

Hazardous Waste

The Resource Conservation and Recovery Act (RCRA) of 1976, which amended the Solid Waste Disposal Act, was the first major effort by Congress to establish a regulatory structure for the management of solid and hazardous wastes. RCRA Subtitle C set up a “cradle-to-grave” system for hazardous waste. Hazardous waste is tracked from the time it’s created (“cradle”) until it’s recycled, treated or disposed (“grave”). RCRA Subtitle D contains less restrictive requirements for non-hazardous solid waste.

The Hazardous and Solid Waste Amendments (HSWA) of 1984 established additional waste management requirements and added RCRA Subtitle I. This amendment required the phasing out of land disposal of untreated hazardous waste and imposed management requirements for underground storage tanks (USTs) that contain petroleum or hazardous substances. It outlined tougher hazardous waste management standards and increased EPA’s enforcement authority. The amendment also included details for corrective action (cleanup) of any hazardous waste releases at hazardous waste facilities. RCRA focuses only on active and future facilities. It does not generally address abandoned or uncontrolled hazardous waste sites.

Sites that have been contaminated with hazardous substances may also be subject to requirements under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly known as Superfund. CERCLA created a federal Trust Fund through a tax on the chemical and petroleum industries. This Trust Fund or “Superfund” was to be used to clean up uncontrolled or abandoned hazardous substances sites when potentially responsible parties could not be identified or located or were unwilling to clean up.

EPA has delegated authority to the Missouri Department of Natural Resources (department) to enforce most of the RCRA requirements in Missouri. The department’s Hazardous Waste Program (HWP) is responsible for monitoring and controlling the generation, handling, storage, treatment and disposal of hazardous wastes in Missouri. They administer programs created by the following federal laws found in the Code of Federal Regulations (CFR):

- RCRA Subtitle C, 40 CFR Part 260 through 40 CFR Part 272,
- CERCLA, 40 CFR Part 300,
- Underground Storage Tanks, 40 CFR Part 280 through 40 CFR Part 282,
- Universal Waste Rule, 40 CFR Part 273 and
- Used Oil Regulations, 40 CFR Part 279.

The *Missouri Hazardous Waste Management Law* (Chapter 260 of the *Missouri Revised Statutes (RSMo)*) and the *Underground Storage Tank Law* (Chapter 319 RSMo) combine those RCRA requirements with other requirements that Missouri has added. These laws address the issues of registration, hazardous waste management, cleanup of hazardous waste and hazardous substance releases, management and removal of petroleum storage tanks, and cleanup of leaking petroleum storage tanks. The program’s responsibilities are recorded in the following state laws found in the Code of State Regulations (CSR):

- Hazardous Waste Management, 10 CSR 25,
- Underground Storage Tanks, 10 CSR 20,
- Universal Waste, 10 CSR 25-16.273,
- Used Oil, 10 CSR 25-11.279 and

- Dry Cleaning Environmental Response Trust (DERT) Fund, 10 CSR 25-17.010 through 10 CSR 25-17.170.

Definition of hazardous waste

For a hazardous material to be regulated as a hazardous waste, it must first fall under the regulatory definition of a solid waste. The definition of a solid waste is based on the fact that the material is a waste, not that it is a solid rather than a liquid or gas. With that in mind, solid waste includes the following materials:

- Materials that are thrown away
- Materials that are recycled
- Materials that are naturally waste-like
- Waste military weapons and ammunition

A hazardous waste is any solid waste that is flammable, corrosive, reactive (e.g., explosive), toxic or is listed (identified) as a hazardous waste in state or federal law. Listed hazardous wastes can be found in 40 CFR Part 261 and 10 CSR 25-4.261(2)(D). Examples of hazardous waste include used solvents, cleaning fluids, electroplating chemicals, oil-refining sludge, banned pesticides and chemicals that can no longer be used.

Permits

An **Aboveground Storage Tank (AST)** includes any tank and connecting pipes that are 90 percent or more above ground surface and contains a petroleum product designated for sale. For more information on the regulation and inspections of ASTs, contact the Missouri Department of Agriculture, Weights and Measures Division, Petroleum Inspection Program at (573) 751-5636.

Dry Cleaning Environmental Response Trust (DERT) Fund Annual Registration is required for any commercial dry cleaning operation that uses chlorinated solvents to clean garments. This also includes coin-operated dry cleaning facilities. Dry cleaning facilities located in prisons, governmental entities, hotels, motels and industrial laundry facilities are excluded from these rules. Facilities that use non-chlorinated solvents are also exempt from these rules.

Operators of an active dry cleaning facility are required to register with department, as outlined in Section 260.915, RSMo. Each active dry cleaning facility is required to pay an annual registration surcharge based on the number of gallons of chlorinated solvents used during the calendar year. Dry cleaning facility categories and the subsequent registration surcharges are listed below:

Size of Dry Cleaner	Gallons of Chlorinated Solvent Used	Annual Registration Fee
Small	0 to 140	\$500
Medium	141 to 360	\$1,000
Large	>360	\$1,500

The annual registration surcharge is due on April 1 of each calendar year. Failure to pay this fee within 30 days will result in a penalty of 15 percent of the facility registration surcharge and interest on the unpaid amount at the rate of ten percent per annum.

