NATIONAL ROUND TABLE ON THE ENVIRONMENT AND THE ECONOMY
TABLE RONDE NATIONALE SUR L'ENVIRONNEMENT ET L'ÉCONOMIE

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DRAFT

DELPHI

NRT-1996056(B)
Green Procurement

# Development of Criteria for Green Procurement

## Phase II: Tools and Criteria

Ottawa
London
Vancouver

**Prepared for:**

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# *Contents*

SECTION A - CONTEXT

## 1. Introduction

As part of a broader movement towards more sustainable practices, many organizations worldwide are trying to "green" their procurement of products and services -- that is, to purchase wherever possible products and services that are less harmful to the local and global environment. This is especially pronounced in the public sector, where governments are increasingly being expected to use their influence and buying power to play a leadership role in both defining and implementing "green procurement". Most public sector organizations, at the local, provincial/state, national and even international level have spent between one and ten years struggling to define and then implement "greener" procurement.

This quest has proven to be a formidable challenge. In order to purchase or even specify environmentally-preferred products and services, it is first necessary to define what we mean by "green". What makes a product green, or at least greener than its competitors? In the life cycle of producing, using and disposing of any product, there are typically dozens of points at which environmental impact might be judged, measured or compared. In many cases, there is scientific uncertainty about these impacts.

Few organizations, let alone individual purchasers, have the resources or skills to make such evaluations. As a result they tend to seek guidance from outside sources such as: "eco labeling" organizations which assess the impact of individual products or suppliers and then award eco labels to those deemed to meet criteria set for a particular sector or product category; companies, government agencies or purchasing associations which have developed their own sources and methods for identifying and verifying green products; and independent groups which have developed and released guides and "green" directories of products and suppliers.

## 2. Vision

The Task Force on Green Procurement of the National Round Table on the Environment and the Economy (NRTEE) believes that real movement toward sustainable development in Canada must include fundamental changes in the way goods and services are produced and consumed.

To motivate change it is important to highlight the benefits of green procurement. They include:

- Savings realized from the application of the 3Rs - reduce, reuse and recycle;
- Savings realized from cost avoidance - lower waste management fees, lower hazardous materials management fees and less spent on pollution prevention;
- Savings realized from resource conservation - energy, water and fuel;
- Potential benefits related to the reduction of risk, environmental compliance and due diligence;
- Benefits to the community as a whole - cleaner air and water, less demand for landfill and less demand for resources.

Furthermore, a strong public sector-led initiative in green procurement has the potential to boost the market for such goods and services. The Canadian Environmental Industry Strategy, launched in 1994, includes action on procurement for this very reason. The Strategy states: "The federal government is the nation's largest commercial landlord and purchases more than $9 billion annually ...Through its procurement purchases it acts as a strong lever for remediation and restoration work and offers significant opportunities to help develop Canada's domestic market for environmental goods and services. (p. 19)"

In fact our survey revealed that other jurisdictions share this view and are willing to take firm steps to ensure action. In the United States, President Bill Clinton signed Executive Order 12845 in April 1993 requiring all federal agencies to purchase Energy Star computers, printers and monitors where commercially available. As of January 1995, over 2000 products had obtained the Energy Star certification.

*Translating Vision Into Action*

A critical obstacle to the growth of green procurement in the public sector identified by the NRTEE is the lack of common criteria for identifying, comparing and specifying "green" products and services. Without such criteria, most purchasers do not feel competent to switch to greener procurement habits. The Task Force initiated this project -- "Development of Criteria for Green Procurement in the Public Sector" -- to meet this need.

The project had as its overarching goal the development of clear and concise criteria for the identification of green products and services that can be incorporated into government purchasing policies, guidelines and bid documents. The priority users of these criteria are federal government purchasers, but it is intended that they may be appropriate for use by

provincial and municipal governments and may serve as a guideline for the development of similar criteria by private sector organizations.

In addition to identifying and developing criteria, this project studied approaches to green procurement being taken by organizations in various sectors and countries. It was also the intention of the Task Force that the research, analysis and feedback from a wide cross-section of advisors would lead to the development of recommendations on implementation of the criteria and of future steps to promote green procurement.

The Task Force believes that incremental change is the only realistic way to proceed with the development of greener procurement practices. The tools contained in Section B are designed to help procurement practitioners take some important steps forward. It is hoped that in this way the NRTEE is helping the federal government to point the way forward for other governments and the Canadian public and to provide industry with a clear understanding of future requirements for sustainable development.

## 3. Where are we now? The state of green procurement and the use of criteria

To serve as the basis for the development of green procurement criteria, the project had as its initial (Phase I) objectives: to survey existing approaches to green procurement, create an inventory of criteria being used; and, to assess and compare those criteria. This inventory and analysis and the conclusions reached regarding both approaches and criteria were to be the foundation for carrying out Phase II, in which a set of criteria for green procurement would be developed for the use of the federal government and other interested governments.

