
Automotive Salvage Yard Waste Management Practices in Colorado



**Colorado Department
of Public Health
and Environment**

Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment

(303) 692-3300

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General Waste Management Guidelines

Accidental spills and releases of vehicle fluids are the most common cause of environmental damage found at automobile salvage yards. Spills can occur if fluids are left in the vehicle when stored in the yard, when the fluids are intentionally removed from the vehicle, and when the fluids are transferred into or out of storage containers and tanks. The best way to minimize your environmental impact is to prevent spills and accidental releases from occurring by using good housekeeping practices. The following best management practices are provided to assist you in maintaining a clean and well-run facility.

DO confine fluid removal, dismantling activities and vehicle crushing to one area that includes a curbed, sealed concrete surface away from open drains. If this area is outside, it should be covered to keep precipitation from collecting and be equipped with secondary containment to prevent contaminated runoff.

DO drain and collect all fluids from incoming vehicles as soon as possible, including fluids from the engine, fuel tank, transmission, radiator, differential, window washing fluid tank, heater core, and all lines and hoses. If you are unable to drain fluids from an incoming vehicle immediately, inspect the vehicle for leaks and stop them if possible. If you are unable to easily stop the leak, place a drip pan under it to collect all fluids. Remove and capture refrigerants from the air conditioning unit and remove the battery as soon as possible.

DO store wastes in appropriate containers or tanks. These should be kept closed except when waste is being added or removed, kept in good condition to prevent releases and inspected at least weekly for signs of deterioration or leakage. If the containers or tanks are stored outside, you should provide secondary containment and keep them covered for stormwater purposes.

DO label all tanks and containers with the contents and type of waste. If hazardous waste, use an appropriate hazardous waste label on which you can record the date that waste was first placed into the tank or container, applicable waste codes and your business name and address.

DO use funnels or pumps when transferring or dispensing liquids. Consider placing a ramp or step in front of storage drums or tanks so that employees don't have to lift drain pans or buckets above their waists to pour liquids into the containers.

DO resell, recycle or properly dispose of materials regularly. Not only will you see a faster return on your investment, but you'll be reducing your potential environmental liability by not storing materials that will cost you if they are accidentally contaminated or released to the environment.

DO keep records (receipts, manifests, logs, other) as a normal course of business. State and local inspectors may periodically visit your site and will want to review your records to ensure that you are using good management practices.

DO train new and existing employees how to identify and properly handle wastes.

DO contain and clean up spills and releases immediately. It's much easier to prevent spills in the first place by using good housekeeping practices, but when spills do occur, it's easier to contain and clean them up right away than to wait until it spreads to a larger area. Keep spill control equipment and absorbent materials in an area easily accessible by employees and near areas where fluids are drained and stored. Train all employees how to use these materials and to quickly respond to the kinds of spills you are likely to have.

DO NOT dispose of liquids by evaporation or by pouring them down storm drains, in septic or sewer systems or on the ground.

DO NOT put containers of waste liquids in the dumpster. Just because a liquid is non-hazardous and/or biodegradable does not mean that it is environmentally friendly or exempt from regulation.

DO NOT dispose of any waste by placing it in vehicles that will be crushed and/or shredded.

The Keys to Environmental Compliance

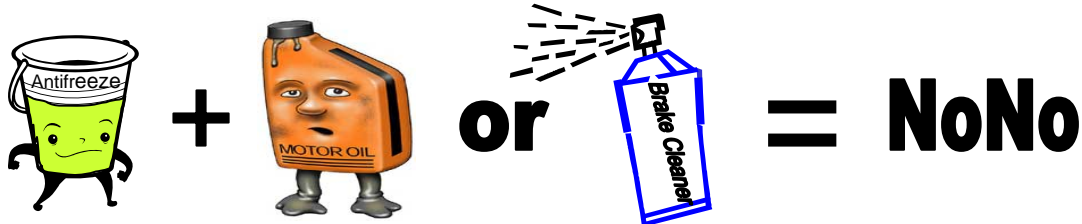
- 1) Reuse, resell or recycle as much as possible. Disposal costs you money and more regulations may apply to your wastes based on the amount that you generate per month.
- 2) Use good housekeeping practices. Preventing spills, drips and releases is the lowest cost option. Cleaning up costs you time and money, and not cleaning up can cost you even MORE in terms of a poor relationship with your neighbors. Many a site has been inspected because disgruntled neighbors report suspected illegal disposal at nearby businesses.

Vehicle Fluids

Used Antifreeze

Used antifreeze becomes contaminated with traces of fuel, metal fines and volatile organic compounds from being in the vehicle. Antifreeze removed from incoming vehicles may be directly reused in your own vehicle or may be sold or given away to employees and customers. If direct reuse is not possible, you should ensure that the antifreeze is recycled, either in an on-site recycling unit or offsite by a commercial antifreeze recycler. You are allowed to directly reuse or recycle used antifreeze without testing it first to determine if it is a hazardous waste.

Containers used to store used antifreeze that will be reused/recycled should be labeled "Used Antifreeze" or "Recycled Antifreeze." **DO NOT** mix used antifreeze with used oil or solvents. While these fluids can be recycled independently, it is very difficult to recycle them if mixed together and you may end up paying extra for waste disposal.



If you dispose of used antifreeze, you are required to test it for benzene, lead and volatile organic compounds like perchloroethylene and trichloroethylene using the Toxicity Characteristic Leaching Procedure (TCLP test). If you use an on-site recycling unit, you are also required to test the filter and sludge prior to disposal because the recycling process concentrates contaminants in these materials.

If the used antifreeze or recycling unit filters and sludge are characteristic hazardous wastes:

- they must be stored in containers labeled "Hazardous Waste – Used Antifreeze" or "Hazardous Waste – Used Antifreeze Filters;"
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing used antifreeze as a hazardous waste is avoidable if you reuse or recycle it; you may avoid managing recycling unit filters and sludge as hazardous waste if you change out the filters more frequently.



