

## **RCRA HAZARDOUS WASTE PROGRAM**

In 1984, the reauthorization of the Resource Conservation and Recovery Act (RCRA) included the cradle-to-grave tracking system for hazardous waste. Congress established three categories of generators in the statute: Conditionally Exempt Small Quantity Generators (CESQG), Small Quantity Generators (SQG) and Large Quantity Generators (LQG).

The system was designed to insure that hazardous waste is properly managed from the point of generation to the point of ultimate disposal. To do this, the EPA developed strict provisions for handlers of hazardous waste, be it generator, transporter or disposer. All parties, except CESQGs, must be assigned an EPA I.D. number, assume responsibility for their role in hazardous waste handling, and are tracked through the hazardous waste manifest which accompanies the waste from the generator to the final disposal site.

An excellent document, "Managing Your Hazardous Waste: A Guide for Small Businesses, December, 2001" is recommended for more detailed information than is provided here. It can be located at [www.epa.gov/epaoswer/hazwaste/sqg/sqghand.htm](http://www.epa.gov/epaoswer/hazwaste/sqg/sqghand.htm). The manual helps small businesses determine whether they generate hazardous waste and provides comprehensive information on how to comply with the federal hazardous waste regulations for small quantity generators. It explains how to obtain an EPA identification number, manage hazardous waste on site, ship hazardous waste off site, comply with land disposal restrictions, and conduct good housekeeping.

**Hazardous Waste Determination:** It is the generator's responsibility to determine if wastes are defined as hazardous and therefore subject to regulation. Generators are not required to perform analytical testing to identify waste. You are, however, required to accurately characterize your waste. There is a three-step hazardous waste determination process that any person who generates a solid waste must follow.

1. The generator must determine if the solid waste is excluded from RCRA regulation under 40 CFR §261.4.
2. If the waste is not excluded, the generator must determine if it is listed in Subpart D of Part 261. Currently, more than 500 wastes are listed. Wastes are listed as hazardous because they are known to be harmful to human health and the environment when not managed properly.
3. If the waste is not listed, it then must be determined whether it exhibits a hazardous waste characteristic:
  - It catches fire under certain conditions. This is known as an ignitable waste. Examples are unsaturated polyester resins, gel coats and acetone.
  - It corrodes metals or has a very high or low pH. This is known as a corrosive waste. Examples are rust removers, acid or alkaline cleaning fluids, and

battery acid.

- It is unstable and explodes or produces toxic fumes, gases, and vapors when mixed with water or under other conditions such as heat or pressure. This is known as a reactive waste. Examples are most organic peroxides.
- It is harmful or fatal when ingested or absorbed, or it leaches toxic chemicals into the soil or ground water when disposed of on land. This is known as a toxic waste. Examples are wastes that contain high concentrations of heavy metals, such as cadmium, lead, or mercury.

Once a generator determines a material meets the definition of a hazardous waste, the next step is to determine the extent of regulation to which you are subject.

**A Conditionally Exempt Small Quantity Generator** – one who generates less than 200 lbs monthly – is exempt from the hazardous waste management regulations except for three basic requirements:

1. You must identify all hazardous waste that you generate.
2. You may not store more than 2,200 lbs. on site at any one time. If this amount were to be exceeded, Small Quantity Generator provisions would apply.
3. You must ensure proper delivery of hazardous waste to a permitted, licensed off-site treatment or disposal facilities.

**A Small Quantity Generator** -- one who generates between 220 lbs. and 2,200 lbs. monthly -- does not have as many provisions to follow as an LQG. But the responsibility for following applicable provisions is equal. First of all, a brief look at SQG responsibilities which differ from LQGs:

1. Hazardous waste may accumulate on-site for 180 days without a permit -- LQGs may only accumulate waste for 90 days. Certain exceptions apply.
2. The quantity of hazardous waste must never exceed 13,228 lbs. on-site -- LQGs do not have a limit set.
3. There must always be at least one employee available to respond to an emergency. The employee is the emergency coordinator responsible for coordinating emergency response measures -- LQGs have similar requirements but must develop written, detailed plans.
4. The generator must post the following information next to the telephone:
  - name and telephone number of emergency coordinator
  - location of fire extinguishers and spill control material, and if present, fire alarm
  - telephone number of fire department unless there is a direct alarm

Once again, LQGs will need more detailed, written plans.

5. All employees must be familiar with proper waste handling and emergency procedures relevant to their responsibilities -- LQG employees must have documented annual training.
6. Emergency coordinators must be able to implement emergency procedures in both cases -- LQG emergency procedures will need to be in greater detail. SQG emergency coordinators must:
  - In the event of a fire, call the fire department or attempt to extinguish it
  - In the event of a spill, contain it and clean it up as soon as practicable
  - In the event of a fire, explosion or release which could threaten human health outside the facility, they must immediately call the National Response Center (800/424-8802) with:
    - Name, address and US EPA ID Number
    - Date, time and type of incident
    - Quantity and type of hazardous waste
    - Extent, if any, of injuries
    - Estimate of quantity released

**Preparedness and Prevention:** All hazardous waste facilities must be maintained and operated to minimize the possibility of a fire, explosion or any unplanned sudden or non-sudden release of hazardous waste.