Phase I confirmed that there are almost as many approaches being taken to green procurement as there are organizations actively trying to implement it. Though this makes it difficult to generalize about the current state of the art, the survey and analysis conducted in Phase I elicited the following conclusions about the pursuit of green procurement generally and within the Canadian public sector particularly.[1]

### What we learned

- The range of criteria in use is vast and the depth of analysis and quality and degree of verification vary greatly.
- Decentralized management of federal procurement means that many more people need access to basic green procurement tools.

[1] Full detail of these findings can be found in the Phase I interim report.

- Government purchasers require clear political commitment, senior internal commitment and strong policy direction.
- Purchasers have little time to pursue green procurement and most feel they do not have adequate training or tools.
- Purchasers would benefit from learning about examples of best practices in use elsewhere.
- Purchasers want an accurate method of verification and/or source of certification for both suppliers and their products/services.
- Little work has been done on calculating the impact of greening procurement on the Canadian economy and industry.
- Organizations in other sectors and countries are struggling with similar issues; particularly those of verification and certification

**The Bottom Line**

An examination in Phase I of the organizations that are actively working to improve their green procurement systems and practices concluded that those which have made substantial progress have:

a. focused on specific objectives and targets;
b. tied their efforts to the interests and business purpose of the organization;
c. invested necessary human and financial resources to put systems in place and train purchasing personnel;
d. incorporated environmental objectives into their normal purchasing methods; and
e. made a long-term commitment to establishing green procurement within the organization.

## 4. Where next? Objectives of Phase II

The objective of Phase II is to advance the practice of green procurement within the federal government and throughout the country. Three ways of doing so have been determined: Tools; recommendations for policy support; and, recommendations for future activities.

### 4.1 Green Procurement Tools

The first, and that which forms the bulk of this report, is a series of criteria-based tools. The Tools section has been designed to be readily converted into a stand-alone document for distribution to purchasing staff. As such, it contains some repetition or reiteration of some key points discussed in this opening context-setting section.

The nine product and service areas for which criteria are proposed in the Tools section were selected from among the vast array being purchased by organizations of all kinds (e.g. jet planes, landscaping, hand cream). These have been chosen because they are areas which met several if not most of the following principles or priorities of sustainability: the dollar value and frequency of purchases are high; the potential for advancement of green procurement appears good; there is a strong likelihood of success given the state of existing knowledge and resources; and, there is clear environmental benefit. A set of generic criteria applicable to any product/service type is proposed as are general criteria for packaging.

Certain issues beyond those traditionally thought of as "environmental" are considered by a few organizations as part of their commitment to sustainable development and are included in their procurement policies. These include the supplier's labour practices, gender/race equity issues in the workplace, family support policies, etc. If the federal government broadens its definition of sustainable development to include such issues, it may be fruitful to revisit these policies.

## 4.2. Recommendations for Policy Support

One of the strongest messages coming out of Phase I was the need for clear policy support. Only those organizations which have the firm, publicly-stated commitment from top leadership, backed by the resources and strategies for implementation can be expected to make significant headway.

In the public sector, as elsewhere, clear and firm political support and policy direction are required by purchasers who might otherwise lack the motivation, time and other forms of support to incorporate environmental/sustainability objectives into their procurement methods.

It is therefore one of the main recommendations of the National Round Table's Task Force on Green Procurement that all federal departments adopt a clear and forward-looking policy of advancing green procurement, as well as adopting directives in support of such a policy. Section B - Tools discusses several successful approaches to policy support that might serve as useful examples for the federal government.

## 4.3. Future Directions

Recommendations for future NRTEE activity -- in partnership with federal departments, industry and other stakeholders -- in the area of green procurement include:

1. Developing a guide for suppliers to the federal government along the lines of the British Department of Environment's (DoE) "Selling to the Federal Government - A Green Guide for Suppliers of Goods and Services to the Department of the Environment".[2] It could explain environmental policy and criteria, how to evaluate, verify, specify and exclude products, and how to sell "green" products to the federal government. It could be a stand alone package or it could be integrated into existing supplier information packages.

2. Supporting the creation of an "online" directory and database of suppliers, products and services with a verification system to be determined.

3. Producing a green procurement primer/casebook that proposes a basic strategy for implementing green procurement, with the possibility of incorporating a section on Criteria and resources based on the tools section of this report. Other potential sources of information such as the CSA guide could be evaluated for appropriateness and used in whole or in part.

4. Studying the domestic economic and employment effects of green procurement. Although the initial proposal for this project included the possibility of trying to consider the net economic and employment costs of incorporating various criteria for green procurement, this proved to be overly ambitious within the time frame and budget of the study.

5. Developing further training and performance enhancement tools such as the Green Procurement Computer Based Training currently in use by the federal government.

6. Suggesting that central leadership be taken wherever possible to send a clear message to federal departments, the environmental industry sector and the Canadian public.