Most wastewater treatment plants have begun to restrict disposal of used antifreeze into the sanitary sewer system. These treatment plants have strict discharge limits applied to them and many can no longer handle large volumes of used antifreeze containing heavy metals.

DO NOT dispose of used antifreeze down a storm drain, into a septic system or onto the ground. While used antifreeze may be biodegradable, it contains other

materials that can contaminate surface water, groundwater and soil. It can also use up the entire oxygen supply in a body of water as it degrades, killing everything else that lives in that water body.

Gasoline and Diesel Fuels

Usable fuel removed from incoming vehicles may be directly reused in your own vehicle or may be given to employees or customers. If the gasoline is “old,” you may rejuvenate it by filtering it (coffee filters work well) and adding octane boosters, then mixing one part rejuvenated gasoline to five parts new gasoline. Tanks and containers used to store usable fuels should be labeled “Usable Gasoline” or “Usable Diesel” as appropriate.

Small amounts of gasoline may be mixed with used oil that will be recycled for fuel blending as long as the mixture does not become characteristic for ignitability and you must have prior permission from your used oil recycler to ensure that they can manage the mixture. Once mixed, you should manage the mixture as used oil.

If gasoline is not reusable or recyclable, you must dispose of it as hazardous waste:

- it must be stored in containers labeled “Hazardous Waste – Gasoline;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing gasoline removed from incoming vehicles as hazardous waste is avoidable if you take care not to contaminate the fuel when it is removed from the vehicle, then reuse or recycle it.



Mixing diesel fuel with used oil, then direct reuse as a fuel is allowed.

In addition to these requirements, petroleum storage tanks may also be regulated by the Division of Oil and Public Safety at the Colorado Department of Labor and Employment. This agency regulates underground petroleum storage tanks (USTs) of 110 gallons or more and aboveground storage tanks (ASTs) of 660 gallons or more. If you have questions about regulated petroleum storage tanks, contact the Division of Oil and Public Safety at 303-318-8547.

An SPCC (Spill Prevention, Control and Countermeasure) Plan may apply to you if you store gasoline, diesel fuel or other petroleum in storage tanks and containers with a cumulative aboveground capacity of 1320 gallons or more. This applies to tanks or containers 55 gallons and over in size, and applies to total capacity, not “used” capacity. If you have questions about SPCC plans, contact US EPA Region 8 at 303-312-6202 or 303-312-6839.

Used Oil

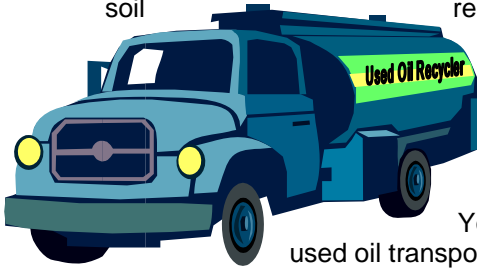
Used oil includes motor oil, gear oil, power steering fluid, transmission fluid, differential oil, and transaxle fluid. It does not include brake fluid. Even though very limited amounts of uncontaminated brake fluid may be included with your used oil with permission from your used oil recycler, this practice is discouraged. Brake fluid is often contaminated with brake cleaners containing chlorinated solvents (F-listed hazardous wastes). Mixing listed solvents with your used oil makes your used oil an F-listed hazardous waste.



All tanks and containers that have used oil in them should be labeled as “Used Oil,” regardless of size. This includes drip pans, buckets and other smaller containers used to store used oil temporarily. Fill pipes leading to underground storage tanks or remote aboveground storage tanks should also be labeled as “Used Oil.” **DO NOT** label your used oil tanks or containers as “waste oil.”

Keep used oil storage tanks and containers closed except when adding or removing used oil and provide secondary containment if stored outside. It’s also good management practice to have secondary containment even if stored indoors.

One of the most common violations at automotive salvage yards is that poor housekeeping practices are used when managing used oil. Some salvage yard operators do not consider it a big deal if some used oil is dripped or spilled onto the ground. However, a build-up of these drips and spills can contribute to significant environmental damage over time. This can lead to potential fines and a relatively expensive soil remediation project that could have been avoided. It is much easier to



prevent drips and spills by using funnels or specially designed drum-top drain pans when pouring used oil into storage tanks or containers. You may want to consider putting a step or small platform in front of your storage tanks or containers so that you don't have to lift drain pans or buckets higher than your waist.

You can recycle your used oil with a commercial used oil recycler. Both the used oil transporter and used oil recycler must have valid EPA Identification numbers (EPA ID numbers) to show that they have notified the State and EPA of their used oil management activities. Used oil that has not been mixed with anything that could make it a hazardous waste does not count toward your hazardous waste generator status and you do not need to obtain an EPA ID number for generating it.

Burning used oil in an on-site space heater is allowed as long as the heater has a maximum capacity of 500,000 Btu/hr, is vented to the outdoors, and you limit the used oil that you burn to what you have generated yourself or used oil that you have received from a household do-it-yourselfer. **DO NOT** accept or purchase used oil from other sources unless it has been tested to ensure that it meets the used oil fuel specifications. **DO NOT** accept untested used oil from other businesses and **DO NOT** give or sell your used oil to another business other than a registered used oil transporter/recycler.



If the used oil is not recyclable because it has been contaminated or mixed with something that makes it a hazardous waste, you must dispose of it as hazardous waste:

- it must be stored in containers labeled "Hazardous Waste – Used Oil;"
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing used oil removed from incoming vehicles as hazardous waste is avoidable if you take care not to contaminate the used oil when it is removed from the vehicle, then recycle it.

In addition to these requirements, petroleum storage tanks may also be regulated by the Division of Oil and Public Safety at the Colorado Department of Labor and Employment. This agency regulates underground petroleum storage tanks (USTs) of 110 gallons or more and aboveground storage tanks (ASTs) of 660 gallons or more. If you have questions about regulated petroleum storage tanks, contact the Division of Oil and Public Safety at 303-318-8547.

