



OREGON DEPARTMENT
OF ENVIRONMENTAL QUALITY

Managing Hazardous Waste

A Guide for Radiator Repair Shops



Oregon Department of Environmental Quality Hazardous Waste Technical Assistance Program



State of Oregon
Department of
Environmental
Quality

The Oregon Department of Environmental Quality (DEQ) Hazardous Waste Technical Assistance Program (TA) Program prepared this guidance. The program was established to help businesses understand the complex hazardous waste regulations that may apply to them. Where possible, we also identify potential hazardous waste reduction opportunities for businesses.

The TA Program works with facilities of all sizes to come up with solutions to problems associated with the generation, storage, treatment and disposal of hazardous waste. The program can provide information on specific businesses as this guidance document does. We can also provide on-site assistance to a specific business. In addition, the program maintains a technical library of information on waste reduction and recycling for a wide range of industries.

To get information, assistance or publications (including this one) on hazardous waste management, waste reduction or recycling, please contact:

DEQ Hazardous Waste Technical Assistance Program
700 NE Multnomah St, Suite 600
Portland, Oregon 97232-4100
Phone 503-229-5696 or
Toll free in Oregon, 1-800-452-4011

The information contained in this guide is intended as general guidance for Radiator Shops. The focus of the report is waste management (primarily hazardous waste) and waste reduction. Regulatory issues are discussed only as to how they affect hazardous waste management and waste reduction. Therefore, this guidance does not necessarily cover all pertinent regulatory requirements. Always refer to the regulations themselves for more details, or contact your nearest DEQ office. A map and regional office location and telephone numbers are included on the back of this booklet.

Why should Radiator Shops pay attention to their waste?

Radiator shops throughout Oregon routinely generate hazardous wastes. Cleaning, rinsing, repairing and other activities in your shop such as general maintenance produce hazardous wastes. Examples include spent caustic-tank and test-tank solutions, sludge from caustic-tank and test-tank cleaning, sludge from wastewater treatment activities, sandblasting media and sludge from flush booths.

If improperly managed, these wastes may threaten the health and safety of yourself and your fellow workers, damage the environment, or put your neighbors at risk. Hazardous wastes may cause cancer, nerve damage, and pollute drinking water. Lead exposure can harm young children and babies even before they are born.

Managing lead wastes improperly can increase the danger to you and your family or friends. Dangers from lead exposure in children may include brain and nervous system damage, behavior and learning problems, slowed growth and headaches. Lead exposure in adults can include difficulties during pregnancy and other reproductive problems, high blood pressure, digestive problems, nerve disorders, and muscle and joint pain.

You can reduce lead exposure in your work place by cleaning floors and walls frequently. Keep a clean shop by routinely cleaning out flush booths, test tanks and caustic tanks, and clean or change your shoes before leaving the office.

Your role in protecting public health and the environment is vital. Radiator shop hazardous wastes do not belong on the ground, down the drain or in the dumpster. Good hazardous waste management practices are important for many reasons:

- ◆ You may save money by finding ways to reduce or recycle your wastes.
- ◆ You will ensure that you comply with hazardous waste regulations and avoid costly penalties.
- ◆ You will join other radiator shops in Oregon that are taking pride in maintaining a clean and healthy environment.
- ◆ You may gain customers who know they have made a wise choice when selecting a shop that protects their health and the environment.

Radiator Shop Wastes: Practical Do's and Don'ts

Some common wastes generated by radiator shops are described in the next several pages, along with do's and don'ts for safe and compliance management of those wastes. Make sure you find out what category of hazardous waste generator you are and what responsibilities you have based on that determination. (See page 17)

Antifreeze



What's wrong with this waste antifreeze recycling area?
The containers are not covered, spills could easily occur.
Also, the containers should be marked "Used Antifreeze."