7. Recommending that environmental or sustainable development responsibilities be integrated into job descriptions and the whole job evaluation process.

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[2] See Phase I for a copy of this document.

## SECTION B - TOOLS

# Criteria for Products and Services

## Introduction

Purchasers intent on greening their procurement process require a set of criteria against which they can evaluate individual products and the manufacturers and suppliers of those products, as well as the suppliers of services. The following lists of criteria are designed to help purchasers develop specifications for products and services and evaluate products and services on their environmental qualities.

It is understood that purchasers will not be doing "green procurement" in a vacuum. Rather, environmental criteria must be incorporated into existing purchasing systems and integrated with such traditional criteria as quality and price. In many cases, the "greener" alternative may have a higher price tag than "less green" products/services. Where this may appear to be the case, it is essential that the purchasing decision be based on the full life cycle cost of that product/service. Although there is a public perception that buying green is more expensive, it is frequently true that environmentally preferable products and services are accompanied by significant savings in areas such as: reduced consumption of energy and other resources; costs avoided (i.e. disposal, storage, accidents, insurance costs, sick leave for staff); longer product life; ease of repair, etc. A true cost comparison must take into account the full range of life cycle costs. The criteria listed below attempt to identify many of these potential costs and savings.

The sets of criteria are designed to be simple, straightforward and easy to use, rather than comprehensive. To assist purchasers who require a more complete understanding of the issues behind these criteria, resource lists are provided with each set of criteria. Additional resource material is provided in the appendices. Furthermore, an expanded list of criteria has been compiled from those being used by various organizations worldwide (see Appendix A).

Users of these lists will find that there is some repetition from one list to the next. This is because many purchasers may consult some, but not all, of the lists at any given moment.

Similarly, while a separate set of considerations for packaging has been provided, some of the key elements relevant to a given type of product/service are repeated in the appropriate places.

A "generic" set of criteria has been developed to be applicable to almost any purchase. Since some purchases do not fall into the key areas covered by the lists in this document, these generic environmental criteria will provide general guidance for the procurement of all manner of product or service.

Finally, the tools provided in this document were developed according to a number of generally accepted principles of sustainable development. The following Key Principles for Sustainable Procurement represent guiding concepts for procurement that is both environmentally and economically sound.

## Key Principles for Sustainable Procurement

**3Rs hierarchy (Reduce, Reuse, Recycle).** Emphasis should be placed on the hierarchy.

**Life-cycle principles.** Products should be evaluated on their environmental impact throughout the entire life-cycle.

**Cost effective over life cycle.** The cost of using the product/service over its entire life cycle should be compared with similar products/services.

**Toxic use reduction.** The use of toxics and their release should be reduced throughout the entire lifecycle.

**Minimize use of resources.** Optimal use should be made of all resources, including energy, water and other materials used in or by products and services

**Regulatory compliance.** Manufacturers and suppliers should demonstrate that they are in full compliance with current legislation.

**Unbiased verification.** An accurate verification process is one that employs suitable scientific verification methods, and produces unbiased, reliable data regarding environmental claims.

# Packaging

*Overview:*
Packaging is estimated to make up 30% of municipal waste. Purchasers can assist in reducing waste through using the 3Rs hierarchy - by buying from suppliers that *Reduce* the amount of packaging, *Reuse* containers and packaging, and ensure that packaging is readily *Recyclable* and has post-consumer content.

- ✔ Product should have no packaging or be packaged in bulk wherever possible.
- ✔ Packaging should be eliminated wherever possible.
- ✔ Packaging that is returnable for re-use may be preferable wherever this is feasible.
- ✔ Containers should be refillable wherever possible, or if not refillable, reusable for another purpose.
- ✔ If not reusable, packaging should be readily recyclable. Packaging is recyclable if there is a widely available economically viable collection, processing and marketing system for the material.
- ✔ Packaging should consist of single materials to increase recyclability as opposed to multi-material packaging wherever possible.
- ✔ Recycled packaging is preferable if it contains post-consumer recycled material content. Ask supplier to specify percentage.
- ✔ Packaging should not contain toxic ingredients.

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**Resources**


Canadian Council for Ministers of the Environment, *Canadian Code of Preferred Packaging Practices*, March 1990.

*G.I.P.P.E.R.'s Guide to Environmental Purchasing.* October 1992.

State of Minnesota, Department of Administration. *Environmentally Aware Purchasing Checklist.* November 1991.

Federation of Canadian Municipalities. The *Packaging Waste Reduction Guide: Minimizing Solid Waste through Efficient Procurement Practices*, 1993.

# Generic Environmental Criteria

**Overview:**
Generic environmental criteria must be available in both a long and short form in order to meet the needs of procurement. In their short form, below, they are intended to provide insight into the potential environmental impact of virtually any product or service. Some of the questions are general and should prompt the purchaser, while others are very complex and drive to the heart of life cycle analysis. A more extensive list is provided in Appendix A to assist organizations who wish to analyze their purchases in greater detail.