An SPCC (Spill Prevention, Control and Countermeasure) Plan may apply to you if you store used oil or other petroleum in storage tanks and containers with a cumulative aboveground capacity of 1320 gallons or more. This applies to tanks or containers 55 gallons and over in size, and applies to total capacity, not "used" capacity. If you have questions about SPCC plans, contact US EPA Region 8 at 303-312-6202 or 303-312-6839.

Vehicle Parts

Used Oil Filters

Used oil filters from passenger vehicles and light duty trucks should be completely drained of oil prior to recycling or disposal. The anti-drain back valve or filter dome end should be punctured to release the vacuum that keeps oil in the filter. The filter should then be placed on a drain rack at or above 60 degrees Fahrenheit for at least 24 hours. Alternatively, you may use an oil filter crusher to remove the oil from the filter or dismantle and drain it. As a practical matter, a filter is considered drained if it is no longer dripping any oil when you pick it up. Although recycling is the preferred option, properly drained used oil



filters can be disposed of in the dumpster. The drain pan or bucket that the filter drains into should be labeled as “Used Oil.” This oil should be periodically poured into your used oil storage tank or container for recycling.

Another of the most common violations at automotive salvage yards is that used oil filters are not properly drained prior to disposal in the dumpster. Used oil is allowed to drip from the filter as it is taken to the dumpster, then continues to drip into the dumpster and onto the ground. This can lead to potential fines and a relatively expensive soil remediation project that could have been avoided.



Terne plating is alloy of lead and tin that is sometimes used for oil filters in heavy duty service vehicles. Because of the lead content, these filters would be hazardous waste if sent for disposal. However, if these filters are recycled as scrap metal, they are exempt from hazardous waste requirements. Properly drained terne plate used oil filters should be stored in containers labeled “Scrap Metal – Terne Plated Filters” until sent for recycling.

If terne plated filters are sent for disposal, you must dispose of it as hazardous waste:

- it must be stored in containers labeled “Hazardous Waste – Terne Plated Filters;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing terne plated filters as hazardous waste is avoidable if you recycle them as scrap metal.

Fuel and Transmission Filters

Fuel and transmission filters are not exempt from the requirement to make a hazardous waste determination and may be characteristic hazardous waste due to contamination by benzene or heavy metals. All-metal filters should be completely drained and then can be managed like used oil filters. Those with fibrous filtering material may exhibit one or more hazardous waste characteristics even when drained and dry. If so, you must dispose of them as hazardous waste:

- must be stored in containers labeled “Hazardous Waste – Filters;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing fibrous used fuel and transmission filters as hazardous waste may not be avoidable.

Lead-acid batteries



Lead-acid vehicle batteries contain lead and corrosive acids, but are exempt from being hazardous wastes if they are reused or recycled. If the battery is in good condition, you may use it in your own vehicle or recharge it and sell it to employees or customers. If the battery is in poor condition, you should recycle it through a commercial battery recycler or supplier.

Lead-acid batteries should be stored indoors if possible. If they must be stored outdoors, they should be placed in closed polypropylene plastic containers or stored upright on pallets on bermed heavy plastic tarps. Part of the tarp should be pulled over the top to keep precipitation from the batteries. Whether stored indoors or out, avoid long-term storage and keep neutralizing agents (baking soda or lime) nearby. Cracked or leaking batteries should be stored in closed polypropylene plastic tubs or pails until they can be recycled.

If lead-acid batteries are sent for disposal, you must dispose of them as hazardous waste:

- they must be stored in containers labeled “Hazardous Waste – Lead-Acid Batteries;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing lead-acid batteries as hazardous waste is avoidable if you reuse or recycle them.

Lead Parts

Wheel weights, battery cable ends, radiators and heater cores contain lead and should be removed from salvage vehicles before crushing because the lead can damage the shredder and contaminate shredder residue (fluff). These parts are exempt from being hazardous wastes if removed and recycled as scrap metal. They should be put into bins or containers labeled "Scrap Metal – Lead."

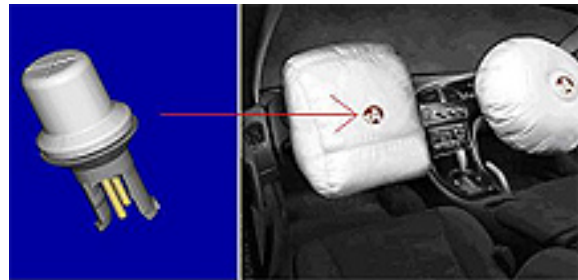


If lead parts are sent for disposal, you must dispose of them as hazardous waste:

- they must be stored in containers labeled "Hazardous Waste – Lead;"
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing lead parts as hazardous waste is avoidable if you recycle them as scrap metal.

Air Bag Initiators

The propellant currently used in most air bag systems is sodium azide, which is an acutely and reactive hazardous waste if disposed. It is all right to leave deployed air bags in salvage vehicles, but undeployed air bags can damage shredders and contaminate shredder residue (fluff). If possible, you should carefully remove undeployed air bags and resell them. If you must deploy an air bag, make sure that you follow the manufacturer's or other recommended procedure to avoid injury.



If undeployed air bags or air bag initiators are sent for disposal, you must dispose of them as acutely hazardous waste:

- they must be stored in containers labeled "Hazardous Waste – Air Bag Initiators;"
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing air bag initiators as hazardous waste is avoidable if they are deployed or resold.

Catalytic converters

Catalytic converters contain the valuable metals platinum, rhodium and palladium. Used catalytic converters have value for their metals content and are easily recycled as scrap metal.

