

# Safe Disposal Procedures for Household Appliances that Use Refrigerants



## Introduction

Appliances that are no longer needed are often dropped off for disposal at solid waste landfills, metal recyclers, or similar facilities. Many of these appliances, such as window air conditioners, motor vehicle air conditioners, and refrigerators, rely on ozone-depleting refrigerants and their substitutes. As the owner or operator of a solid waste landfill or metal recycling facility, you need to comply with the U.S. Environmental Protection Agency's (EPA's) regulations for the removal of refrigerants before you dispose of any appliances.

Common refrigerants include ozone-depleting substances called chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), which are also known by the trade name Freon®.

This brochure describes the federal safe disposal requirements you must follow when your facility accepts an appliance that might contain refrigerants for disposal. **You should also check with your local environmental agency to make sure that you comply with any local or state regulations as well when disposing of these appliances.**

## Which Appliances You Need to Check Before Accepting for Disposal

Appliances with cooling elements, such as motor vehicle air conditioners, household refrigerators and freezers, window air conditioners, water coolers, vending machines, ice makers and dehumidifiers, are subject to EPA's safe disposal requirements.

## What You Need to Do When You Accept these Appliances for Disposal

Under the federal regulations, you are responsible for making sure the refrigerant has been properly removed before an appliance is buried, shredded or dismantled, either by verifying its removal prior to arrival at your facility, or by removing it yourself.

### Verification of Refrigerant Removal Prior to Arrival at Landfill

As the owner or operator of a solid waste landfill or metal recycling facility, you must obtain a written and signed statement from each of your customers verifying that the refrigerant has been properly removed from all appliances (including motor vehicle air conditioners) prior to delivery to your facility.



### What if I receive an appliance with a sticker on it?

In most cases, marks on appliances such as "X" or the presence of a sticker in some way stating that the appliance has been "emptied" do **NOT** satisfy the EPA verification requirements.

You must maintain copies of these documents on site for at least three years. This documentation must include:

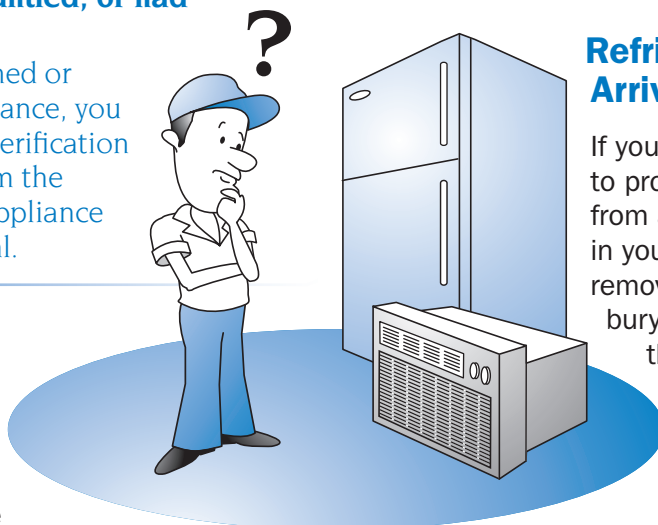
- A signed statement from the customer that sent the appliance for disposal stating that all refrigerant has been removed from the appliance in accordance with the standards listed in EPA's regulations, and
- The name and address of the person (for example, an appliance retailer) who removed the refrigerant and the specific date the refrigerant was removed, OR a copy of the contract between the customer and the person who removed the refrigerant stating that refrigerant will be removed from these appliances prior to delivery to your facility.

### What if I receive an appliance that has been crushed, partially dismantled, or had its refrigerant line cut?

If you receive such a crushed or partially dismantled appliance, you still must obtain written verification of refrigerant removal from the customer that sent that appliance to your facility for disposal.

As part of your verification efforts, EPA recommends that you notify any customers sending these appliances for disposal that the refrigerant must be properly removed before the appliances arrive at your facility. You may do this by:

- Posting warning signs at your facility's entrance stating that your facility will not accept any whole, partially dismantled, or crushed appliance or motor vehicle air conditioner for disposal without accompanying documentation of proper refrigerant removal, or
- Sending letters to more frequent customers stating that refrigerant must be properly removed (and documentation of the removal brought by the truck driver) before such appliances or motor vehicle air conditioners can be accepted for disposal, or
- Using any other equivalent means you can think of to notify your customers.



