

EQUIPMENT DISPOSAL AND DECOMMISSIONING GUIDELINES

The saveONenergy Retrofit Program participant agreement states:

"The Participant will take all necessary steps to have equipment that was removed or replaced as part of any Project disposed of or decommissioned in accordance with appropriate disposal or decommissioning processes, applicable laws, and in accordance with commercially reasonable environmental practices and shall evidence such activities by appropriate disposal certificates or similar documentation."

The intent of this summary sheet is to provide additional information to the marketplace so that participants may make informed decisions with respect to equipment disposal and decommissioning for specific products or technologies. While there are no specific documents that can be referenced in the table below, to meet the requirement for "evidence of reasonable environmental practices" it is recommended that program participants ask each service provider to provide copies of any disposal certificates that are obtained while dropping off any material at a licensed waste disposal and recycling sites.

Hazardous Materials – Regulated Compliance				
Regulations	Best Practices	Regulatory Documentation	saveONenergy Documentation Requirements	Local Disposal Sites
Air Conditioning / Refrigeration System with CFC, HCFC or HFC Based Refrigerants - Both chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) have been used as refrigerants in a variety of HVAC equipment and have both ozone depleting and global warming impacts. The production of CFCs was eliminated in 1995, and HCFC production and consumption will be phased out over the next 20 years. Many commercial systems have already been converted to HCFCs (primarily R-22) from CFCs. The removal, discharge, handling, and disposal of the existing refrigerant is regulated by Ontario's Ozone-Depleting Substances and Halocarbon Alternatives Regulation and must be performed by a certified technician.				
<p>As of January 1, 2009, large refrigeration equipment could no longer be refilled with CFC refrigerant. As of July 1, 2012 CFCs will be designated as hazardous waste and chillers using CFC refrigerant (typically R11) will not be allowed to operate.</p> <p>Technicians who are part of the Refrigerant Management Canada Stewardship Program are currently required to transfer all material to a wholesaler or a refrigerant waste disposal site.</p>	<p>CFC refrigerant use must discontinue by December 31, 2011 and all equipment must be converted to an alternate refrigerant or replaced.</p>	<p>An Ozone Depletion Prevention (ODP) certificate is required to purchase and handle refrigerants in Ontario.</p>	<p>Written proof that the refrigerant has been sent to an RMC wholesaler.</p> <p>Written proof that other system's components have been sent to an Ontario Scrap Dealer or municipal landfill.</p>	<p>Authorized RMC wholesalers and program participants are available at: http://www.refrigerantmanagement.ca/authorized-participants.php</p>

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Fluorescent and HID Ballasts (Containing PCBs) - The capacitors inside the ballasts of fluorescent and HID lamp fixtures manufactured prior to 1980 are likely contaminated with high levels of PCB liquid. Most of these fixtures were removed in Ontario over the past 30 years. Fluorescent lighting ballasts containing PCBs are easily identifiable by a trained lighting contractor.				
The handling of PCB wastes is subject to Ontario Regulation 362 PCB Waste Management under the Environmental Protection Act of Ontario.	Environment Canada has a publication on "Identifying Lamp Ballast containing PCBs". http://www.ec.gc.ca/Publications/default.asp?lang=En&xml=F1D91988-3B5E-4956-A705-78D054685FFE	Contractors wishing to remove large quantities (>40) of ballasts from a site must obtain written permission from the Ministry of the Environment.	Written proof that the PCB ballast has been sent to a disposal facility.	Aevitas, Ayr, ON http://www.aevitas.ca/ C.L.E.A.N. Environmental Services, Bolton, ON http://www.cleanalliance.com/ PCB Disposal, Ajax, ON http://www.pcbdisposalinc.com/
Insulation with Asbestos and Other Asbestos Containing Materials – Asbestos can be contained in a number of insulation products, from sprayed-on friable materials to sheet and board products. Asbestos has been identified as a dangerous carcinogen and its removal and handling must be done in accordance with strict Ministry of Labour Regulations.				
The removal and handling of Asbestos is governed by Ontario Regulation 278 Designated Substance – Asbestos On Construction Projects and in Buildings and Repair Operations	If asbestos is suspected, the owner is required to have a report prepared stating whether the material is or is not asbestos-containing material or else remove the material as if it were asbestos-containing material.	Depending on the type of removal operation, additional training and documentation may be required from the Ministry of Labour.	Written proof that the asbestos was sent to a hazardous waste site.	Asbestos must be disposed of at a licensed hazardous waste site, such as the Lambton Clean Harbours hazardous waste site. Please ensure that the disposal site used is licensed to receive asbestos waste.

