

## Q & A



### **What is Mixed Waste?**

Mixed Waste is an unwanted chemical material that contains both NRC-regulated radioactive and EPA-regulated hazardous components.

### **When is something radioactive?**

When the material emits radiant energy by the disintegration of atomic nuclei, it is considered to be radioactive. 'Radioactive material' is defined by the NRC as a source, special nuclear, or byproduct material subject to the Atomic Energy Act.

### **When is something an "EPA-regulated hazardous" material?**

According to the EPA, an unwanted material is regulated if it is one that is specifically listed in their tables or exhibits a characteristic of ignitability, corrosivity, reactivity, and/or toxicity as defined in the regulations.

### **How am I supposed to know which chemicals are on that EPA list or have those characteristics?**

That's our job. We just ask that you list all the chemical components and their percentages in your solutions. This information allows us to determine if the material is a Mixed Waste. It also provides us the information required to ship the material off campus for proper disposal.



Environmental Health and Safety  
8 Research Park Development Building  
Columbia, MO 65211-3050  
(573) 882-7018  
ehs@missouri.edu  
<http://ehs.missouri.edu>

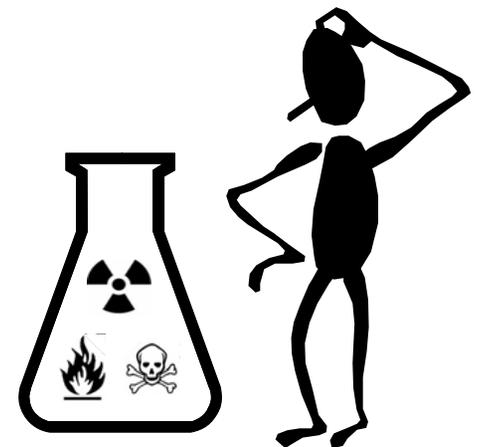
 University of Missouri – Columbia

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# MIXED WASTE

## Information About Your Radioactive And Hazardous Unwanted Materials



# Why is MU so concerned about Mixed Waste?

## Cost

Disposing of Mixed Waste is very expensive. Based on recent shipments, the cost to dispose of Mixed Waste exceeds \$200 per gallon. This makes Mixed Waste more than 100 times more expensive to dispose than radioactive-only or hazardous-only.



## Time and Regulations

Mixed Waste comprises less than 1% of the unwanted materials handled on campus. Although small in amount, Mixed Waste is scrutinized by both the EPA and NRC.



The time, energy, and paperwork devoted to Mixed Waste are tripled compared with the other materials handled by EHS.

# How is Mixed Waste Handled?

## Regulations

Mixed Waste is regulated by both the EPA and the NRC.

MU is regulated by the EPA as a Large Quantity Generator, one of the most stringent levels in their system. We also have a broad-scope license from the NRC to handle radioisotopes.

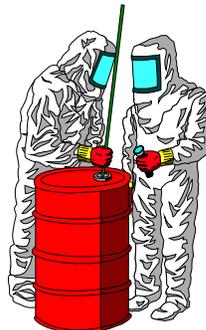
With work involving both hazardous and radioactive materials, the campus is frequently inspected by both agencies for compliance.



## Disposal

After we collect your Mixed Waste, the material is stored for up to 90 days at the Resource Recovery Center (RRC).

Before the 90 day limit, your material is packaged, profiled, and then shipped to a responsible vendor for proper disposal.



# Minimization

## What can one person do?

Minimize the amount of Mixed Waste that comes out of your work area. There are several ways of doing this.

- Avoid procedures that cause a mixed waste to be produced.
- Do not add radioactive-only or hazardous-only to the Mixed Waste already produced. We'll provide the containers and make extra pickups for your other materials.
- Change your protocol. Can you use another process where the hazardous component can be substituted for one that is not "hazardous"? Using biodegradable instead of solvent-based scintillation fluid has significantly decreased the amount of Mixed Waste generated on campus.
- Get new equipment! If there is a process or device to minimize your Mixed Waste, you could get financial assistance from MU's Hazardous Waste Minimization program.

Contact EHS! We'll be happy to consult with you about your specific Mixed Waste issues.