A Missouri **Hazardous Waste Facility Permit**, also known as a hazardous waste permit, is required for Missouri hazardous waste treatment, storage or disposal (TSD) facilities. These facilities are specially designed to handle, treat or otherwise dispose of hazardous wastes.

Businesses that produce or store a certain amount of hazardous wastes are required to complete a **Hazardous Waste Generator Registration**. There are three waste generator categories, depending on the amount of hazardous waste generated or stored:

Large Quantity Generator (LQG)

- Generates more than 1 kg (2.2 lbs.) of acutely hazardous waste in one calendar month or
- Generates 1,000 kg (2,200 lbs.) or more of hazardous waste in one calendar month

Small Quantity Generator (SQG)

- Generates less than 1 kg (2.2 lbs.) of acutely hazardous waste in one calendar month and
- Generates between 100 kg (220 lbs.) and 1,000 kg (2,200 lbs.) of hazardous waste in one calendar month or
- Accumulates more than 100 kg (220 lbs.) of hazardous waste before shipping it off-site

Conditionally Exempt Small Quantity Generator (CESQG)

- Generates 100 kg (220 lbs.) or less of hazardous waste in one calendar month and
- Generates less than 1 kg (2.2 lbs.) of acutely hazardous waste in one calendar month

It is impossible to list every type of business that produces hazardous waste. Businesses likely to produce hazardous waste include automobile repair shops, printers, dry cleaning and laundry facilities, photo processors, furniture manufacturers and refinishers, pest control services and road and building construction companies. Businesses should refer to the appropriate state and federal laws and regulations and should request the fact sheet, *Does Your Business Generate Hazardous Waste?* (Pub117) is available online at <http://www.dnr.mo.gov/pubs/pub117.pdf>.

A Hazardous Waste Resource Recovery Certification is for activities where hazardous waste is recycled, reused or reclaimed. Hazardous waste is reused if it can be used as a substitute for another chemical. Reclaiming a hazardous waste involves processing it to recover a usable product. A number of hazardous wastes, such as solvents, can be filtered to make them pure again.

A facility is required to notify the department if they recover less than 2,200 pounds of hazardous waste in a month. A facility is required to get a Resource Recovery Certificate if they process 2,200 pounds or more of their own hazardous waste in a month or if the recovery is done by a second company at the first company's facility (in which case the mobile service needs to have the certificate). A facility will normally need to get a Resource Recovery

Certificate, a hazardous waste permit, or both if they want to process any hazardous waste from off-site.

Resource Recovery Certification is not required by the federal government. Missouri requires Resource Recovery facilities to meet certain financial assurance and operational standards beyond the federal law.

Those transporting hazardous waste must get a **Hazardous Waste Transporter License**. This license can be obtained through the Missouri Department of Transportation, Motor Carrier Services at (573) 751-3358.

Persons that want to accept waste or waste manufactured items that contain PCB's (Polychlorinated Biphenyls), such as capacitor or transformers, in order to commercially broker, treat or dispose of PCB's in Missouri must get a **PCB (Polychlorinated Biphenyl) Facility Permit**. The persons involved will also have to meet Toxic Substance Control Act (TSCA) requirements, possibly including getting a separate permit from EPA. PCB Facility Permits list similar requirements to what is found in a Hazardous Waste Management Facility Permit. The Missouri PCB facility permit requirements are found in 10 CSR 25-13, and are largely based on the standards found in 40 CFR Parts 264, 270 and 761.

Facilities that only store PCB's are not required to be permitted. However, all PCB storage areas must be registered with EPA for manifest reasons.

Underground Storage Tank Registration is for any underground storage tank (UST) including any tank and piping system that is 10 percent or more covered with soil and contains petroleum or a hazardous product listed in CERCLA. Petroleum is defined as gasoline, kerosene, diesel, lubricants, E85, E10 and fuel oil. Any tank smaller than 110 gallons, farm or residential tanks smaller than 1,100 gallons holding motor fuel used for noncommercial purposes, emergency spill and overfill tanks, flow-through process tanks, septic tanks and systems for collecting storm water and wastewater and any heating oil tanks for on-site use are excluded from the UST definition.

The tank owner must register their USTs with the department within 30 days of bringing them into use. The department requires a 30-day advance notice of installation. Systems out of service before 1974 are exempt from the registration requirement. Both the owner and operator are responsible for all other aspects of the UST rules:

- keeping records of corrosion protection,
- repairs,
- monthly leak detection,
- site assessments,
- financial responsibility and
- reporting all releases, including suspected releases, spills, overfills and confirmed releases within 24 hours. Petroleum spills of less than 25 gallons do not have to be reported if cleaned up immediately.