Automotive Shredder Residue (ASR or Fluff)

Auto shredder residue consists of foam, plastics, metal fines, rubber, glass, fabric, oils and possibly PCBs left behind once the valuable scrap metal has been removed. It is easily contaminated by fluids, metals and other parts left in the vehicles before shredding, so it is in the best interests of the shredder to ensure that as much of those materials are removed from the vehicles as possible prior to shredding. Uncontaminated shredder residue can be sent to a landfill and is often used as alternative daily cover.

If the shredder residue is contaminated to the point that it becomes a hazardous waste, you must dispose of it as hazardous waste:

- it must be stored in containers labeled "Hazardous Waste – Auto Shredder Residue;"
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing automotive shredder residue as hazardous waste is avoidable if care is taken to remove potential contaminants prior to shredding the vehicle.

Mercury Switches



Mercury switches have traditionally been used in automobiles for convenience lighting in glove boxes, under the hood and in the trunk because of their reliability. If the switches haven't been removed prior to shredding, mercury can be released into the environment and will contaminate the shredder residue, making it more expensive to dispose.

Mercury switches should be carefully removed from the vehicle and placed into containers labeled "Used Mercury Switches" or "Universal Waste Mercury Switches." You should have written procedures for the removal

process to ensure safe handling of the switches and to ensure that needed equipment is provided and maintained in working order. Employees need to be trained in switch removal procedures and what to do in case of a release. Depending on the volume of vehicles you process, the removed switches should be shipped to a mercury recycler at least once per year. Up to one pound of mercury switches (about the equivalent of a 20 ounce pop bottle) managed as universal wastes can be shipped to the recycler under a normal bill of lading by ground transport.

If you experience a mercury spill while removing or otherwise managing the switches, you should immediately contain the mercury and use a mercury spill kit to clean it up. Mercury switches managed as universal wastes destined for recycling do not count toward your monthly hazardous waste generator accumulation total.

Tires

Tires removed from salvage vehicles can be sold for reuse if they are in good condition. Otherwise, they should be sent offsite to a permitted waste tire recycling or disposal facility. You should avoid long-term storage of tires on your property because they can be a fire hazard and a breeding ground for mosquitoes, rodents and other pests. If you temporarily store tires prior to resale or sending offsite for recycling or disposal, you should store them in a sunny area, stacked so as to minimize standing water in the tires. If you send your tires to a waste tire storage or disposal facility, your tire hauler must be registered with the Colorado Department of Public Health and Environment.

Parts Washers

If you remove parts from salvage vehicles for resale, you may use a parts washer to clean off the dirt and grime. Many parts washers use solvents like methyl ethyl ketone (MEK), which are F-listed, or mineral spirits and petroleum naphtha, which are characteristic ignitable hazardous wastes after use. Others use water and detergent to clean the parts, but even these can generate characteristic hazardous waste if used too long. In any case, the cleaning solution is recycled and filtered to prolong use, but eventually needs to be replaced.



If you use a solvent parts washer, or if you use a water-based parts washer to the point that the cleaning solution becomes characteristic hazardous waste, you must dispose of it as hazardous waste:

- parts washers are generally kept in service until the waste is picked up for disposal by your service company, so the waste is not "stored" on-site and the containers generally do not need to be labeled as hazardous waste;
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing parts washer wastes as hazardous waste may be avoidable if you use a water and detergent-based parts washer and ensure that the cleaning solution is replaced on a regular basis before it becomes too contaminated.

DO NOT mix parts washer solutions with used oil or any other wastes.

Brake Cleaner

Most brake cleaners contain chlorinated solvents like perchloroethylene or methylene chloride, other F-listed solvents like methyl ethyl ketone (MEK), and/or substances like xylene or ethyl benzene that make the waste ignitable. If you use brake cleaners, make sure you contain all overspray in order to prevent contamination of your waste storage and work areas.

Used brake cleaners must be disposed of as hazardous waste:

- it must be stored in containers labeled “Hazardous Waste – Brake Cleaner;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing brake cleaner as hazardous waste may be avoidable if you use a water and detergent-based brake cleaner and ensure that the cleaning solution is replaced on a regular basis before it becomes too contaminated.

DO NOT mix brake cleaner with used oil or other solvents.

Hot Tank

Hot tanks or dip tanks are used to submerge engines and other large vehicle parts for cleaning in a strongly alkaline (pH >12.5) solution. After use, the used solution is corrosive and generally toxic for heavy metals.

Used hot tank solutions must be disposed of as hazardous waste:

- it must be stored in containers designed to hold strong corrosives and labeled “Hazardous Waste – Corrosive;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements will apply (See Appendix A);
- managing used hot tank solutions as hazardous waste is generally not avoidable and the waste must be sent to a permitted hazardous waste treatment or disposal company.

Sump and Oil/Water Separator Sludge

Sludges from your sump or oil/water separator may be hazardous waste, depending on what types of materials are allowed to drain into them. A representative sample of the sludge should be collected and sent to an environmental lab for analysis to determine if it is hazardous for heavy metals or solvents. If the sludge is not hazardous waste, it may be disposed of as solid waste. Because of the high liquids content, you will need to ensure that it is taken to a solid waste disposal facility that can handle wastes containing free liquids.

If the sludge is hazardous, you must dispose of it as hazardous waste:

- it must be stored in containers labeled “Hazardous Waste – Sludge;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing sump or oil/water separator sludge as hazardous waste is avoidable if care is taken to limit the types of materials that can get into the unit.

Used Shop Rags

Shop towels and reusable absorbents become contaminated with listed solvents, used oil and other contaminants when used to wipe off automotive parts or your hands. To avoid managing them as hazardous waste, towels and absorbents should be sent to an industrial launderer or dry cleaner, cleaned and returned for reuse. Any towels or absorbents that are contaminated with a listed hazardous waste or that exhibit a hazardous characteristic and are not commercially dry cleaned or laundered must be managed as hazardous waste:

- they must be stored in containers labeled “Hazardous Waste – Shop Towels and Absorbents;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;



- additional hazardous waste generator requirements will apply (See Appendix A);
- managing contaminated shop towels and reusable absorbents as hazardous waste is avoidable if they are sent to an industrial launderer or dry cleaner and returned for reuse.