Examples include the development of annual benchmark specifications such as those used for information equipment or construction and renovation by Public Works and Government Services Canada, high dollar-value purchases of thousands of items such as service poles, highway markers, park benches, etc., or multi-million dollar purchases such as Coast Guard vessels, laboratory equipment, airport hangars, etc.

**Pre-purchase Decision:**

- ✔ Is the product/service necessary?
- ✔ Are all features/elements necessary?
- ✔ Can the product be shared, borrowed or rented rather than purchased?
- ✔ Can a used or re-manufactured product be substituted for the new product requested?

**General Questions**

- ✔ Is the product certified "green" (e.g. EcoLogo$^{M}$/Green Seal)?
- ✔ Is the product durable/long lasting?
- ✔ Is the product easily repaired?
- ✔ Is it easily updated or upgraded by replacing or adding a part?
- ✔ Has a full life cycle environmental evaluation been carried out on the product?

**Manufacturing / Use / Disposal**

- ✔ Does the product contain recycled material?
- ✔ Does the product contain toxins, (as defined by the *Canadian Environmental Protection Act)*, banned or restricted substances (e.g. CFCs) or ozone depleting substances?
- ✔ Does the product design minimize use of resources (i.e. energy, water)?
- ✔ Is it easily maintained and repaired?
- ✔ Is it reconditionable or recyclable after use?
- ✔ Does the product require special disposal considerations (e.g. hazardous materials)?

**Environmental Profile of Manufacturer, Supplier or Service Provider**

- ✔ Does the company have a written, formal, environmental policy?
- ✔ Does the company have an Environmental Management System (EMS) in place?
- ✔ Does the manufacturer comply with any environmental performance standards (e.g. ISO 14000, BS7750, CSA standards)?
- ✔ Does the company apply stricter environmental standards than required by law?
- ✔ Has the company made a commitment to cradle-to-grave product stewardship?

# Housekeeping and Janitorial Services

**Overview:**
An estimated 17,000 bathtubs full of cleaning products are used within the federal government each year (Office of Environmental Stewardship, 1994). Many of the products contain ingredients harmful to both humans and the environment. Some provide only temporary relief or simply mask the problem. Efforts to reduce the use of harmful cleaning products will reduce the long term costs associated with health care and a degraded environment.

***Minimize Use of Dangerous Ingredients***

- ✔ All purpose cleaners should be EcoLogo[M] certified or meet Environmental Choice guidelines wherever possible.
- ✔ Products should be biodegradable.
- ✔ Unscented products are preferable.
- ✔ Toxic products should be replaced with non-toxic products wherever possible.
- ✔ Products should be non-caustic, non-corrosive and non-chlorinated.
- ✔ Cleaning products should be standardized with unnecessary products eliminated to reduce the number of chemicals in use (i.e. air fresheners, carpet fresheners, bathroom cleaners).
- ✔ Products should have no or minimal Biochemical Oxygen Demand (BOD) and should contain no, or minimal, volatile organic compounds (VOCs).

***Encourage Waste Reduction***

- ✔ Cleaning products should be purchased in concentrated and bulk form (the less toxic the cleaning product the less potential danger in handling it in concentrated form).
- ✔ Packaging should be minimized by working with the supplier to use refillable containers which are returned to the supplier.
- ✔ Packaging should contain recycled content material as dictated by the Environmental Choice Program or US legislation.
- ✔ If packaging cannot be returned to the supplier it should be reusable or recyclable in the existing recycling program at the workplace.

*Maximize Life of Cleaning Equipment*

- ✔ Cleaning equipment should have an extended warranty and local servicing available.
- ✔ Cleaning equipment should have replaceable parts with parts being easily accessible.

*Maximize Worker Health and Safety*

- ✔ Products must have Material Safety Data Sheets (MSDS) or equivalent information on potential hazards associated with their use.
- ✔ Health and safety information should be available in a variety of languages corresponding to the native language of the janitorial staff.
- ✔ Instructions for mixing concentrated products, etc. should be available in an easy to understand format.
- ✔ Concentrates should be dispensed using proper measuring devices (i.e. pump dispensers which measure the correct amount).
- ✔ Cleaning products should be clearly labeled.

## Alternatives to Cleaning Products

| Cleaning Product | Potential Hazardous Ingredients | Alternatives |
|---|---|---|
| Aerosols | - volatile organic compounds (VOCs)<br>- ozone depleting substances | - no or low VOC formulas<br>- pump dispensers |
| General Purpose Cleaner | - linear alkylbenzene sulfonates<br>- glycol ethers<br>- ammonia<br>- isopropanol | - sodium bicarbonate<br>- sodium citrate<br>- citrus oils<br>- pine oil<br>- soaps |
| Bathroom Cleaners | - phosphoric acids<br>- glycol ethers<br>- alcohol<br>- ammonia | - sodium bicarbonate<br>- sodium citrate<br>- borax |
| Glass Cleaners | - butoxy ethanol<br>- alcohol | - vinegar and water |
| Toilet Bowl Cleaners | - phosphoric acid<br>- hydrochloric acid<br>- paradichlorobenzene<br>- sodium hydrogen sulphate<br>- glycol ethers | - sodium bicarbonate<br>- sodium citrate<br>- borax |

Resources:


Association of Municipal Recycling Coordinators. 1994. *Waste Reduction Fact Sheet: Janitorial Service and Supply*. Guelph, Ontario.

