Responsible Appliance Disposal Program

RAD

EPA

Responsible Appliance Disposal (RAD) Program

Guidance for Existing and Prospective Partners

Partners in EPA's Responsible Appliance Disposal (RAD) Program help protect the ozone layer and reduce emissions of greenhouse gases by disposing of old, inefficient refrigerated appliances using the best environmental practices available. By meeting Program requirements and going above what is required by law to remove appliance foam, Partners can reduce emissions of ozone-depleting substances (ODS) and greenhouse gases (GHGs), and will be publicly recognized for doing so. RAD Partners also help to ensure that hazardous materials, such as mercury, PCBs, and used oil, are not released into the environment.

Joining the Program may also serve as a way to document efforts, voluntary commitments, or pledges to reduce greenhouse gas emissions. In addition, Partners that actively encourage the removal of old appliances from the electricity grid (e.g., by providing bounties for old, working appliances) will also reduce energy demand and greenhouse gas emissions associated with electricity generation.

What Does Proper Disposal of Refrigerated Appliances Entail?

Responsible disposal of refrigerated appliances involves the proper recovery and treatment of refrigerant, foam, mercury, PCBs, and used oil, as explained in detail below.

Refrigerant

The refrigerant or coolant contained in household appliances depletes the ozone layer and/or contributes to global warming; therefore, at the appliance's end-of-life, refrigerant or coolant must be properly recovered using EPA-certified refrigerant recovery equipment.

Once **recovered**, refrigerant must either be **reclaimed** by an EPA-certified reclaimer for reuse, or destroyed using approved destruction technologies.

- Technicians disposing of/dismantling appliances are not required to be certified. However, disposal companies must **certify** to their EPA regional office that they have acquired and are properly using refrigerant recovery/recycling equipment.

Foam

Appliance insulating foam is manufactured using blowing agents that contribute to ozone depletion and/or global warming. To prevent emissions of the foam blowing agent (i.e., to the atmosphere), RAD Partners agree to remove the insulating foam prior to the disposal of the appliance, and either reclaim the ODS from the foam or destroy it using environmentally-acceptable methods. Special technology is needed to separate the ODS liquid from the foam for reclamation.

Mercury

As a toxic substance, mercury waste must be recovered from switches and relays found in appliances prior to their disposal. These wastes must be handled by a qualified recovery facility that has appropriate hazardous waste management permits. At approved facilities, mercury wastes are managed in accordance with applicable federal, state, and local hazardous waste regulations (e.g., waste must be properly packaged prior to transport). For more information on the proper storage of hazardous waste, visit www.epa.gov/osw/tsds.htm.

Used Oil

If improperly handled, used oil can leak into groundwater and major waterways and pollute drinking water sources. Used oil from appliances may contain toxic chemicals and heavy metals which are dangerous to human health. Therefore, used oil must be recovered from appliances and properly managed in accordance with federal standards (40 CFR 279) and any applicable state regulations. Once used oil is recovered, it must be stored in appropriate containers that are in good condition, with no visible leaks. Additionally, any refrigerant contaminating the used oil must be recovered to the fullest extent possible, and reclaimed or destroyed (as explained above). Used oil from refrigerated appliances cannot be mixed with used oil from other sources.

PCBs

Polychlorinated biphenyls (PCBs) are regulated by EPA as toxic substances; they may cause cancer, liver damage, and can have negative impacts on the neurological development of children, the human reproductive system, the immune system, and the endocrine system. PCBs can be found in capacitors (used to store electrical charge in the compressor) of refrigerated appliances. If the capacitor fails to state "contains no PCBs" or the capacitor (or appliance) was manufactured before 1979, one should assume that the capacitor contains PCBs. By law, PCB capacitors may not be stored for more than one year. EPA-approved storage and disposal companies can assist you in properly handling any PCB capacitors recovered from appliances. To find an EPA-approved PCB storage facility near you, visit www.epa.gov/pcb/pubs/comstor.html. To find an EPA-approved PCB disposal company near you, visit www.epa.gov/pcb/pubs/stordisp.html.

What Recordkeeping / Reporting Requirements Apply to RAD Partners?

EPA provides partners with a user-friendly reporting form, available electronically or in hard copy, to be completed and submitted annually to the EPA. Based on user inputs, the electronic reporting form automatically calculates the environmental benefits of partner activities, such that each partner can see the positive impacts that have resulted from their disposal programs.

Specifically, RAD Partners must report on the following program information annually:

- The number of appliances collected;
- Type and quantity of refrigerants recovered and subsequently reclaimed/destroyed;
- Type and quantity of foam blowing agent destroyed;
- Weight of metals, plastics, and glass recycled;
- Quantity of hazardous waste products recovered; and
- Energy savings information associated with retirement of old appliances (if applicable).

Where Can I Find More Information?

Visit EPA's Responsible Appliance Disposal Program website at www.epa.gov/ozone/snap/emissions/radp.html.