Fluorescent and HID Lamps

Many automotive salvage yards use fluorescent lights in their office and shop areas, and high intensity discharge (HID) lamps to light the yard at night. These lamps contain mercury and may be hazardous waste when disposed. Mercury-containing lighting wastes may be managed as universal wastes and sent to a lamp recycler that will recover the mercury.

Used lamps should be placed into containers labeled “Used Lamps” or “Universal Waste Lamps.” You should have written procedures to ensure that the lamps are handled properly, especially if you use HID lamps and need to remove the bulb from the exterior portion of an HID light fixture. Employees need to be trained in lamp replacement procedures and what to do in case a lamp breaks. The used lamps must be sent to a lamp recycler at least once per year, and can be shipped using a normal bill of lading by ground transport. If you break a lamp, you should immediately contain and clean up the spill. The cleaned up material should be wrapped separately from the unbroken lamps. Contact your lamp recycler to find out how to ship broken lamps. Lamps managed as universal wastes destined for recycling do not count toward your monthly hazardous waste generator accumulation total.

To avoid having to manage your fluorescent lamps and HID lamps as hazardous waste, you can switch to low-mercury versions of these lamps. Low mercury fluorescent lamps can be recognized by either green end caps or green printing on the tube. Low mercury versions of high pressure sodium lights are also available. The manufacturer of low-mercury fluorescent or HID lamps should be able to provide you with analytical results showing that their lamps are not hazardous waste.

If you do not recycle your fluorescent and HID lamps, and you have not switched to low mercury versions of these lamps, you must dispose of them as hazardous waste:

- the lamps must be stored in containers labeled “Hazardous Waste – Lamps;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing fluorescent and HID lamps as hazardous waste is avoidable if you use low mercury versions of these lamps.

Spill Cleanup material

Disposable absorbents can be used to clean up drips and spills, but do not use any more than necessary to contain and clean up the spill. If the spilled material was a non-hazardous waste, then the used absorbent will also be non-hazardous. Ensure that all liquids were taken up by the absorbent and are not dripping from it, then wrap the material securely before putting it in the dumpster.

If the spilled material was a hazardous waste, then the used absorbent will likely be a hazardous waste as well. If hazardous, you must dispose of it as hazardous waste:

- the used absorbent must be stored in containers labeled “Hazardous Waste – Used Absorbent;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing used absorbents as hazardous waste is avoidable if you use good housekeeping practices to avoid drips and spills.



Contaminated Soil

Soil may become contaminated over time by the slow accumulation of many small drips and spills, or all at once by a single spill event. Using good housekeeping practices can help you avoid potentially costly remediation of contaminated soil due to accidental drips and spills. When spills do occur, the release

should be stopped and cleaned up immediately. You are the one responsible for determining if the contaminated soil is a hazardous waste. Solid waste landfills in Colorado are not permitted to accept hazardous waste for disposal.

If the spilled material was hazardous waste, then the contaminated soil will likely be a hazardous waste as well. If hazardous, you must dispose of it as hazardous waste:

- the contaminated soil must be stored in containers labeled “Hazardous Waste – Contaminated Soil;”
- all hazardous wastes count toward your monthly hazardous waste generator accumulation total;
- additional hazardous waste generator requirements may apply (See Appendix A);
- managing contaminated soil as hazardous waste is avoidable if you use good housekeeping practices to avoid drips and spills.

If the spilled material was non-hazardous waste, then the contaminated soil will also be non-hazardous. Contaminated soil should be containerized or stored covered on bermed plastic sheeting until a decision is made on how it will be managed. **DO NOT** store contaminated soils indefinitely.

Heavy Metals Contaminated Soil

Soils contaminated by heavy metals can be a concern at automotive salvage yards. Generally, these soils must be excavated and shipped offsite to a hazardous waste disposal facility. Depending on the level and extent of contamination, approval may be granted to conduct on-site soil solidification/stabilization.

Petroleum Contaminated Soil

Much of the soil contamination at automotive salvage yards is a result of used oil dripped or spilled onto the ground. This type of non-hazardous petroleum contaminated soil can be disposed of at an approved landfill or possibly landfarmed on-site. Usually, the fastest and easiest thing to do is to dig out the petroleum contaminated soil and haul it to a permitted solid waste landfill, then backfill with clean soil. Most solid waste landfills in Colorado are able to accept petroleum contaminated soil for disposal, but you should always contact landfills in your area to determine their acceptance criteria.

Landfarming is the process of remediating petroleum contaminated soil by spreading it out on the site where generated and allowing natural microbes in the soil to degrade the petroleum. Although there are no formal requirements for landfarm design and operations, approval for landfarming petroleum contaminated soils is based on factors such as the adequacy of the site to physically accommodate these operations, having an adequate berm and liner system to ensure contamination containment, having a process to turn the soil and keep it moist in order to enhance biodegradation, having a plan to monitor performance of the operation, and having plans for final disposition of the remediated soil.

Approval Process

Although excavation and landfill disposal are suitable for any amount of contaminated soil, on-site treatment is suitable only for relatively small releases where there is no potential to impact surface waters, adjacent properties or sensitive environments. Site-specific guidance for on-site soil remediation may be received by contacting the Hazardous Materials and Waste Management Division at the Colorado Department of Public Health and Environment at (303) 692-3300. The Solid Waste Unit oversees management of non-hazardous contaminated soils, while the Hazardous Waste Corrective Action Unit oversees management of soils contaminated with hazardous wastes.

Appendix A Hazardous Waste Generator Requirements

How are generators of hazardous waste classified?

There are three generator classifications. These categories are based on the cumulative amount of hazardous waste generated per calendar month and/or the amount of hazardous waste on-site at one time. As you might expect, the more hazardous waste that you generate or store, the more regulations that apply to you. As an automotive salvage yard operator, you should reuse, recycle or reuse as much as possible in order to stay in the smallest hazardous waste generator category that you can.