The Body Shop. April 1995. *Environmental/Ecological Guidelines for Buyers*. U.K.

Environmental Partners Program. 1995. *Office Green Buying Guide*. Washington, D.C.

Green Seal. July 1992. *Environmental Evaluation: Household Cleaners*. Washington, D.C.

Metropolitan Toronto Works Department. no date. *Household Hazardous Waste Wheel*. Toronto, Ontario

Office of Environmental Stewardship. 1994. *Green Cleaning Checklist*. Ottawa, Ontario.

The Pollution Probe Foundation. 1994. *Getting Off Toxics*. Toronto, Ontario

Environmental Choice Program guidelines.

# Construction, Renovation and Demolition

## Overview

Moving, renovating and retrofitting Canadian government offices is a significant source of waste generation as the restructuring and downsizing of government means that some 50,000 to 60,000 people are moving within the organization each year. Renovation and construction can provide significant opportunities for improving energy efficiency and air quality, using environmentally preferred materials, and reducing the amount of waste generated. Environmental Choice has a number of Ecologo$^{M}$ certified products in this area that should be given priority in use. Construction and demolition waste accounts for up to 25 percent of all waste going to landfill in Canada.

## Windows

- ✔ Purchase energy efficient windows which are certified for thermal performance and air-tightness (see Canadian Window and Door Manufacturers Association certification list). Preferred windows incorporate all of these features: double or triple glazing, low-E coating, inert gas fill, insulated frame and spacer materials, and fixed design whenever possible.
- ✔ Check CSA performance levels.

## Doors

- ✔ Choose a frame that can be well-insulated and that will form an airtight seal.
- ✔ Weather-stripping between the frame and the door should be airtight.

## Space and Water Heating Systems

- ✔ Select high-efficiency heating systems.
- ✔ Use hot water heaters accepted by the R-2000 program, certified by EcoLogo$^{M}$ or meeting Environmental Choice guidelines.
- ✔ Wherever possible and economically feasible choose passive solar hot water heating systems.
- ✔ Select furnaces with electronically commutated or with split capacitor motors.

**Water Conserving Products**

- ✔ Purchase low-flow (6 litre per flush or less) toilets.
- ✔ Purchase faucet aerators.
- ✔ Purchase low-flow shower heads.
- ✔ Install closed-loop water cooling systems.

**Appliances**

- ✔ Select appliances that are rated in the top 33% of their class by EnerGuide.

**Finishes**

- ✔ Use latex and alkyd paints with 50-100% recycled content.
- ✔ Use water based paints, varnishes and stains that are EcoLogo$^{M}$ certified or meet Environmental Choice guidelines.

**Ventilation**

- ✔ Install ventilation systems with heat exchangers and/or heat recovery units.

**Automated Energy Management Systems**

- ✔ Use motion sensors.
- ✔ Use photo cell light controls for outdoor, all-night lights.

**Building Products and Materials**

- ✔ Purchase floor tiles made with recycled plastics.
- ✔ Wallboard and ceiling tiles should contain recycled newspaper or gyprock.
- ✔ For blown-in insulation use recycled wood based cellulose fibre as per Environmental Choice Guidelines, or made from post-consumer recycled paper.
- ✔ Use recycled metal framing and remountable walls wherever feasible.
- ✔ Use concrete and cement containing ground granulated blast furnace slag or coal fly ash.
- ✔ Use polyester carpet containing recovered material for low to medium traffic areas. Consider using wool carpeting to meet needs.
- ✔ Use exterior grade plywood (no off-gassing at normal room temperature).
- ✔ Use linoleum instead of vinyl.
- ✔ Use polystyrene wall forming systems for foundations wherever possible.
- ✔ Consider stone, ceramic tile, hardwood, laminated composite wood, cork tile or natural linoleum over vinyl flooring.

- ✔ Consider using the following adhesive materials: water-based adhesives (acrylic), natural white glue, phenol-formaldehyde glue, contact cement (water based), starch glues (wallpaper paste) and dry adhesives.
- ✔ Use latex or other non-solvent based caulking materials.