You do not need to count or manifest used antifreeze as a hazardous waste if it is recycled routinely. Store it in containers in good condition, marked with the words "Waste (or Used) Antifreeze." Keep container covers closed. If used antifreeze is not recycled and is otherwise disposed of, it may be subject to full hazardous waste regulation, unless the generator can document that the antifreeze is not a hazardous waste. This would usually require laboratory analysis.

Do's

- Recycle your own antifreeze or use a recycling service.
- Drain any remaining antifreeze from radiators into a recycling container.
- Consider keeping a separate container for antifreeze that you can re-use as a product in your shop. Be sure to label this container differently than your waste antifreeze container. It is not a waste.
- Where possible, use secondary containment for liquid wastes.

* Reference Oregon DEQ Used Antifreeze Policy, No. 1977-PO-004, November 21, 1997.

More Do's

- Write the words "Waste Antifreeze" or "Used Antifreeze" on your waste containers.
- Keep used antifreeze containers closed and in good condition.
- Regularly recycle your used antifreeze to avoid storing large amounts of waste.
- Keep records of your recycling activities.
- If you have a spill, clean it up immediately.

Don'ts

- Do **not** dispose of waste antifreeze to the sewer or to a septic system.
- Don't dump antifreeze down storm drains, into a dry well, or onto the ground.
- Don't mix used antifreeze with any other wastes such as used oil or solvent. Keep it separate.

Floor-Cleaning Waste Water

Where possible, floors in radiator shops should be washed, not swept. Sweeping may put harmful dust and lead into the air. If floors are kept generally clean to begin with, washwater from floor cleaning should not typically be hazardous wastewater. However, washwater may contain heavy metals, dirt and other debris that may need treatment before discharging to the sewer, to meet water quality discharge limits.

Do's

- Keep your floors clean to begin with. Clean up small spills immediately and place spill debris in an appropriate container.
- Check with your local sewer utility or your local public works department to make sure your floor-cleaning washwater is okay to discharge to the sewer.
- Consider using the mop water from floor cleaning as make-up water in your caustic tank.

Don'ts

- Don't let washwater from floor cleaning enter storm drains, dry wells or septic systems.
- Don't mismanage solids from floor cleaning that may contain lead. Make sure any solids that contain lead are either recycled as dross or placed in a hazardous waste container.

Paint Wastes and Sandblasting Media

Waste paint may or may not be hazardous waste, depending on the type of paint. Some radiator shops now use water-based paints that do not contain hazardous waste levels of heavy metals such as lead, cadmium, chromium, or mercury. If you use glass bead blasting or sandblasting to remove the paint from radiators, the blasting media should be disposed of as hazardous waste, unless you have laboratory analysis or other evidence that shows otherwise.

Do's

- Consider switching to less hazardous water-based paints.
- If you use spray cans to paint radiators and you use up the entire can, you may dispose of the empty can in the dumpster (as long as the local landfill approves this practice). If you are a Large or Small Quantity Hazardous Waste Generator, you must puncture the can and properly manage the drained residue. (The residue may be hazardous waste.) If possible, recycle the empty metal spray cans.
- Make sure all paint containers are empty before recycling them as scrap metal or disposing of them in your dumpster.

Don'ts

- Don't mismanage your paint waste material from cleanup. This is particularly important if you use enamel paints or oil-based paints that require lacquer thinner for cleanup.
- Don't put glass bead dust, sandblasting grit or other residues from paint preparation in the dumpster unless you can show those wastes are not hazardous wastes.



If you sandblast radiators to remove paint, the sandblast grit may contain hazardous waste levels of lead or other heavy metals. You should manage the grit as hazardous waste, unless you have laboratory analysis or other documentation that it is not hazardous waste.