### What should I do if a truck delivers a load of solid waste containing one or more appliances, but does not have any refrigerant removal documentation for the appliances or know who the original appliance owners or trash collector were?

You can do any of the following:

- Refuse to dispose of the appliance(s) and make the truck driver load the appliance back on the truck for return to whatever location the driver started from;
- Accept the appliance(s) from the truck driver, and then send the appliance(s) to a technician who can remove the refrigerant in accordance with EPA's regulations; or
- Remove the refrigerant yourself using EPA-certified equipment (see next section).

### Refrigerant Removal after Arrival at Your Facility

If you do not require your customers to properly remove the refrigerant from any appliance before it arrives in your facility, you must properly remove the refrigerant prior to burying, shredding or dismantling the appliance at your facility.

If you choose to remove and collect the remaining refrigerant from an appliance at your facility, you must do so in accordance with EPA's safe disposal requirements. You must obtain and properly use refrigerant recovery equipment that has been certified for use with small appliances or motor vehicle air-conditioners. As the owner of refrigerant recovery equipment you must register or certify that you have obtained refrigerant recovery equipment and that you will comply with the safe disposal requirements.

The equipment certification must be signed by the owner of the equipment or another responsible officer and sent to the appropriate EPA Regional Office. You are not required to send in a new certification each time you add refrigerant recovery equipment at your facility.

Equipment certification requirements are located in 40 CFR Part 82, Subpart F, §82.162(c) and at <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=b37988720482f5c67595ddf2ebd45422&rgn=div8&view=text&node=40:17.0.1.1.2.6.1.8&idno=40>

### The certification must include:

1. The name and address, including the county name, of the purchaser of the equipment;
2. The name and address of your facility (where the equipment is or will be located);
3. The number of service trucks (or other vehicles) used to transport technicians and equipment between your facility, any job sites and the field;
4. The manufacturer name, the date of manufacture, and, if applicable, the model and serial number of the equipment; and
5. A statement that the equipment will be properly used in servicing, recovering, or disposing of appliances and that the information given is true and correct.



You can find a sample form for equipment certification at [www.epa.gov/ozone/title6/608/recoveryform.pdf](http://www.epa.gov/ozone/title6/608/recoveryform.pdf)

On-site personnel recovering refrigerant from appliances that arrive at your facility for disposal are not required to obtain EPA technician certification.

### What can I do with the refrigerant when I remove it from an appliance at my facility?

- You must collect the refrigerant, since EPA's regulations prohibit the venting of refrigerant compounds to the atmosphere.
- In most cases, you cannot sell the collected refrigerant for direct re-use. Used refrigerant must be reclaimed by an EPA-certified reclaimer prior to resale to a new owner. EPA-certified refrigerant reclaimers have specialized equipment that has the ability to clean used refrigerant back to virgin specifications.
- You can sell collected refrigerant for direct re-use if the refrigerant was **ONLY** removed from motor vehicle air conditioners and will **ONLY** be used in motor vehicle air conditioners by the new owner.

## Further Information

For further information regarding the proper disposal of appliances, please visit [www.epa.gov/ozone](http://www.epa.gov/ozone) or call EPA's Stratospheric Ozone Information Hotline at 1-800-296-1996

A factsheet with more information on the disposal requirements may be found at [www.epa.gov/ozone/title6/608/608fact.html#disposal](http://www.epa.gov/ozone/title6/608/608fact.html#disposal)

A copy of the federal regulations described in this brochure, located in 40 CFR Part 82, Subpart F, are available at [http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=0cdade3c39eb979704559c80ede2ef61&tpl=/ecfrbrowse/Title40/40cfr82\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=0cdade3c39eb979704559c80ede2ef61&tpl=/ecfrbrowse/Title40/40cfr82_main_02.tpl)

Required levels for the evacuation of refrigerant from appliances may be found at [www.epa.gov/ozone/title6/608/608evtab.html](http://www.epa.gov/ozone/title6/608/608evtab.html)