To do this, all facilities must be equipped with the following:

- An internal communications or alarm system in order to provide immediate emergency instruction to facility personnel -- voice or signals are acceptable
- A telephone, hand-held two-way radio or similar device capable of summoning emergency assistance from outside responders such as the local police and fire departments
- Portable fire extinguishers, fire control equipment, spill control equipment and decontamination equipment
- Water at adequate volume and pressure to supply water hose streams or automatic extinguishing systems

All equipment must be tested and maintained as necessary to ensure it is operable in case of an emergency.

Whenever hazardous waste is being handled, personnel involved in the operation must have immediate access to the internal communications or alarm system. If there is ever only one employee on the premises, he must have immediate access to a telephone or other means to summons external assistance.

Aisle space must be maintained so that personnel and fire protection equipment, etc. can be allowed unobstructed movement.

Arrangements must be made to familiarize police and fire departments with the layout of the facility and information about the hazardous waste which is stored. Arrangements must also be made with local hospitals to inform them about the hazards of the waste that are handled in case of injury. Agreements must be made with State emergency response teams, emergency response contractors and equipment suppliers.

**Proper Storage:** This guideline will only review drum storage of hazardous wastes. If more information is needed on tank storage of hazardous wastes, please call Composites One's Department of Health, Safety & Environment.

- Accumulation Time: In order to track the restricted time-frame for storage of hazardous waste without a permit, the date upon which each period of accumulation begins must be marked and visible for inspection on each container.

Each container must also be marked clearly with the words Hazardous Waste.

- Condition of Containers: If a container is not in good condition or if it begins to leak, the generator must transfer the hazardous waste into a container in good condition.
- Compatibility of Waste with Containers: A container must be made of or lined with materials which will not react with the hazardous waste to be stored.
- Management of Containers: A container holding hazardous waste must always be closed during storage. Funnels left in bungs for the convenience of adding waste to a drum are considered a violation of this provision.

A container must not be opened, handled or stored in a way which may rupture the container or cause it to leak.

It is highly recommended that secondary containment be provided to prevent any leakage from occurring beyond the hazardous waste storage area.

- Inspections: The areas where containers are stored must be inspected at least weekly to check for leaks and deterioration. Although not required, a recommended checklist follows in this section indicating who checked what and when so that there is documentation that this provision is being followed.
- Special Requirements for Ignitable or Reactive Wastes (LQGs only): Containers holding ignitable or reactive waste must be located at least 50 feet from the facility's property line. This waste must be separated from sources of ignition. "No Smoking" signs must be conspicuously posted.

- Special Requirements for Incompatible Wastes: A storage container holding hazardous waste which is incompatible with any waste or materials stored nearby in other containers MUST be separated from other materials or protected from them by means of a dike, wall or other device.

***If there are specific questions about your facility's storage arrangements, please call Composites One's Department of Health, Safety & Environment at 800/621-8003.***

**Recordkeeping and Reporting:** RCRA stipulates given time frames for keeping actual records which are listed below. But because of the CERCLA Superfund regulations, it is highly recommended that facilities keep as much documentation as possible about hazardous waste that was shipped off-site.

1. Properly signed manifests (by generator, transporter and designated waste facility) must be retained as a record for three years from the date the waste was accepted by the original transporter.
  2. A copy of each Biennial Report (LQGs only) and Exception Report must be kept for at least three years from the due date of the report.
  3. Records of any test results, analyses or other determinations must be kept for at least three years from the date the waste was last sent to treatment, storage or disposal. (The generator may use knowledge of the waste to determine what the hazardous waste stream is. Testing is only necessary when it is uncertain.)
  4. Retention periods are automatically extended during any unresolved enforcement activity.
- Biennial Reporting: An LQG who ships hazardous waste off-site must prepare this report and submit it to the Regional Administrator by March 1 of each even numbered year. The report covers generator activities during the previous year. It should be sent automatically to LQGs, but if it hasn't been received by mid-February, it may be a good idea to call the Regional Administrator.
  - Exception Reporting: If a copy of the manifest with the signature of the operator of the designated facility has not been received within 35 days of shipment, LQGs must call the facility or transporter. SQGs are encouraged to do so also.

An LQG must then submit an Exception Report to the EPA Regional Administrator if he has not received a copy of the signed manifest from the designated facility within 45 days.

An SQG who does not receive a copy of the signed manifest from the designated facility within 60 days of when the transporter received it must submit a legible copy of the manifest to the EPA Regional Administrator.

**Annual Training Requirements:** Large Quantity Generators must provide annual training for employees. The requirements are as follows:

1. Facility personnel must complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way to ensure compliance
2. The program must be directed by a person trained in hazardous waste management procedures. Instruction must teach facility personnel proper procedures (including contingency plan implementation) relevant to their positions.
3. The training program must be designed to ensure that the facility personnel are able to respond to emergencies by familiarizing them with emergency procedures, equipment and systems, including:
  - procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment
  - key parameters for automatic feed cut-off systems
  - communications or alarm systems
  - response to fire and explosions
  - response to groundwater contamination incidents
  - shutdown of operations

Facility personnel must complete the program within six months after assignment and may not work in unsupervised positions until the training is completed.