Incoming Radiator Rinse Waters

The rinse water from cleaning a radiator that just enters the shop will typically not fail a characteristic of a hazardous waste. If you use clean city water to pressure-wash the bugs and dirt off a radiator before repair, you can discharge the water to the city sewer. If you use treated waters from an on-site treatment system for this activity, those waters may not be discharged to the city sewer without first determining that they do not contain lead at hazardous waste levels. **Remember: No industrial wastewaters can be discharged to an on-site septic system.**



Check with your sewer utility or city engineering department to find out for sure where your drains lead. Many outside drains and some inside drains don't go to a sewage treatment plant, but instead are storm drains that lead directly to a stream, lake or ditch or to dry wells that may contaminate groundwater.

Pressure-Wash Rinse Water and Sludge from Flush Booths

After you clean a radiator in a caustic tank or sonic tank, any water used to rinse the radiator or flush the radiator will contain metals. This rinsing activity is usually done in a flush booth. The concentration of heavy metals in the flush booth area may make the wastewaters a hazardous waste. If so this water will need to be treated to remove the heavy metals and other contaminants before being discharged to the city sewer. Over time, the flush booth will accumulate solids. Dispose of those sludges properly. They will typically be hazardous waste.

Do's

- Re-use rinse water by using some kind of closed-loop recycling system.
- Add treated water or dirty rinse water as make up water in the caustic tanks (in which case the rinse water is not a waste).
- If rinse waters are directed to the sewer, get permission first from your local sewer utility for this discharge. Example: If you take radiator cores out of your caustic tank and hose them off directly to a sewer drain.
- Solids from the flushing of radiator cores are likely to contain heavy metals, making the sludge hazardous. Be sure that wastes from the flush booth are managed properly.
- Accumulate flush-booth solids in containers that are in good condition, labeled and kept closed.
- Close off any drains or piping leading to storm water sewers or dry wells.

Don'ts

- Don't dispose of flush-booth rinse water down any storm drain, septic system or dry well. This not only violates the Clean Water Act, but could likely lead to water contamination and liability problems for you.
- Don't put rinse-water sludge into the dumpster or on the ground.



Shop Towels

If your shop towels are being handled according to the advice below, they do not need to be managed and counted as hazardous waste. If your towels are being disposed of they may be a characteristic hazardous waste, depending on the material they have been used to clean up.

Do's

- Use cloth towels you can clean and re-use. Shop towels in Oregon are exempt from the hazardous waste regulations if they are laundered by a commercial facility or if you launder your own towels on-site.
- Use non-chlorinated cleaning solvents.
- Keep waste shop towels in a closed container marked "contaminated shop towels" or "dirty towels" or something similar.



Photo at left shows good management of soiled shop towels used with ignitable solvent. An industrial laundry will pick these up. The top of the lid is marked "Dirty Shop Rags."

Don'ts

- Don't throw dirty towels into your dumpster unless you are sure either by knowledge of process or by laboratory analysis that the dirty towel is not a hazardous waste.
- Don't dispose of solvents or other potential hazardous wastes by pouring them into containers of dirty shop towels.
- Avoid using disposable paper towels, where possible.

Solvent or Degreasing Stations

Radiator shops don't generally use large amounts of solvent. Parts-washer solvent tanks and other solvents are sometimes used for cleaning smaller parts and tools. When solvents are no longer effective or become "spent" they are typically ignitable hazardous waste. In a radiator shop, they may also contain heavy metals.

Do's

- Look into aqueous-based parts cleaning options.
- If you use solvents, install a filter to increase the life of your solvent.
- Recycle spent solvents rather than disposing of them.
- Keep spent solvent in containers that are labeled, closed and in good condition.
- Keep records of how you manage spent solvents (manifest, bills of lading, etc.)

Don'ts

- Don't dispose of spent solvent down drains, into the air, or onto the ground.
- Don't mix spent solvents with other wastes.

Spent Hot Tank Solutions and Sludge



Whether you are using a boil-out tank, caustic tank, hot tank or an ultrasonic system, spent solution from tanks-as well as the sludge-is typically hazardous waste. This is due to its heavy metal content and corrosive nature.