### Other

- ✔ Use glasphalt (asphalt with specific proportions of crushed glass) as pavement
- ✔ Use recycled plastic in counter tops

## Criteria for Green Construction, Renovation and Demolition Services

### Bid Qualifications and/or Contract Clauses

- ✔ Require vendors, contractors, subcontractors and bidders to certify amounts of recovered and recycled material in building supplies, and to separate wastes by type for recovery and recycling, or use building materials recycling services.
- ✔ Give preference when tendering to suppliers, designers and contractors who employ environmental approaches whenever feasible.
- ✔ Encourage contractors, suppliers and designers to use non-hazardous raw materials.
- ✔ Insist that suppliers use products that are EcoLogo$^{M}$ certified or meet Environmental Choice guidelines.

### Site Design and Treatment

- ✔ Ensure designers maximize natural light and air flow in office design.
- ✔ Ensure that environmental impact assessments are conducted where necessary.

### Service Specific Recommendations

- ✔ For stripping use abrasive media stripping such as plastic beads or use water based cleaning solutions.

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### Resources


Canadian Window and Door Manufacturers Association, *Voluntary Certification Program*
Royal Architectural Institute Of Canada, *Environmentally Responsible Design.*
Pennsylvania Department of General Services, *Policy on insulation.*
Virginia Department Of Environmental Quality, *Waste reduction fact sheet.*
City Of Toronto Management Services Department, *Purchasing and Material Supply Division - Environmental Initiatives.*
Office of Federal Environmental Stewardship, Environment Canada, *Environmentally Responsible Construction and Renovation Handbook.*

# Criteria for Vehicles and Vehicle Maintenance Services

**Overview**

The federal government purchases almost $102 million worth of vehicles and trailers per year, with contractual commitments for fuels, lubricants, oils and waxes at $561 million. In Canada, close to 15% of total carbon dioxide (a green house gas) emissions from fossil fuels come from automobiles and light trucks. There are opportunities in vehicle maintenance to choose products that use reclaimed materials, thereby conserving resources and reducing waste. Contracts for vehicle maintenance should assess how the work will be carried out and what will happen to the waste products. For a truly sustainable approach, the promotion of alternatives to vehicle use should be addressed.

## Vehicle Maintenance

*Use of Re-manufactured/Recycled Products:*

- ✔ Re-refined motor oil that is EcoLogo$^{M}$ certified or meets Environmental Choice guidelines should be used in all vehicles. Purchase oil in recyclable containers and arrange for pick up of containers by supplier for recycling.
- ✔ Retread tires are to be used whenever feasible and services contracted to retread existing tire casings.
- ✔ Purchase re-manufactured gasoline engines for trucks, and re-manufactured diesel engines for heavy duty trucks. Use re-manufactured starters and alternators for existing vehicles.
- ✔ Use reclaimed engine coolant (consider on-site facilities).

*Other Environmental Considerations*

- ✔ Require contractors to have oil filters recycled.
- ✔ Buy windshield washer fluid and antifreeze in concentrated form and in bulk recyclable containers.

## Vehicle Purchasing

*Vehicle Considerations*

- ✔ Select models with greatest fuel efficiency.
- ✔ Consider vehicles which use compressed natural gas and consider the use of alternate fuels (ethanol, propane) where possible.
- ✔ Ensure that any new vehicles purchased conform to federal and provincial standards for emission control and fuel consumption.
- ✔ Inclusion of air conditioning or purchase of high power models should only be authorized if it meets a clear operational requirement.

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### Resources


RIS Toronto Resource Center, *Guide to institutional purchasing.*

City of Toronto Management Services Department, Purchasing and Material Supply Division - Environmental Initiatives.

Minnesota Department Of Administration, *Policy on purchasing for the state transportation department.*

Denver Green Fleets Program, *Policy on purchasing and trip reduction.*

Pennsylvania Department of General Services , *Policy on re-refined oils/lubricants.*

Environmental Protection Agency, *Guidelines on procuring recovered materials.*

Alberta Public Works Supply and Services, *Green products and practices fact sheet.*

Transport Canada Green Workplace Commitment.

State of New York, *Tender documents for purchases of vehicles, antifreeze and lubricating oils.*

Environmental Choice Program guidelines.

# Furniture

**Overview:**
The Federal Government is one of the largest single purchasers of goods and services in Canada. In 1994, the Federal Government budgeted an estimated $142 million towards the purchase of new office furniture. Even something as seemingly benign as office furniture can have a harmful impact on the environment through the use of exotic woods, improper use of chemicals in production, and off gassing. Strides are being made by the furniture industry to address environmental concerns in the design and manufacturing of office furniture. Environmental Choice has addressed office furniture in recently produced guidelines.