Conditionally Exempt Small Quantity Generators of Hazardous Waste

If you generate no more than 100 kilograms (about 220 pounds or 25 gallons) of hazardous waste, and no more than 1 kilogram (about 2.2 pounds) of acutely hazardous waste in any calendar month AND never accumulate more than 1,000 kilograms of hazardous waste on your property, you are a conditionally exempt small quantity generator of hazardous waste. This category of generator is **conditionally** exempt, not **totally** exempt from the hazardous waste regulations.

What are the requirements for a conditionally exempt small quantity generator?

1. A conditionally exempt small quantity generator must identify all hazardous wastes generated.
2. If a conditionally exempt small quantity generator accumulates more than 1,000 kilograms of hazardous waste on-site at any one time, the generator status of the conditionally exempt small quantity generator changes to that of a small quantity generator and those regulations must be followed.
3. If a conditionally exempt small quantity generator accumulates more than one kilogram of acutely hazardous waste on-site at any one time, the generator status of the conditionally exempt small quantity generator changes to that of a large quantity generator and those regulations must be followed.
4. A conditionally exempt small quantity generator may either treat its hazardous waste on-site or must ensure delivery of their hazardous waste to a facility that is authorized to accept that hazardous waste. They are not permitted to dispose of their hazardous wastes on-site in Colorado and solid waste landfills in Colorado are not allowed to accept any hazardous waste for disposal from conditionally exempt small quantity generators. It is suggested that in order to confirm that delivery of hazardous waste was made to an authorized facility, the conditionally exempt small quantity generator should keep shipping documents or hazardous waste shipping manifests on file for review.

Small Quantity Generators of Hazardous Waste

If you generate more than 100 and less than 1,000 kilograms (between 220 and 2,200 pounds, or about 25 to under 300 gallons) of hazardous waste, and no more than 1 kilogram (about 2.2 pounds) of acutely hazardous waste in any month AND never accumulate 6,000 kilograms of non-acutely hazardous waste on-site at any one time, you are a small quantity generator of hazardous waste.

What are the requirements for a small quantity generator?

1. A small quantity generator must identify all hazardous waste generated and must keep records of any test results, waste analyses or other determinations for at least three years.
2. A small quantity generator must have no more than 6000 kilograms (about thirty 55-gallon drums) on-site at any one time. Storage in excess of this limit requires a permit.
3. A small quantity generator must never accumulate more than 1 kilogram (about 2.2 pounds) of acutely hazardous waste on-site at any one time. Storage in excess of this limit requires a permit.

4. A small quantity generator must not store waste on-site for more than 180 days. If they must ship waste farther than 200 miles from the facility, storage may be for no longer than 270 days. A one time 30-day extension to the 180/270-day accumulation time limit may be granted on a case-by-case basis. Storage in excess of these limits requires a permit.
5. A small quantity generator must file for and receive an Environmental Protection Agency identification number (EPA I.D. number). The EPA I.D. number is not a permit. It is a unique number assigned to the facility that identifies its hazardous waste activities for the state and EPA.
6. A small quantity generator must label hazardous waste accumulation tanks and containers with the words "Hazardous Waste."
7. A small quantity generator must clearly mark the date when waste was first placed in the container (the "accumulation start date") on the container, and must have a tracking system in place to ensure that waste has not been in a hazardous waste accumulation tank for more than 180/270 days.
8. A small quantity generator must ensure that tanks and containers used to store hazardous waste are in good condition and kept closed except when waste is being added or removed.
9. A small quantity generator must ensure that the waste will not cause the tank or container to rupture, leak or corrode. Small quantity generators must inspect tanks and containers weekly for signs of leaks or deterioration. Discharge control equipment, data gathered from monitoring equipment and the level of waste in accumulation tanks must be inspected every day that the tank contains hazardous waste.
10. A small quantity generator must ensure that wastes that could react together (for example could cause a fire, explosion, toxic gases or are otherwise incompatible) are not placed in the same tank or container or an unwashed tank or container that previously held an incompatible material. A storage tank or container holding hazardous waste that is incompatible with wastes in other tanks or containers nearby must be separated from the other materials by a dike, berm, wall, etc.
11. A small quantity generator must take precautions to prevent accidental ignition or reaction of ignitable or reactive wastes and the uncontrolled mixing of incompatible wastes. If they treat or store ignitable or reactive wastes in covered tanks, they must comply with the buffer zone requirements for tanks in the National Fire Protection Association (NFPA) and with any local fire department requirements.
12. A small quantity generator must ensure that uncovered tanks have two feet of freeboard (empty space at the top of the tank) or a containment structure that equals or exceeds the volume of the top two feet of the tank.
13. Where hazardous waste is continuously fed into a tank, a small quantity generator must ensure that the tank is equipped with a means to stop this inflow.
14. Upon closure of the facility, a small quantity generator must remove hazardous waste from storage tanks, discharge control equipment and discharge confinement structures and ensure that it is properly disposed.
15. A small quantity generator may accumulate as much as 55 gallons of a hazardous waste or one quart of an acutely hazardous waste in containers at or near any point of generation where wastes initially accumulate ("satellite accumulation area").
16. When shipping hazardous waste off-site, a small quantity generator must use a properly completed hazardous waste manifest. They must receive a copy of the manifest with the signature of the owner or operator of the designated disposal facility within 60 days of the waste being accepted by the transporter. If no such copy is received in 60 days, the generator must submit a legible copy of the manifest, along with some indication that the generator has not received confirmation of delivery, to

the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment. Properly signed manifests must be kept on file for three years.