However, if certain best management practices are met during treatment (evaporation, neutralization, wastewater treatment) within the process tank or an enclosed system, only the sludge needs to be counted toward monthly hazardous waste totals. (See page 17 of this Guide.)

Do's

- Periodically remove sludge from the bottom of the hot tank and recharge the solution.
- Evaporation will occur, where possible use flush-booth rinse waters for makeup water.
- Accumulate all sludge in a container that is in good condition, labeled and kept closed when not in use.

Don'ts

- Don't dispose of spent hot tank solution down any drain or on the ground.
- Don't dispose of hot tank sludge into the dumpster or on the ground.
- Don't treat your hazardous waste on site, **unless** you do so in compliance with the hazardous waste regulations that apply. It is a good idea to contact your local DEQ office for guidance and technical assistance. For the location of the nearest DEQ office, please refer to the back cover of this Guide.

Used Solder



If used solder is recycled as scrap metal or re-smelted as solder dross, it would not be a hazardous waste and would not count toward your generator category. (If not recycled it would be a toxic hazardous waste for the heavy metal lead.) Avoid dropping solder into your test tank. Collect used solder and manage it as a scrap metal or dross. Keep the solder as clean as possible. The more debris that is mixed with the dross the less value the dross has.

Test Tank Water and Sludge

The test tank water often contains heavy metals (such as lead, copper and zinc), in such high concentrations that the water is hazardous. When test tank water can no longer be used and must be cleaned out, it can be:

- 1) recycled in the shop (if you have a wastewater treatment system),
- 2) collected and placed in containers for disposal through a hazardous waste management company, or
- 3) treated to meet local sewer utility limits, if feasible.

If your option is treatment through neutralization or separation within the process tank, it is possible that only the remaining sludge needs to be counted toward your monthly hazardous waste generation totals. If treatment of this water is the avenue you select, you must make sure it meets water quality treatment standards before discharge. If you have any questions, you should contact your nearest DEQ office or your local public works department.



Test tank water may contain hazardous levels of heavy metals and may require treatment or hazardous waste management. When you clean out sludge from the tank, the sludge will require management as hazardous waste.

Do's

- Extend the life of your test tank by carefully rinsing the radiator and allowing it to drip over the flush tank before placing it in the test tank.
- Avoid soldering over the test tank. Bits of solder can fall into the tank and increase the concentration of lead and zinc in the solution. This means you would need to replace the tank water more often.
- Re-use the same test tank water after treating it in a wastewater recycling system.
- If any test tank water is directed to the sewer, get permission from the local public works sewer authority before any discharge.

- Store your test tank sludge in containers that are sturdy, closed and labeled as hazardous waste. Dispose of the test tank sludge as hazardous waste and where possible, recycle any solder.



This photo shows an area outside a radiator shop where test tank water was disposed of. Laboratory testing of the soil showed high hazardous waste levels of lead-a potentially serious hazardous waste violation.

Don'ts

- Don't direct any test tank water to on-site septic systems or dry wells.
- Don't get septic tank pumping services to remove this water. They are not hazardous waste transporters. There is no environmentally safe or legal way for these services to dispose of this waste.
- Don't put test tank sludge into the dumpster or on the ground, as this material would be considered hazardous waste.

Sump Sludges

Sludge from your sump or oil/water separator is likely to be hazardous waste. You will need to test your sump sludge at a laboratory for hazardous waste metals to determine if it is hazardous. Or you can save testing costs, assume it is hazardous waste, and manage it accordingly.

Do's

- Have the sludge tested when pumped or shoveled out. (See the section on "Testing" on page 14.) Keep records of all testing. If you do not want to test, you can assume it is hazardous waste and manage it accordingly.
- If the sludge is a hazardous waste, send it to a hazardous waste management facility. If the tests show it is not a hazardous waste, it could go to a permitted solid waste landfill.
- Clean your sump out frequently to avoid large generations of hazardous waste. Always try to generate less than 220 pounds of hazardous waste in any month, to maintain conditionally exempt generator status. Re-use the same test tank water after treating it in a wastewater recycling system.