Hazardous Materials – Voluntary Compliance with Recycling Programs			
Regulations	Best Practices	saveONenergy Documentation Requirements	Local Disposal Facilities
Fluorescent Lamps (containing mercury) - Mercury is an essential component in fluorescent lamps and high intensity discharge (HID) lamps used in streetlights and floodlights. The mercury is in a vapour form and in the phosphor coating on the lamp tube. When excited, the mercury vapour discharge emits ultraviolet radiation that is converted to visible light by the phosphor powder that coats the interior of the light. Most fluorescent lamps qualify as hazardous waste when removed from service and are prohibited from disposal in the solid waste stream.			
<p>All products containing mercury are classified as subject waste under Ontario Regulation 347 General Waste Management.</p> <p>Fluorescent lamps are categorized as “common mercury waste” under Ontario Regulation 347. Common mercury waste can be transported to a common mercury recovery facility without being registered or manifested.</p>	<p>Ensure that your lighting contractor participates in the voluntary “Take Back the Light” Program run by the Recycling Council of Ontario. “Take Back the Light” is a fluorescent lamp recycling program that provides a simple low-cost opportunity to send fluorescent lamps to be recycled.</p>	<p>Written proof that the lamps have been sent to a common mercury recovery facility.</p>	<p>Aevitas, Ayr, ON http://www.aevitas.ca/</p> <p>C.L.E.A.N. Environmental Services, Bolton, ON http://www.cleanalliance.com/</p>
Thermostat (containing mercury) – Mercury-containing switches have been used in thermostats for over 40 years in most residential and commercial heating systems. They provided temperature control without a power source and with little maintenance. Each switch contains approximately 3-4 grams of mercury in a glass ampoule, typically attached to a metal coil.			
<p>All products containing mercury are classified as subject waste under Ontario Regulation 347 General Waste Management.</p> <p>Thermostats are categorized as “common mercury waste” under Ontario Regulation 347. Common mercury waste can be transported to a common mercury recovery facility without being registered or manifested.</p>	<p>“Switch the Stat” is a voluntary program run in cooperation with Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) and the Canadian Institute of Plumbing & Heating (CIPH). HVAC/R contractors and wholesalers participate by collecting older thermostats that contain mercury and ensuring that they are removed to licensed hazardous waste facilities.</p>	<p>Written proof that the thermostats have been sent to a common mercury recovery facility.</p>	<p>Aevitas, Ayr, ON http://www.aevitas.ca/</p> <p>Please contact either HRAI or CIPH for other participating disposal sites.</p>

Electronic Waste			
Regulations	Best Practices	saveONenergy Documentation Requirements	Local Disposal Facilities
Waste electrical and electronic components covered under the Recycle Your Electronics program			
<p>The Waste Diversion Act (WDA) of 2002 provides the legislative framework under which Waste Diversion Ontario (WDO) - a permanent, non-government corporation - operates.</p> <p>Ontario Regulation 393 Waste Electrical and Electronic Equipment was created under the WDA.</p> <p>Ontario Electronic Stewardship runs the Recycle Your Electronics program.</p>	<p>Ensuring all electronic waste covered under the Recycle Your Electronics program is sent to an approved processor.</p> <p>A list of the electronic waste covered under the program is available at: http://www.ontarioelectronicstewardship.ca/program/accepted-electronics</p>	<p>Written proof that the waste has been sent to an approved processor under the Recycle Your Electronics program.</p>	<p>A list of approved processors is available at: http://www.ontarioelectronicstewardship.ca/your-role/service-provider/recycler-processor#approved</p>
Large IT equipment not covered under the Recycle Your Electronics program			
<p>N / A</p>	<p>Ensuring large IT equipment is sent to a recycling facility.</p>	<p>Written proof that the large IT equipment has been sent to a recycling facility.</p>	<p>Many of the approved processors under the Recycle Your Electronics program will accept Large IT equipment such as servers.</p>

Non-Hazardous Materials

Electric Motors, Air Compressors, Standard Lighting Ballasts (not containing PCBs) - There are no regulatory requirements for the disposal of these products and technologies. However, these products contain metals that should be recycled instead of being placed in a landfill. In some instances, compressor oils and lubricants may be able to be recovered from the equipment for recycling or disposal. Contact the local municipality or a registered Ontario Scrap Dealer for details on how to ensure that this material is diverted from disposal in the solid waste stream.

Lamps (not containing mercury) - These may be safely disposed of in the solid waste stream. Contact your local municipality for details on disposal. However, some lighting contractors have been stock-piling standard incandescent bulbs (and T12 fluorescent lamps) for possible resale after upcoming regulations eliminate low-efficiency incandescent and fluorescent lamps from the marketplace. Every attempt should be made to ensure that any lighting technology that is replaced in a retrofit project is diverted to the appropriate solid waste stream; and in the case of T12 lamps, recycled through the "Take Back the Light" program (see above).

Ballasts (not containing PCBs) - These may be safely disposed of in the solid waste stream. However, best practices is to send the ballast to a recycling facility. Contact your local municipality for details on disposal.