

# RECOVERY, RECYCLING AND DESTRUCTION

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## A. RECOVERY AND RECYCLING OF CFCs, HCFCs AND HFCS

In recent years there has been increased interest in developing appropriate technologies (affectionately referred to as "vampire units") for the recovery and recycling of CFCs in industrial processes and from refrigeration and air conditioning equipment. Pressure brought to bear on the industry through public debate, such as that conducted by this Committee, and through local and regional legislation has played an important part in this progress. The State of Vermont, for example, passed a bill restricting the use of CFCs in automobile air conditioners. Subsequently, some of the large automobile manufacturers have indicated that their service depots would soon acquire recovery and recycling equipment. The Greater Regional District of Vancouver and Metropolitan Toronto are implementing bylaws that require the recovery and recycling of CFCs, while Montreal is planning to invoke as regulations the proposed "Code of Practice for the Reduction of CFC Emissions in Refrigeration and Air Conditioning Systems", developed by Environment Canada.

Recovery and recycling of CFCs can be done in several ways. For example, if a refrigeration unit needs repairs the CFCs can be withdrawn into a sealed container and then reinjected into the same unit upon completion of the repairs. Although the CFCs would contain oils and other substances, they are replaced into the same refrigeration unit from which the contamination was derived and they will not need to be repurified. When a refrigeration unit is decommissioned, however, the CFCs are often contaminated by substances that may be incompatible with other refrigeration units, or there may only be limited uses for the contaminated CFCs until they have been repurified. Since units for on site repurification are not available for most situations, recycling will often involve transporting the substance to a place where it can be repurified. Liquid CFCs that are used as solvents or cleaning agents, however, are often contaminated by more dangerous chemicals and must be handled as a hazardous waste until they are purified.

The Committee encourages initiatives being taken by manufacturers such as Inglis, which soon will recover CFCs from refrigerators during repair at its service centres. CAMCO and other companies are investigating technologies for portable CFC recovery and recycling equipment to be used in the home during maintenance procedures. The Committee applauds service organizations, such as the Heating, Refrigerating and Air Conditioning Institute (HRAI), which have helped develop a Code of Practice as well as education and training programs for technicians who design and service refrigeration equipment. CFCs have been voluntarily removed from use by the foam packaging industry and from 95% of the aerosol uses in Canada, those of a medical nature being the main exception.

### Automobile Air Conditioners

Not all uses of CFCs in Canada are being reduced, however. The Committee condemns the automobile industry's failure to develop air conditioning units that are leak-proof. An estimated 60% of new cars sold in Canada are equipped with air conditioning units, as are 90% of