Don'ts

- Don't put hazardous waste sludge in your dumpster or on the ground.
- Don't use a septic tank pumping service to remove this sludge. There is not legal environmentally safe way for them to dispose of your waste if it is hazardous.



Used oil storage can be a radiator shop issue. This photo shows good used oil storage practices, **except** that the drums should be marked "Used Oil."

Important Topics

Treatment in Process Tanks

Hazardous wastes generated in process tanks such as spent caustic hot tank solutions and waste-water treatment tanks, may be excluded from hazardous waste requirements until they are removed from the tank or tank system. This exclusion requires that you follow these best management practices:

1. The treatment process may **not** under any circumstances:
 - Generate extreme heat or pressure, fire or explosion, or violent reaction;
 - Produce uncontrollable toxic mists, fumes, or gases in sufficient quantities to threaten human health or the environment;
 - Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - Damage the structural integrity of the unit holding the waste, or
 - Through other similar means, threaten human health or the environment.
2. Generators must ensure that the process tank is compatible with the materials used for treatment, and that it is designed for operation under the treatment conditions.
3. Generators must ensure that employees are familiar with proper treatment procedures, handling of waste treatment residuals, and emergency procedures relevant to treatment operations.
4. Generators must develop a waste analysis plan that ensures the waste is treated in an appropriate, safe manner and that a hazardous waste determination has been conducted for treatment residuals.



This tank is part of a wastewater treatment system used by a radiator shop to treat washwater from its on-site activities. The water is treated to acceptable limits for discharge to the local sewer system.

5. The waste generated in a process tank must be treated or removed within 90 days for large quantity generators and within 180 days for small quantity generators from the time the tank is taken out of service.
6. If the waste treatment residuals are determined to be hazardous waste, they must be removed from the tank following treatment completion and placed in containers that are in good condition, labeled and kept closed (unless hazardous waste is being actively managed in that container).
7. If the resulting treatment residuals are hazardous waste, they must be managed in compliance with all applicable hazardous waste requirements. This includes, but is not limited to, the container management requirements of 40 CFR 262.34. The residuals, if hazardous, must also be transported and disposed of in accordance with state and local requirements.

Testing

Sometimes sending a sample of waste to a laboratory for analysis is the only way to determine if the waste is hazardous. Important tests for radiator shops include heavy metals (lead, cadmium, selenium, and chromium). However, other testing may be needed depending on your operations. Those tests could include pH for corrosivity (less than 2 or greater than 12.5 would be a hazardous waste) or for volatile organics (chlorinated solvent, benzene, toluene, xylene, ethyl benzene, methyl ethyl ketone, acetone, etc.).

If you test a waste once and continue to use the same industrial process and same chemicals, you may apply those test results to determine if future generation of that waste is hazardous. For example, if you test your pressure washing rinse water once and find it non-hazardous, you may use this knowledge for future determinations, provided nothing has changed in your operations. You can find testing laboratories for hazardous waste determination analysis under "Laboratories - Analytical" in the Yellow Pages of your telephone book.

Hazardous Waste Technical Assistance and Toxic Use Reduction

DEQ's hazardous waste program has a technical assistance branch that is dedicated to assist and educate small businesses in properly managing hazardous waste. Where possible, technical assistance also helps businesses find ways to reduce the amount of hazardous waste they generate.

If you would like more information on the hazardous waste technical assistance program, contact your nearest DEQ office or call DEQ's toll free number, 1-800-452-4011.

Pollution Prevention/Waste Reduction

Reducing hazardous waste in your radiator shop makes good business sense. Reducing waste, before you generate it, can help you to:

- Avoid long-term liability concerns associated with generating hazardous waste,
- Save on hazardous waste and solid waste management costs, and
- Help create a healthier, safer work environment.