Facility personnel must then take part in an annual review of the program.

The owner or operator must then maintain the following documents at the facility:

- job title for each position at the facility related to hazardous waste management and the name of the employee filling each job
- a written job description for each position
- a written description of the type and amount of both introductory and continuing training that will be given to each person filling a relevant position
- records that document that the training or job experience required has been completed by the personnel
- training records must be kept on current personnel until closure of facility

***If more information or a training video is needed, please call Composites One's Department of Health, Safety & Environment at 800/621-8003.***

**Contingency Plan:** LQGs must also have a written contingency plan. The following basic elements should be covered:

- general information about the facility
- designated primary emergency coordinator
- designated secondary emergency coordinators
- description of facility waste streams
- criteria for contingency plan implementation
- emergency response procedures
- arrangements with emergency response organizations
- types and locations of emergency equipment
- emergency coordinator duties
- emergency response personnel duties
- evacuation plan special conditions
- medical services

A copy of the contingency plan must be maintained at the facility as well as be submitted to all local fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

The plan should be reviewed and amended whenever there are changes.

## **UNIVERSAL WASTE MANAGEMENT**

If you are a Small Quantity Generator or Large Quantity Generator of hazardous waste, you may also be affected by the Universal Waste Management Rules. Previously, the waste streams listed below all had to be handled as hazardous waste. The Universal Waste rules ease the regulatory burden of handling these particular waste streams in your facility.

**Universal Waste Streams:** If you generate any of the following universal waste streams in your operations, you will be subject to this rule:

- Spent batteries
- Spent mercury-containing instruments such as thermostats, pressure and temperature gauges, etc.
- Spent lamps defined as the bulb or tube portion of an electric lighting which contains hazardous waste such as fluorescent, high intensity discharge, mercury vapor, high pressure sodium, etc.

It will be assumed here that no facility will accumulate more than 2,200 lbs. of universal waste at any time, so only standards for Small Quantity Handlers of Universal Waste will be reviewed.

**Waste Management:** You are NOT permitted to dispose of Universal Waste. The waste must ultimately be recycled.

- Batteries and mercury-containing instruments must be contained if there is evidence of leakage, spillage or damage
- Lamps must be contained in containers or packages that are structurally sound to prevent breakage

**Labeling:** Universal waste must be properly labeled with “Universal Waste” or “Waste or Used Batteries, etc.”

**Accumulation:** Universal waste may not be accumulated for longer than one year unless it can be proven that greater quantities are necessary to facilitate proper recovery, treatment or disposal.

**Employee Training:** Employees who handle or manage universal waste must be trained in proper handling and emergency procedures appropriate for the waste stream.

**Response to Releases:** All releases must be contained immediately. It then must be determined whether any release results in hazardous waste. If it does, this must be disposed of as hazardous waste, not universal waste.

**Off-site Shipments:** You are prohibited from sending or taking waste to a place other than another universal waste handler or destination facility.

For more detailed information, please refer to  
[www.epa.gov/epaoswer/hazwaste/id/univwaste.htm](http://www.epa.gov/epaoswer/hazwaste/id/univwaste.htm).

## POLYMERIZATION OF SCRAP RESIN

As of August 11, 1997, the EPA has permitted fabricators to harden scrap resin and landfill it. This sounds wonderful – but there are a lot of conditions that need to be met in order to do so.

- Resin to be hardened must be counted towards your overall monthly hazardous waste generation. Remember: Small Quantity Generators (SQG) are allowed to generate between 220 lbs. and 2,200 lbs. per month. Anything above that classifies you as a Large Quantity Generator (LQG), anything below that means you are conditionally exempt from most of the regulations!
- Just as with all hazardous waste, scrap resin must be stored properly (labeling, accumulation date, weekly container inspection, etc.) until it has been treated and is ready to be disposed of as non-hazardous waste.
- Treatment procedures: The following procedures will have to be followed by both LQGs and SQGs:

The generator must develop and follow a written waste analysis plan describing procedures he will carry out to comply with treatment standards. The plan must be kept on site in records:

- Plan must be based on detailed chemical and physical analysis of representative sample and contain information necessary to treat waste.
- Plan must be filed with the EPA or state authority 30 days *prior* to treatment activity, with delivery verified.
- Notice: If generator determines that the restricted waste can be land disposed without further treatment, with each shipment of waste he must submit to the treatment, storage or land disposal facility, a notice and certification stating that the waste meets the applicable treatment standards and applicable prohibition levels. Notice must include the following information:
  - EPA Hazardous Waste Number
  - Waste constituents that the treater will monitor. Generators must also include whether the waste is a nonwastewater or wastewater.
  - Manifest number associated with the shipment of waste.
  - Waste analysis data, where available.
- Certification must be signed by authorized representative and state the following: “I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d). I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment”.

It just might be easier to still dispose of your scrap resin as hazardous waste!