

5.5 Office Equipment and Related Services

Office equipment consists of all the “hard” materials that make an office function. The items in this category focus on printing and printing services, and production of

photocopies and facsimiles. In addition, as noted in the case study at the end of the section, much of this information can apply to computers.

5.5.1 Photocopiers and Facsimile Machines

An Overview

Photocopiers and facsimile (fax) machines are widely used in both traditional office and home workplaces. They are an integral part of many offices.

The variety of models on the market that perform “multifunction” tasks -- from acting as a photocopier, an answering machine, a fax machine, a computer printer or a computer scanner -- has made it possible for units to appear in the smallest of “home offices.”

With improvements to the environmental friendliness of this category of product there should be reduction in waste-to-disposal, a reduction of chemical emissions and conservation of energy.

Potential Environmental Impacts

- Consume both significant quantities of energy and paper.
- Release emissions in the form of noise and chemical substances such as ozone.

Things to Consider If You Write Your Own Specifications

This is an opportunity to add clauses in photocopier specifications to address:

- Preference for units that carry the EcoLogo
- Preference for multifunction units that reduce the need for additional machines to perform office tasks
- Preference for machines that use standard paper
- Preference for photocopiers that make two sided copies.

Specifications from Other Agencies and Seals of Approval

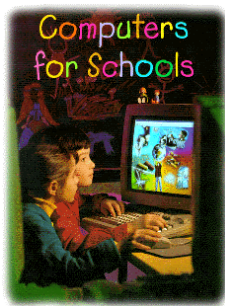
Environmental Choice program guideline ECP-46

(details at www.environmentalchoice.com/guidelines/pdfs/ecp-46.pdf)

Environmental Choice program guideline ECP-71

(details at www.environmentalchoice.com/guidelines/pdfs/ecp-71.pdf)

Case Study: Computers for Schools



Computers for Schools

Old computers are finding new lives thanks to the Canadian Computers for Schools (CFS) Program. CFS channels eligible, surplus computer equipment and software from governments and businesses to schools and libraries. Since major sponsors Industry Canada and the Telephone Pioneers began the program in 1993, over 193,563 computers have been tested, refurbished and delivered to recipients free of cost. In British Columbia, BC Tel pioneers have logged countless volunteer hours testing and refurbishing over 16,000 of those computers for donation to BC schools.

This largely volunteer program has a lofty goal: to place a quarter of a million computers in schools and public libraries by March 31, 2001. For more information check the program’s provincial web site at www.scbc.org/cfs.

5.5.2 Printing Cartridges (including remanufactured printing cartridges)

An Overview

Printing cartridges are widely used in photocopy and facsimile equipment, as well as in laser printers. Statistics indicate that in Canada over one million cartridges are disposed of annually. Most are not reused.

Cartridges are often thrown away once the toner inside the cartridge is used up or the “toner waste sump” is filled. This typically occurs after several thousand copies have been made, depending on the make and model of the printing cartridge.

Single use cartridges contain many components that are in perfect condition at the end of the expected life of the cartridge. The practice of re-manufacturing printing cartridges involves disassembling the unit, inspecting and cleaning components replacing or refurbishing the unit’s organic photoreceptor cell and replacing the supply of toner.

Potential Environmental Impacts

- End-of-use disposal problems.

Things to Consider If You Write Your Own Specifications

This is an opportunity to add clauses in photocopier specifications to address:

- Preference for units that carry the EcoLogo
- Preference for remanufactured print cartridges.

Specifications from Other Agencies and Seals of Approval

Environmental Choice program guideline ECP-42
(details at www.environmentalchoice.com/guidelines/pdfs/ecp-42.pdf)

Case Study: Recycling Toner Cartridges



GVRD Staff Representative

A decade ago few people thought twice about throwing a spent toner cartridge in the garbage and buying a brand-new replacement. Times have changed, and the GVRD’s approach to replacing toner cartridges is an excellent example of how. In 1998 and 1999 the GVRD sent a total of 404 spent toner cartridges for recycling and purchased 760 remanufactured cartridges. In the past 4 years the GVRD has received \$10,250 in rebates from toner cartridge recycling and has applied these funds to other recycling projects.

5.5.3 Printing Inks

An Overview

Printing inks, used to produce an image on a “substrate” (usually a paper), are generally made of 3 components: pigments, “the vehicle” (the carrier and binding agent) and additives.

Pigment is the solid coloring that we see. The “vehicle” is the largest component of ink and acts as a carrier medium for the pigment as well as a binder to fix the pigment to the “substrate”. Additives modify the performance of ink and include materials such as dryers, waxes, lubricants, reducing oils and solvents, binding varnish antioxidants and resins.

Potential Environmental Impacts

- The manufacture, use, and disposal of printing inks which contain heavy metals, petroleum distillates and volatile organic compounds (VOCs).

Things to Consider If You Write Your Own Specifications

This is an opportunity to add clauses in ink specifications to address.

- Preference for units that carry the EcoLogo.
- Preference for inks with lower levels of heavy metals and petroleum distillates.

Specifications from Other Agencies and Seals of Approval

Environmental Choice program guideline ECP-48
(details at www.environmentalchoice.com/guidelines/pdfs/ecp-48.pdf)