It may not be as hard as you think. The first step is to walk through your shop and review all of the processes. Then look closely at the processes that generate hazardous waste. Then look at ways to reduce the volume of wastes generated in these areas. It may be as simple as more frequent maintenance or better operating techniques. Some options to think about are:

Substituting a less toxic raw material—For example:

- Use pressurized water for initial pre-cleaning instead of caustic jet spray.
- Switch to non-lead solder.
- Always research any new product. When possible, pick the product that will be the least harmful to the environment.

Use good operating practices—For example:

- Always use funnels or pumps to dispense liquids.
- Keep all chemicals in sealed containers with tight-fitting lids.
- Seal floor drains, where possible. Don't allow any untreated process solutions to enter the sewer.
- Use drip boards or pans to catch excess metal-containing solutions and sludge. Divert the excess back into the tank rather than onto the shop floor.

Change your process—For example:

- Use chemical precipitation to separate metals from solution.
- Use some kind of a de-watering unit (filter press, drum heater, evaporator, etc.) to reduce the weight and volume of sludge waste.
- Maintain equipment and tanks to minimize monthly generation.

Recycle wastes and wastewater—For example:

- Contract with a recycling service to pick up used solvents and solder dross.
- Contract out or recycle on site waste antifreeze.
- Re-use spent rinse water as makeup water in your hot tank and/or test tank.



In making hazardous waste determinations and calculating your generator category, be sure to consider all the activities in your shop that generate potential hazardous waste. Typical activities pictured above include sandblasting and caustic-tank cleaning.

Your Requirements as a Generator of Hazardous Waste

Radiator shops become regulated Hazardous Waste Generators if they generate more than 220 pounds of hazardous waste in any calendar month, or if they accumulate more than 2,200 pounds of hazardous waste on-site at any time. Shops that generate or store less than those amounts are Conditionally Exempt Generators. You can use the worksheet below to determine your shop's generator category. Calculate for each waste that applies to your shop the amount you generate in one month.

Worksheet

HOT TANK SLUDGE (Remember, this sludge is heavy-at least 10 pounds per gallon)	lbs.
WASTE ANTIFREEZE (Don't count this waste stream if it is being recycled on or off-site)	lbs.
FLUSH BOOTH SLUDGE (This sludge is heavy-at least 10 pounds per gallon)	lbs.
TEST TANK SLUDGE (This sludge is heavy-at least 10 pounds per gallon)	lbs.
SUMP SLUDGE (This sludge is heavy-at least 10 pounds per gallon)	lbs.
WASTEWATER TREATMENT TANK SLUDGE (This sludge is heavy-at least 10 pounds per gallon)	lbs.
PAINT WASTE (if using oil-based paints and lacquer thinners instead of water-based paints, 7 pounds per gallon)	lbs.
CLEANING SOLVENTS (if using ignitable or chlorinated solvents, 7 pounds per gallon)	lbs.
USED SOLDER (pounds of solder per month, unless you recycle)	lbs.
OTHER HAZARDOUS WASTES (pounds per month)	lbs.

TOTAL HAZARDOUS WASTE PER MONTH _____ lbs.

If the total is more than 220 pounds in any one month, you are a regulated Small Quantity Generator of hazardous waste. If your monthly generation total exceeds 2,200 pounds, you are a Large Quantity Generator of hazardous waste. Small Quantity Generator requirements are summarized beginning on the next page.

Summary of State and Federal Requirements for Small Quantity Generators of Hazardous Waste

- **Identify your waste:** You must determine if any of your solid wastes are regulated as hazardous wastes by conducting hazardous waste determinations. The DEQ Small Quantity Generator Handbook outlines hazardous waste determination procedures. A hazardous waste may be regulated in one or more of the following categories:

- **Listed** (specifically listed in the federal regulations)

- **Characteristic** (ignitable, corrosive, reactive, or toxic, as specified in the federal regulations)

- **Oregon only listed hazardous waste** (as specified in state regulations).