New UST systems (new tanks and piping) must meet the technical requirements for corrosion protection, spill and overfill prevention, leak detection and certification of proper installation. All existing UST systems should have been upgraded by December 1998. Upgrades consist of lining and/or cathodically protecting the tank, adding spill and overfill preventers to the tank and cathodically protecting the piping.

Because of the potential for a spill or release from their tanks, owners must show that they have resources set aside to pay for soil and ground water cleanup, third-party property cleanup and third-party bodily injury. Participation in the Missouri Petroleum Storage Tank Insurance Fund (PSTIF) is one way of meeting this requirement.

The **Universal Waste Rule** was designed to give generators of certain types of hazardous wastes an option to manage those wastes under less stringent Universal Waste Rule requirements rather than by the more stringent existing hazardous waste regulations. Universal wastes are hazardous wastes, but not all hazardous wastes can be universal wastes. In general, to qualify as a universal waste a hazardous waste must be widespread, commonly found in medium to large volumes, exhibit only low-level hazards or be easily managed.

Universal wastes in Missouri's rule include the following items:

- Batteries such as nickelcadmium (Ni-Cd) and small sealed lead-acid batteries
- Pesticides that are collected and managed as part of a waste pesticide collection program
- Thermostats, mercury switches and mercury containing thermometers and manometers
- Mercury containing lamps

Most businesses generate universal waste. Anyone who wants to manage one or more of the universal wastes under the Universal Waste Rule must determine his or her handler status. The handler counts only those wastes that will be managed as universal wastes. All other hazardous wastes are calculated separately and determine the "hazardous waste generator status" of the business. There are two universal waste handler categories, depending on the amount of universal waste accumulated:

- Large Quantity Handler (LQH) - Accumulates 5,000 kg (11,000 lbs.) or more of universal waste at any time.
- Small Quantity Handler (SQH) - Accumulates less than 5,000 kg (11,000 lbs.) of universal waste at any time.

Small quantity handlers generating only universal wastes that they manage under this rule do not need to register or obtain an EPA identification number. Large quantity handlers must register and obtain an EPA identification number if a number has not previously been obtained. Businesses should refer to the appropriate state and federal laws and regulations and should request the technical bulletin, *Universal Waste Rule in Missouri* (Pub2058) is available online at <http://www.dnr.mo.gov/pubs/pub2058.pdf>.

Used Oil is defined as petroleum-derived and synthetic oils that have been spilled into the environment or used for lubrication or cutting oil, heat transfer, hydraulic power or insulation in dielectric transformers. Oil used as solvents and used ethylene glycol are not defined as used oil.

Any business that produces used oil through commercial or industrial operations or that collects used oil from these operations or from private households and exempted farmers is considered a used oil generator. Households who change their own oil (do-it-yourselfers) and farmers who generate an average of 25 gallons or less of used oil per month are exempt. Businesses should refer to the appropriate state and federal laws and regulations and should request the technical

bulletin, *Used Oil Generators* (Pub131) available online at <http://www.dnr.mo.gov/pubs/pub131.pdf>.

Many of the required forms are available on-line under the heading *Hazardous Waste* at <http://www.dnr.mo.gov/forms/index.html> For more information about the specific permits, *Environmental Permits and How to Obtain Them* may be helpful, and is also located online. To receive a paper copy of any hazardous waste application forms, please contact the Hazardous Waste Program (HWP) Permit Section at (573) 751-3553.

Pesticides

The federal government first regulated pesticides when Congress passed the Insecticide Act of 1910. Congress broadened the federal government's control of pesticides by passing the original Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) of 1947 under control of the U.S. Department of Agriculture. In 1970, Congress transferred the administration of FIFRA to the newly created Environmental Protection Agency (EPA). This initiated a shift in the focus of federal policy from the control of pesticides for reasonably safe use in agricultural production to the control of pesticides for reduction of unreasonable risks to humans and the environment.

In Missouri, the Missouri Department of Agriculture administers the pesticide program in the Bureau of Pesticide Control in the Plant Industries Division. The Bureau administers the Missouri Pesticide Use Act (281.005 - 281.115 RSMo.) and the Missouri Pesticide Registration Act (281.210 - 281.310 RSMo.). The portion of the Code of State Regulations (CSR) that governs and outlines the Bureau's responsibilities is recorded in Title 2 CSR 70-25.

The Missouri Department of Natural Resources regulates the disposal of pesticides including pesticide containers. In Missouri, pesticides are regulated under the **Universal Waste Rule** (UWR), found in 10 CSR 25-16.273. This rule incorporates the federal law found in 40 CFR 273. The UWR gives generators of certain types of hazardous waste (including pesticides) a less stringent management option. Please refer to the Universal Waste topic.

For further information concerning pesticide use, applicator licensing, registration or training contact:

The Bureau of Pesticide Control - Plant Industries Division
Missouri Department of Agriculture
P.O. Box 630
Jefferson City, MO 65102
(573) 751-5504
(573) 751-0005 fax
www.mda.mo.gov

Additional information is also available toll-free from the National Pesticide Information Center at (800) 858-7378 or <http://npic.orst.edu>.