***Minimize Use of Toxics***

- ✔ Furniture should be EcoLogo$^{M}$ certified or meet Environmental Choice guidelines.
- ✔ Manufacturers should not use solvent based adhesives.
- ✔ Foams and plastic components should not contain CFCs or HCFCs.
- ✔ Manufacturing should minimize the use of chemicals that result in off-gassing and/or VOC emissions.
- ✔ Manufacturers should use adhesive products that are EcoLogo$^{M}$ certified or meet Environmental Choice guidelines.
- ✔ Manufacturers should not use chemicals that are toxic or irritating to humans in the manufacturing, treatment, installation or cleaning of fabric components.
- ✔ Paints should not contain solvents or formaldehydes.
- ✔ Preference should be given to parts that are painted using power coating methods.
- ✔ Preference should be given to metal components which are not electroplated.
- ✔ Preference should be given to manufacturers which have implemented the mandates of the ARET program and have environmental management systems in place (i.e. CSAZ750 or ISO 14000).

***Encourage Waste Reduction***

- ✔ Packaging should be minimized by implementing a take-back program with the supplier.
- ✔ Products should be transported in bulk.
- ✔ Packaging which cannot be returned to the supplier should be recyclable in the existing recycling program and should have post-consumer content.

- ✔ Recyclable materials should be built into the design of the product wherever possible and applicable.
- ✔ Office furniture should be designed to permit effective disassembly of materials from major components to permit reuse or recycling.
- ✔ Wear-susceptible parts should be replaceable.
- ✔ Preference should be given to the use of recycled fabric.
- ✔ All major plastic components should be stamped with information about the resin type using the Society of Plastics Industry (SPI) plastic coding system to facilitate recycling.
- ✔ Preference should be given to suppliers that take back used furniture for repair and refurbishing.

*Encourage Preservation of Biodiversity*

- ✔ Wood parts should not contain wood that is considered exotic or listed by the Convention on International Trade in Endangered Species on Flora and Fauna (CITES).
- ✔ Wood should be used from sustainable managed forestry sources.
- ✔ Wood should not come from old growth forests.
- ✔ The manufacturer should be prepared to provide documentation about the management and harvesting practices of the wood in use.

**Tips**

- Before purchasing, find out if existing furniture can be refurbished or if surplus furniture is available elsewhere
- Refurbishing can result in cost savings and reduce the potential for off gassing
- Deliveries of new office furniture should be made just before a weekend to protect staff from initial off gassing
- Conduct a life cycle costing (LCC) assessment to determine the long term costs associated with maintenance and replacement when deciding upon environmentally preferred furniture and fixtures over conventional ones

## Resources


Environment Canada. June 1994. *Environmental Specifications for Office Furniture.* Office of Environmental Stewardship, Hull, Quebec

St. John, A. ed. November 1992. *The Sourcebook for Sustainable Design: A Guide to Environmentally Building Materials and Processes.* The Boston Society of Architects, Boston, Massachusetts

Schourer, V. 1993. *The Interior Concerns Resource Guide.* The Interior Concerns Publication, Mill Valley, California

State of Washington. December 1989. *Indoor Air Quality Specifications.* Department of General Administration, Washington.

Office of Federal Environmental Stewardship, *Furniture Checklist.*

# Computers and Printers

**Overview:**
Computers and other office equipment can account for up to half of the electricity consumed in a modern office building. Much of the consumption can be reduced through energy efficient initiatives, such as purchasing energy efficient computers and turning off equipment at night. Through the Energy Star program, energy efficient advances have been made by most major computer companies. A single Energy Star computer and monitor can save up to $52 annually and an Energy Star printer can save up to $35 annually.

The Public Works and Government Services Canada computer benchmarks for 1994 included two categories of energy saving computer monitor combinations. The 1994 benchmark for printers awards "bonus" points for products which have been awarded the Power Smart logo. Increased government use of these standing offers will conserve resources.

***Reduce Energy Consumption***

- ✔ Computers should comply with the new (1995) Energy Star guidelines and bear the Energy Star logo.
- ✔ The computer should have power saving features (Energy Star new (1995) low-power model guidelines for computers).
- ✔ The monitor should consume 8 watts or less when conforming to the VESA-DPMS "off" mode.
- ✔ The printer should have power saving features (Energy Star low-power mode for printers is 30 watts for 1-7 pages per minute; 45 watts for 15 pages and more per minute) or an external power-saving device.
- ✔ The printer should comply with the Power Smart Program and bear the Power Smart logo.
- ✔ Ensure monitors are capable of powering down when connected to the PC.
- ✔ Consideration may be given to features that enable the user to change the power-down settings.
- ✔ Preference should be given to computers that do not disconnect from a network when in sleep mode.
- ✔ Preference should be given to ink jet printers as opposed to laser printers where laser quality is not essential.
- ✔ The manufacturer should provide a copy of the Memorandum of Understanding established with the EPA.

*Encourage Waste Reduction*

- ✔ The computer should be upgradable.
- ✔ Computers should be easily dismantled to encourage reuse, refurbishing or recycling.
- ✔ The supplier should offer a trade-in program to enable the computer to be refurbished or recycled.
- ✔ The toner cartridges for printers should be reusable/refillable.
- ✔ Consider whether the computer or printer contains recycled material.
- ✔ Packaging should be minimized by implementing a take-back program with the supplier.
- ✔ Packaging which cannot be returned to the supplier should be recyclable in the existing recycling program.
- ✔ Preference should be given to printers that print on both sides of the paper and can handle paper containing high amounts of recycled content.