In making a determination, a generator can use knowledge of process or analysis, or a combination of those two approaches.

- **Obtain a generator identification number:** If you are a regulated generator, you are required to notify the Department of your hazardous waste activity and obtain a site-specific DEQ Identification Number. You can obtain a hazardous waste identification number by contacting DEQ Headquarters in Portland at (503) 229-6511, or toll-free in Oregon 1-800-452-4011. Companies that transport and manage hazardous waste for disposal are also required to have an Identification Number. Those companies may choose not to accept your hazardous waste if you do not have an Identification Number, even if you are a Conditionally Exempt Generator and technically are not required to have one.
- **Annual reporting and fees:** If you have an active hazardous waste identification number, you must submit an annual report by March 1 of each calendar year. For Conditionally Exempt Generators, the form is a simple one-page verification report with no annual fees. The annual report for Small Quantity and Large Quantity Generators requires more information, and fees are assessed based on the information in your report. The report asks for information that summarizes your hazardous waste management activities for the previous calendar year, including amounts and types of hazardous waste generated, off-site shipments and on-site management if applicable. For more information on this report, you can contact DEQ Headquarters in Portland at (503) 229-6968 or 1-800-452-4011.
- **Preparedness and prevention:** You must manage hazardous waste in a manner that prevents releases, leaks, spills, fires or explosions. Small Quantity Generators are required to:
 - have knowledge of the hazardous waste regulations;
 - post emergency information next to the telephone closest to points of generation (name and phone number of the emergency coordinator, emergency number usually 911, and the location of emergency response equipment);
 - conduct and record weekly inspections where hazardous waste is being stored or accumulated;

- keep the necessary emergency equipment (such as fire extinguishers spill response equipment, and telephones) on hand and accessible to employees;
- regularly test and maintain all your emergency equipment; and
- notify local authorities (police, fire departments, and local hospital) of the nature and danger of the waste you generate, and provide them with local layout of your facility.

- **Properly store and accumulate hazardous waste prior to treatment or disposal:** Small Quantity Generators can store hazardous waste on site for up to 180 days from the date the waste was first generated. Then they must manage it on site or send it to an appropriate hazardous waste management facility. Large quantity generators have only 90 days to store hazardous waste.

While accumulating your hazardous waste, you must follow certain container management requirements for safe and proper storage, labeling and management of hazardous wastes:

- Place hazardous wastes in appropriate containers and mark the container with the words "hazardous waste" and an accumulation start date.
- Maintain adequate space between the containers to allow access in case of an emergency and to allow access for easy weekly inspections.
- Make sure containers are in good condition and kept closed unless you are actively managing hazardous waste in that container.
- Make sure all wastes that are placed in a container are compatible with the container and if necessary other wastes that are or have been previously stored in that container.
- Conduct weekly inspections looking for labeling, releases, or any sign that could indicate a future problem. Note this in a log and correct the problems immediately

Although not required by state or federal regulations, a generator should try to establish an area that is solely for accumulating and storing hazardous waste. Don't have hazardous waste stored all over your shop. If possible, place containment around the hazardous waste storage area to prevent liability and the potential added costs of cleanup.

- **Plan for emergencies:** Small Quantity Generators must appoint someone to act as an emergency coordinator for the facility. The emergency coordinator must be on site or on call at all times. More than one emergency coordinator can be appointed at the facility. The emergency coordinator must be familiar with the operations and activities at the site and must have the authority to commit the resources necessary to deal with a hazardous waste emergency. In a small shop, this will most likely be the owner or manager.

Planning for emergencies can help prevent a small spill from turning into a dangerous and expensive contamination problem. Employees must be trained in

proper waste handling procedures and should know how to react to different types of emergencies in the shop.

