hazardous wastes. Biological wastes, including red bag medical waste, are not considered hazardous wastes. Wastes generated in a home, while they may be hazardous, are not regulated under the hazardous waste regulations. Most items that will be recycled are exempt from hazardous waste regulations. Asbestos is regulated by the Toxic Substances Control Act and is not subject to hazardous waste regulations. In addition, hazardous

wastes are not the same as DOT hazardous materials or OSHA hazardous chemicals, though there is overlap with both of those regulatory programs.

#### Slide 6 – Hazardous Waste IS...

Next, let's talk about what IS hazardous waste. Hazardous wastes are regulated under the federal Resource Conservation and Recovery Act, also known as RCRA. In Montana, we incorporate the federal rules by reference and have very few state-specific rules. Any time in this presentation that you see the acronym CFR, it is referring to the code of federal regulations. Environmental regulations are found in Title 40 of the CFR. Hazardous wastes are very specifically defined in 40 CFR 261.3. To be a hazardous waste, a waste has to be considered a solid waste. The term solid waste does not refer to the physical state of the waste, but rather how the waste will be disposed. Wastes that will be discharged to a sanitary sewer are not solid wastes. All other wastes are considered solid waste. Hazardous wastes are either specifically listed in the regulations or have specific characteristics that make them hazardous. I will talk more in depth on listed and characteristic wastes in a little bit. There are several exemptions and exclusions to the hazardous waste regulations. Excluded wastes are those that are excluded from being considered solid wastes. This includes household hazardous wastes and industrial discharges to regulated sanitary sewer systems. These systems, and their discharges, are permitted under the Clean Water Act. Exempt wastes are wastes that are considered a solid waste, but have special rules that exempt them from following the same regulations. These included some scrap metals, used oil, and universal wastes, which we will discuss next.

#### Slide 7 – Used Oil

Does your site have grounds maintenance? Do they have lawn mowers or snow blowers that are maintained on-site? Then you may have used oil. Used oil is just as it sounds...it is an oil, cutting oil, hydraulic fluid, and similar products that have been used for their lubrication properties and are now contaminated and must be disposed. The term used oil does not apply to animal or vegetable products or antifreeze. Used oil must be stored in containers labeled with the words "used oil" and must be disposed of properly, usually with a commercial used oil recycler.

#### Slide 8 – Universal Waste

Universal Wastes are those wastes that are common across all types of businesses. They are generally considered to be less hazardous than other hazardous wastes and are granted some relief from regulations. Items considered universal wastes are spent fluorescent and halide lamps, used batteries such as ni-cad, nickel metal hydride, and lithium batteries, full or empty aerosol cans, recalled pesticides, and used mercury equipment including thermometers and thermostats. Universal wastes must be stored in closed containers that are labeled as universal waste and with an accumulation start date. Universal waste must be properly disposed of within one year of the accumulation start date.

### Slide 9 – Listed Waste

Now that we have talked about excluded and exempt wastes, next we will discuss listed and characteristic wastes. Listed wastes are those that are specifically listed in the regulations and are considered hazardous regardless of concentration or what characteristics they may exhibit at the time they are generated. All hazardous wastes can be summarized by a waste code. These codes consist of a letter followed by three numbers. The waste code letter corresponds to the list on which it can be found. Wastes that are on the F list are common wastes from a variety of industries. These include spent solvents and electroplating wastes. Wastes on the K list are wastes from specific industries such as oil refining. Generally, K wastes are not found in healthcare facilities. Wastes on the U list are discarded unused chemicals such as acetone or formaldehyde. There are 472 materials on the U-list and about 65 of them are commonly handled in healthcare facilities. P-listed wastes are those that are acutely hazardous to humans or the environment and include warfarin and arsenic compounds. The P-list contains 239 acutely toxic substances and about 15 of those may be expected to be found in a healthcare facility.

### Slide 10 – Characteristic Wastes

Next, we will talk about characteristic hazardous wastes. Characteristic hazardous waste are considered hazardous because they exhibit certain characteristics rather than being specifically defined on a list. Characteristic wastes have a waste code that starts with the letter D. Sometimes information is available to determine if a waste meets these criteria and other times a laboratory test is needed. A list of testing laboratories can be found on our website.

Ignitable wastes are liquids with a flash point of 140 degrees Fahrenheit or less and ignitable compressed gasses. These include things such as 70% rubbing alcohol and propane.

Corrosive hazardous wastes have a pH of 2 or less or 12.5 or more. These include hydrochloric acid and some concentrations of bleach.

Reactive hazardous wastes are those that react violently to heat, pressure, friction, or when exposed to air or water. These include sodium metal and picric acid.

Hazardous wastes that exhibit the toxicity characteristic must contain one or more of 39 contaminants at specific concentrations. For example, a waste that contains 5 ppm or more of arsenic or 0.2 ppm or more of mercury would be considered a toxic hazardous waste.

### Slide 11 – Common Hazardous Wastes at Healthcare Facilities

There are many potential wastes from healthcare facilities that may be considered hazardous wastes. Some are listed wastes and can include hazardous waste pharmaceuticals such as warfarin or solvents used in a laboratory such as both used and unused xylene. Some are characteristic wastes such as alcohol-based hand sanitizers that have passed their expiration date or silver nitrate which contains greater than 5 ppm of silver and is considered a toxic hazardous

waste. It is important to evaluate all the wastes that are generated to determine which are hazardous wastes.