17. When shipping hazardous waste off-site, a small quantity generator must ensure delivery of their hazardous waste to a facility that is authorized to accept that waste.
18. When shipping hazardous waste off-site, a small quantity generator must ensure that all hazardous waste are packaged in accordance with the US Department of Transportation regulations.
19. A small quantity generator must test its waste, or use process knowledge of the waste, to determine if the waste is restricted from land disposal. Depending on the outcome of the determination, either a certification or a notification of this determination must be included with each new hazardous waste stream shipped to the same disposal facility or a shipment to a new disposal facility declaring whether or not these wastes meet the Land Disposal treatment standards.
20. A small quantity generator must retain a copy of all notices, certifications, demonstrations, waste analysis data and other documentation relevant to the Land Disposal Restrictions for at least three years.
21. A small quantity generator must ensure that all employees are thoroughly familiar with proper waste handling and emergency response procedures relevant to their job responsibilities.
22. A small quantity generator must have one employee on-site or on-call with the responsibility for coordinating emergency response measures 24 hours a day. This employee is the emergency coordinator. The name and telephone number of the emergency response coordinator, the telephone number of the fire department, and the location of fire extinguishers, spill control materials and the location of the fire alarm (if present) must be posted by the telephone.
23. A small quantity generator must maintain and operate the facility in a manner to minimize the possibility of a fire, explosion or any release of hazardous waste or hazardous waste constituents to the air, soil, or water which could threaten human health or the environment.
24. A small quantity generator must maintain aisle space between containers and tanks to allow unobstructed movement of emergency response personnel or equipment.
25. A small quantity generator must attempt to make arrangements with local authorities such as police, fire, local health departments, emergency response teams and local hospitals to familiarize the local authorities with the layout, waste handling activities at the site, and the types of injuries or illnesses that could result from fires, explosions, or releases at the facility. If state and local authorities decline to enter into an arrangement, the facility needs to document this refusal. Facilities that are not provided with fire protection by a fire protection district must be operated in accordance with a plan for their own protection and prevention. The Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment must approve the plan.

Large Quantity Generators of Hazardous Waste

If you generate 1,000 kilograms (about 2,200 pounds, or 300 gallons) or more of hazardous waste, or more than 1 kilogram (about 2.2 pounds) of acutely hazardous waste in any month, you are a large quantity generator of hazardous waste.

What are the requirements for a large quantity generator? *(Please refer to 6 CCR 1007-3. The regulations for large quantity generators are too lengthy to include all of them in this publication)*

1. A large quantity generator must identify all hazardous waste generated and must keep records of any test results, waste analyses or other determinations for at least three years.

2. A large quantity generator must not store waste on-site for more than 90 days. A one time 30-day extension to the 90-day accumulation time limit may be granted on a case-by-case basis. Storage in excess of this limit requires a permit.
3. A large quantity generator must file for and receive an Environmental Protection Agency identification number (EPA I.D. number). The EPA I.D. number is not a permit. It is a unique number assigned to the facility that identifies its hazardous waste activities for the state and EPA.
4. A large quantity generator must submit a biennial report to the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment by March 1 of each even numbered year or upon the Department's request. The biennial report must cover activities during the previous year. The generator must keep a copy of these reports on file for three years.
5. A large quantity generator must label hazardous waste accumulation tanks and containers with the words "Hazardous Waste."
6. A large quantity generator must clearly mark the date when waste was first placed in the container (the "accumulation start date") on the container, and must have a tracking system in place to ensure that waste has not been in a hazardous waste accumulation tank for more than 90 days.
7. A large quantity generator must ensure that tanks and containers used to store hazardous waste are in good condition and kept closed except when waste is being added or removed.
8. A large quantity generator must ensure that the waste will not cause the container to rupture, leak or corrode. Large quantity generators must inspect containers weekly for signs of leaks or deterioration.
9. A large quantity generator must ensure that the waste will not cause the tank to rupture, leak or corrode. Large quantity generators must inspect the aboveground portion of the tank system for signs of leaks or deterioration, the data gathered from monitoring and leak detection equipment, and the secondary containment system for signs of a release each day that the tank contains hazardous waste. Inspections must be documented in the operating record of the facility.
10. A large quantity generator must ensure that wastes that could react together (for example could cause a fire, explosion, toxic gases or are otherwise incompatible) are not placed in the same tank or container or an unwashed tank or container that previously held an incompatible material. A tank or container holding hazardous waste that is incompatible with wastes in other tanks or containers nearby must be separated from the other materials by a dike, berm, wall, etc.
11. A large quantity generator must take precautions to prevent accidental ignition or reaction of ignitable or reactive wastes and the uncontrolled mixing of incompatible wastes. If they treat or store ignitable or reactive wastes in covered tanks, they must comply with the buffer zone requirements for tanks in the National Fire Protection Association (NFPA) and with any local fire department requirements.
12. A large quantity generator must provide secondary containment systems that are capable of detecting and collecting releases from their hazardous waste tanks and operate them in a manner to prevent any migration of wastes or accumulated liquid out of the system into the environment. Ancillary equipment, such as transfer piping and welded connections, also require secondary containment unless inspected daily.
13. A large quantity generator must use appropriate controls to prevent spills and overflows such as covering the tank or providing at least two feet of freeboard (empty space at the top of the tank) in uncovered tanks, a waste-feed cutoff or bypass system to stop the flow if the tank has equipment that allows the waste to flow into it, or other spill and overflow prevention controls. A large quantity generator must develop and follow a schedule and procedure for inspecting overflow controls daily.