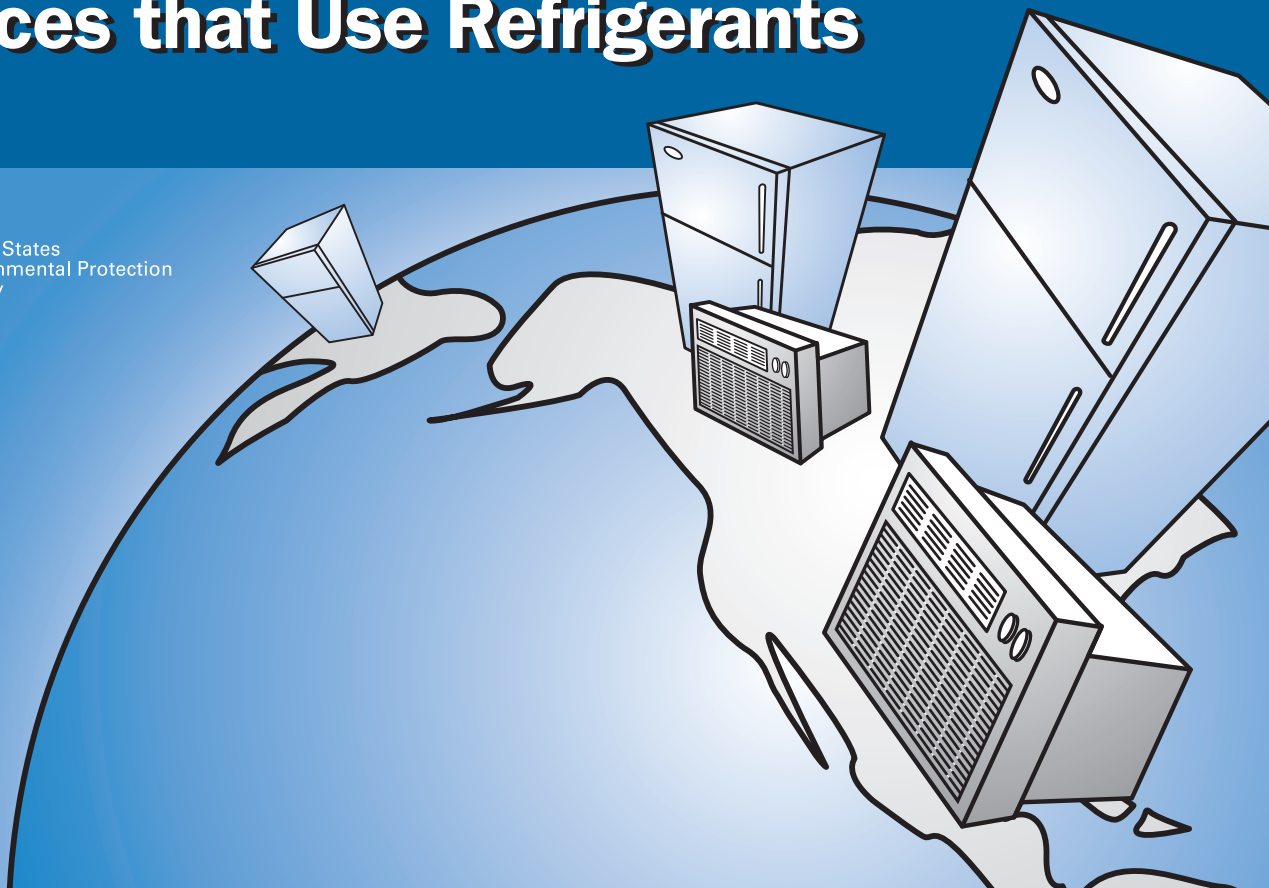
Lists of certified refrigerant recovery equipment may be obtained from the following sources:

- The Air-Conditioning and Refrigeration Institute at 703-524-8800 or online at [www.ari.org/directories/rre/#previous](http://www.ari.org/directories/rre/#previous)
- Underwriters Laboratories 708-272-8800 ext. 42371 or online at [www.ul.com](http://www.ul.com)
- EPA's listing of approved refrigerant recovery equipment for motor vehicle air conditioners online at [www.epa.gov/ozone/title6/609/technicians/appequip.html](http://www.epa.gov/ozone/title6/609/technicians/appequip.html)

A list of EPA-certified refrigerant reclaimers is available at [www.epa.gov/ozone/title6/608/reclamation/reclist.html](http://www.epa.gov/ozone/title6/608/reclamation/reclist.html)

Links to all state environmental agencies can be found at [www.epa.gov/epahome/state.htm](http://www.epa.gov/epahome/state.htm)

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