#### Slide 12 – Pharmaceuticals “Subpart P”

In May of 2022, Montana DEQ adopted new federal rules governing the management of waste pharmaceuticals. These regulations can be found at 40 CFR 266 and are also known as Subpart P. Subpart P allows healthcare facilities to skip individual waste codes for hazardous waste pharmaceuticals and manage and ship all hazardous waste pharmaceuticals together. Hazardous waste pharmaceuticals must be stored in closed containers and labeled with an accumulation start date and the words “hazardous waste pharmaceuticals”. Healthcare facilities have one year to properly dispose of the waste. Healthcare facilities that wish to manage their waste pharmaceuticals under Subpart P must notify the DEQ Hazardous Waste Program.

#### Slide 13 – So, I have hazardous waste...now what?

So you’ve made your waste determinations and found that you have hazardous wastes, now what do you do? The next set of slides will cover how to count, store, and label those wastes to stay in compliance with hazardous waste regulations.

#### Slide 14 – Categories of HW Generators

Once you have determined which of the wastes you are generating are hazardous wastes, it is important to then track how much you are generating in a calendar month. This amount will determine your generator category. For review, used oil, universal waste, and hazardous waste pharmaceuticals managed under Subpart P do not need to be included in your monthly totals.

Large quantity generators generate 2,200 pounds of hazardous waste or more per month.

Small quantity generators generate between 220 and 2,200 pounds of hazardous waste per month.

Very small quantity generators generate less than 220 pounds per month. For a frame of reference, 220 pounds is about 27 gallons of water. So if you are generating more than about half of a 55-gallon drum of liquid waste per month, you are probably no longer a very small quantity generator.

For acute hazardous wastes, those wastes on the p-list, a site that generates or accumulates 2.2 pounds or more per month is a large quantity generator. Small and Large quantity generators must register for an EPA ID number with the Montana DEQ Hazardous Waste Program and have specific time limits to remove hazardous waste from their sites. We will cover more requirements in the next few slides.

### Slide 15 – Hazardous Waste Storage

The following waste storage and labeling rules are required for small and large quantity generators. For very small quantity generators they are considered best management practices and are strongly encouraged. Hazardous wastes and hazardous waste pharmaceuticals must be stored in containers that are in good condition and compatible with the waste that is being stored. In addition, the lid must be securely closed unless waste is actively being added or removed. Both photos shown are from hospital pharmacies in Montana. As you can see, it can sometimes be a challenge to have staff remember to close containers and you can use signage or devices to help keep your containers closed. Open containers of hazardous wastes will be considered a violation during an inspection.

### Slide 16 – Hazardous Waste Labeling

Hazardous waste is generally stored either in a satellite accumulation area or in a central accumulation area. Satellite accumulation areas must be at or near the point of generation and have 55 gallons of waste or less. Common examples of these are hazardous waste pharmaceutical containers in a pharmacy or in a medical unit or small spent solvent containers in a laboratory. Central accumulation areas are generally where full waste containers from satellite accumulation areas are stored until waste is picked up for disposal. Containers in both of these areas must be labeled with the words “hazardous waste” and with an indication of the hazards posed by the waste. This can be a written word such as “Ignitable” or “Corrosive” or you may use a nationally recognized label such as a DOT warning label, an OSHA GHS compliant label, or an NFPA hazard label. In addition, containers of hazardous waste in a central accumulation area must be labeled with an accumulation start date. Containers in satellite accumulation areas can accumulate until the container is full but care should be taken that the container remains in good condition. As a reminder, hazardous waste pharmaceuticals managed under Subpart P must be disposed within one year of starting to accumulate, regardless of how full the container is or whether it is in a satellite or central accumulation area.

### Slide 17 – What we look for during an inspection...

Montana DEQ has two hazardous waste specialists dedicated to inspecting facilities that generate hazardous waste. We inspect all types and sizes of hazardous waste generators, from refineries, to hospitals, to military installations, to retailers, and any other site that generates hazardous waste, universal waste, or used oil. So, what do we look at when we arrive a site for an inspection? First, for all generators, we make sure an accurate hazardous waste determination has been made on the waste generated at the facility and that the waste is being disposed of properly. The next things we look at are required for large and small quantity generators and recommended for very small quantity generators. There are three big considerations for containers of hazardous waste... Is it in good condition, is it securely closed, and is it properly labeled. Labels must include proper wording for the type of waste, either hazardous waste, hazardous waste pharmaceuticals, universal waste, or used oil. Also, for most wastes, an accumulation start date is needed. We also

make sure people have been trained and that an emergency plan is in place. This list is just a brief summary of things we look for and are some of the things that are often missed. Contact our office if you would like more information on what we look for during an inspection.

#### Slide 18 - Resources

A great deal of information is available online regarding hazardous waste management. A great place to start is the Montana DEQ website at [deq.mt.gov](http://deq.mt.gov) where we have lists of laboratories and waste transporters, summaries of the regulations, and registration forms. You can also sign up to be on the distribution list for the hazardous waste program's semi-annual newsletter. Another excellent resource for healthcare facilities is [hercenter.org](http://hercenter.org). This is the Healthcare Environmental Resource Center which provides a comprehensive resource for hazardous waste compliance in the healthcare sector.

#### Slide 19 – Connect with us!

Montana DEQ can be found on Facebook, Twitter, Instagram, and YouTube. If you have more questions about hazardous waste, you are welcome to call or email me any time. You may also reach out to the whole hazardous waste program at any time by phone or email, we are always happy to answer your questions. Thanks for joining me for this presentation!