14. Upon closure of the facility, a large quantity generator must remove hazardous waste from storage tanks, discharge control equipment and discharge confinement structures and ensure that it is properly disposed.
15. A large quantity generator may accumulate as much as 55 gallons of a hazardous waste or one quart of an acutely hazardous waste in containers at or near any point of generation where wastes initially accumulate ("satellite accumulation area").
16. When shipping hazardous waste offsite, a large quantity generator must use a properly completed hazardous waste manifest. They must receive a copy of the manifest with the signature of the owner or operator of the designated disposal facility within 35 days of the waste being accepted by the transporter. If no such copy is received, they must contact the transporter and/or the disposal facility to determine the status of their waste. If no copy of the final signed manifest is received within 45 days of the waste being accepted by the initial transporter, the generator must submit an exception report to the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment. Properly signed manifests must be kept on file for three years.
17. When shipping hazardous waste offsite, a large quantity generator must ensure delivery of their hazardous waste to a facility that is authorized to accept that waste.
18. When shipping hazardous waste offsite, a large quantity generator must ensure that all hazardous waste are packaged in accordance with the US Department of Transportation regulations.
19. A large quantity generator must test its waste, or use process knowledge of the waste, to determine if the waste is restricted from land disposal. Depending on the outcome of the determination, either a certification or a notification of this determination must be included with each new hazardous waste stream shipped to the same disposal facility or a shipment to a new disposal facility declaring whether or not these wastes meet the Land Disposal treatment standards.
20. A large quantity generator must retain a copy of all notices, certifications, demonstrations, waste analysis data and other documentation relevant to the Land Disposal Restrictions for at least three years.
21. A large quantity generator must provide classroom and on-the-job training to employees that teaches them proper waste handling and emergency response procedures relevant to their job responsibilities within six months of new or changed job duties. Employees must also receive annual hazardous waste training.
22. A large quantity generator must maintain training records for current and past employees (employed within the last three years).
23. A large quantity generator must have a written emergency response/contingency plan for the facility. A copy of the plan and all revisions must be maintained at the facility and submitted to all state and local emergency response teams. The emergency coordinator must have the authority to implement the contingency plan.
24. A large quantity generator must maintain and operate the facility in a manner to minimize the possibility of a fire, explosion or any release of hazardous waste or hazardous waste constituents to the air, soil, or water which could threaten human health or the environment.
25. A large quantity generator must maintain aisle space between containers and tanks to allow unobstructed movement of emergency response personnel or equipment.
26. A large quantity generator must attempt to make arrangements with local authorities such as police, fire, local health departments, emergency response teams and local hospitals to familiarize the local authorities with the layout, waste handling activities at the site, and the types of injuries or illnesses

that could result from fires, explosions, or releases at the facility. If state and local authorities decline to enter into an arrangement, the facility needs to document this refusal. Facilities that are not provided with fire protection by a fire protection district must be operated in accordance with a plan for their own protection and prevention. The Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment must approve the plan.

27. A large quantity generator must comply with organic air emission standards that apply to tanks and containers.

Hazardous Waste Generator Matrix

GENERATOR REQUIREMENT	GENERATOR CATEGORY		
	Conditionally Exempt Small Quantity Generator (CESQG)	Small Quantity Generator (SQG)	Large Quantity Generator (LQG)
Hazardous Waste Determination	Required through process knowledge or analysis (supporting documentation recommended)	Required through process knowledge or analysis (supporting documentation required)	Required through process knowledge or analysis (supporting documentation required)
On-site Storage & Disposal	Part "B" Permit required	Part "B" Permit required	Part "B" Permit required
Monthly Generation Rate	< 1 kg of acutely HW < 100 kg of HW *	< 1 kg of acutely HW > 100 kg but < 1,000 kg of HW *	> 1 kg of acutely HW > 1,000 kg of HW *
Maximum Accumulation	< 1 kg of acutely HW < 1,000 kg of HW *	< 1 kg of acutely HW < 6,000 kg of HW *	No limit
On-site Treatment	Unrestricted (Knowledge of proper & safe treatment methods implied)	Part "B" Permit, Permit-by-Rule, Treat in WWTU or Treat to meet LDR	Part "B" Permit, Permit-by-Rule, Treat in WWTU or Treat to meet LDR
Accumulation Time Period	None, as long as don't exceed maximum accumulation	180 days or 270 days if TSD facility is > 200 miles away (30 day extension available)	90 days (30 day extension available)
EPA ID Number	Required if generate >3 gal/yr hazardous waste codes F001, F002, F004 and/or F005	Required	Required
Manifests & LDR	Not Required (recommended)	Required	Required
Exception Reports	Not Required (recommended)	Notify CDPHE within 60 days & include a copy of the Manifest	Contact handler within 35 days, Report to CDPHE within 45 days
Biennial Reports	Not Required	Not Required	Required (March 1 st of even numbered year)
Contingency Plan	Not Required (recommended)	Basic Plan Required	Written Plan Required
Container Management	Not Required (recommended)	Good Condition, Compatible with Waste, Labeled as Haz. Waste, Aisle Space, Lids, Weekly Inspections & Acc. Start Date <u>unless</u> at Satellite Accumulation Area	Good Condition, Compatible with Waste, Labeled as Haz. Waste, Aisle Space, Lids, Weekly Inspections & Acc. Start Date <u>unless</u> at Satellite Accumulation Area, Subparts AA, BB & CC apply
Tank Management	Not Required (recommended)	Good Condition, Compatible with Waste, Labeled as Haz. Waste, Acc. Start Date Tracked & Daily Inspections	Good Condition, Compatible with Waste, Labeled as Haz. Waste, Acc. Start Date Tracked, Daily Inspections. Subparts AA, BB & CC apply & Secondary Containment is Required
Personnel Training	Not Required (recommended)	Basic Training Required	Written Training Plan Required
Record Keeping	Disposal Receipts & Waste Analysis Records (recommended)	Manifests, LDR, Training Records & Waste Analysis Records	Manifests, LDR, Waste Analysis Records, Training Records, Biennial Reports & Exception Reports

* 1 kg ~ 1 qt
 1,000 kg ~ 27 gal (~ ½ of a 55 gal drum) or 220 lbs, depending on material
 1,000 kg ~ 270 gal (~ 5/55 gal drums) or 2,200 lbs, depending on material
 6,000 kg ~ 1,620 gal (~ 30/55 gal drums) or 13,200 lbs, depending on material

For liquids, specific gravity x 8.3 = lbs/gal