- **Arrange for proper transportation and disposal:** As a Small Quantity Generator (or a Large Quantity Generator) of hazardous waste you are responsible for following the regulations for the safe transportation and disposal of your waste. You are responsible for your waste, even after it leaves your shop. Before transporting hazardous waste off site, you need to make sure it is packaged, labeled and marked in accordance with US. Department of Transportation hazardous material regulations.

Regulated generators must hire a transporter that has notified of their hazardous waste transportation activities and obtained an Identification Number. The generator must also ensure that their hazardous wastes are managed at a permitted hazardous waste Treatment, Storage and Disposal (TSD) facility, or at a facility that legitimately recycles or reclaims hazardous waste.

Conditionally Exempt Generators can transport their own wastes, but must make sure that their hazardous waste are sent to:

- A permitted hazardous waste facility (TSD);
- A legitimate recycler; or
- A permitted solid waste facility, provided the facility is willing and permitted to receive Conditionally Exempt Generator hazardous waste.

- **Manifest shipments of hazardous waste:** To ship hazardous waste off site, Small and Large Quantity Generators must prepare a Uniform Hazardous Waste Manifest Form. This form identifies the contents of the shipment, the transporters used and the permitted facility receiving the hazardous waste. This form accompanies the waste from the site where it is generated to the final destination. A copy of the manifest then comes back to you for your records as the generator of that waste.

Some hazardous wastes are restricted from land disposal unless they meet specific treatment standards. If you send your waste off site for disposal, you must prepare and sign a certification stating that either your waste is not restricted from land disposal; or that it meets the treatment standard outlined in the regulations.

Otherwise, you must notify the receiving facility that you are aware of the land disposal restrictions and that your waste does not meet those standards without further treatment.

Often the waste hauler fills out these forms and you just sign them. As the generator of the hazardous waste, you must carefully check all information before signing the manifest and the land disposal restriction notification or certification. You are ultimately responsible that the information on these documents is accurate.

If you as a Small Quantity Generator have not received a signed copy of the manifest from the receiving facility within 35 days of the date of shipment, you must try to determine what has happened. If after 45 days from the date of shipment you still do not have a signed copy of the manifest, you must submit to the DEQ Regional

Administrator an exception report documenting your efforts to obtain a copy from the receiving facility.

- **Keep records of hazardous waste activities:** There are a number of records, reports and information that regulated generators must prepare and maintain on site for at least three years. That includes: Annual reports, manifests and land disposal restriction notification and certifications, exception reports, copies of any waste analysis tests you have conducted in making hazardous waste determinations, copies of your Toxics Use Reduction plan, and copies of your notification of hazardous waste activity.

The regulations require that you keep most of these documents for at least three years. DEQ recommends that you keep these records for as long as you are in business.

WHERE TO GET MORE INFORMATION

While this guidance document summarizes some of the requirements for generators of radiator shop and automotive waste under State and Federal Hazardous Waste Regulations (40 CFR 260-270 and ORS 466 and 468), it does not replace them. Always refer to the regulations themselves for more details or contact your nearest DEQ Regional Office.



Eastern Region

475 NE Bellevue Dr, Suite 110
Bend, OR 97701
541-388-6146

800 SE Emigrant, Suite 330
Pendleton, OR 97801
541-276-4063

Northwest Region

700 NE Multnomah St, Suite 600
Portland, OR 97232
503-229-5696

Western Region

4026 Fairview Industrial Dr
Salem, OR 97302
503-378-8240, ext. 253
165 E 7th Ave, Suite 100.
Eugene, OR 97401
541-686-7838

It is your responsibility to manage the wastes generated at your facility safely. Don't be afraid to ask for help. DEQ can help you keep up to date and in compliance with environmental regulations. For additional information and assistance, contact your nearest DEQ Regional Office and ask for a Hazardous Waste Specialist. Remember the hazardous waste program has a proactive Technical Assistance Program that was established in 1992 to assist small businesses in proper management of their hazardous wastes. The Technical Assistance Program is a non-enforcement program.

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