**Tips**

- The lowest energy consuming monitor is a LCD. monochrome backlit, followed by a LCD colour-active matrix, and then by a monochrome CRT.
- Laptops use up to 99 percent less energy than desktop computers.
- Ink jet printers use up to 99 percent less energy when printing than laser printers.
- The lifetime of a computer can be extended 10 times by turning it off at night and on the weekends.
- Information on the Energy Star program is available by phone at (202) 775-6650 or by internet: http://www.epa.gov/docs/GCDOAR/EnergyStar.html .
- Information about the Power Smart Program is available by calling (604) 688-4637 or by internet: http://www.powersmart.ca/search html
- An energy efficient guidebook is available through Natural Resources Canada. Jim Clark (613) 947-1948 or internet: http://hypernet.on.ca/Nrcan

**Resources**


Environmental Partners Program. 1995. *Office Green Buying Guide.* Washington, D.C.

Green Seal. on-going. *Choose Green Report,* Washington, D.C.

Natural Resources Canada 1994. *Guide to Buying and Using Energy Efficient Office Equipment.* Ottawa, Canada.

Public Works and Government Services Canada. no date. *NSTL/ SIPSS Benchmark Report:* Category 3.OG - ISA 486DX/66 Energy Star Compliance. Ottawa, Ontario

USEPA. January 1995. *Purchasing An Energy Star Computer.* Washington, D.C.

Office of Environmental Stewardship, Environment Canada, *Powering Down the Office.*

# Photocopy Machines

**Overview:**
Photocopiers consume more energy than any other piece of office equipment (i.e. computers, laser printers, fax machines). In July 1995, photocopiers joined the USEPA's Energy Star program which requires photocopiers to have a built-in feature that automatically turns off the photocopier after a period of inactivity. This feature can reduce energy consumption by two-thirds that of conventional copiers. Photocopiers that copy double sided not only save resources but they save money as well.

*Reduce Energy Consumption*

- ✔ Photocopiers should have the Green Seal, be EcoLogo$^{M}$ certified or meet Environmental Choice guidelines, and/or comply with the USEPA's Energy Star program and bear the EPA Energy Star logo..
- ✔ The photocopier should be equipped with an energy-saver feature that acts as a power down or stand-by feature if not in use over a period of time.
- ✔ The manufacturer should provide a copy of the Memorandum of Understanding established with the EPA.
- ✔ Power rating should be provided in five modes: plug-in, warm-up, printing, idling and energy saver.
- ✔ The photocopier should meet the energy efficiency requirements documented by the Green Seal program (1995) as follows:

**Tier 1 Criteria**
(effective July 1, 1995 to June 30, 1997)

| Copier Speed (copiers per minute) | Off Mode and Off Mode Default Time | Automatic Duplex Mode |
|---|---|---|
| Low (1 < cpm < 20) | < 5 W after 30 minutes or less | NA |
| Medium (20 < cpm < 44) | <40 W after 60 minutes or less | Default |
| High (44 < cpm) | <40 W after 90 minutes or less | Default |

**Tier 2 Criteria**
(effective July 1, 1997)

| Copier Speed (copies per minute) | Low-Power Mode & Recovery Time | Off Mode & Default Time | Automatic Duplex Mode |
|---|---|---|---|
| Low (1 < cpm < 20) | NA | < 5 W after 30 minutes or less | NA |
| Medium (20 < cpm < 44) | 3.85 x cpm + 5 Recovery time = 30s | < 10 W after 60 minutes or less | Default |
| High (44 < cpm) | 3.85 x cpm + 5 Recommended Recovery time = 30s | < 15 W after 90 minutes or less | Default |

*Encourage Waste Reduction*

- ✔ The photocopier should print double sided and be capable of using paper with high amounts of recycled content.
- ✔ Preference should be given to photocopiers with automatic paper-size selection to reduce paper waste.
- ✔ Preference should be given to photocopiers with automatic default systems that return the selection guide to one copy, etc.
- ✔ The toner cartridges should be reusable/refillable.
- ✔ Packaging should be minimized by implementing a take-back program with the supplier.
- ✔ Packaging which cannot be returned to the supplier should be recyclable in the existing recycling program.
- ✔ The photocopier should be easily dismantled to encourage reuse, refurbishing or recycling.
- ✔ The supplier should offer a trade-in program to enable the photocopier to be refurbished or recycled.
- ✔ Consider whether the photocopier contains recycled material.

## Tips

- Power ratings on photocopiers will enable you to compare energy consumption of different photocopiers.
- Choose the size of photocopier that best meets your photocopying needs since the energy use increases with copy volume capability and speed.
- Use one of the paper trays to store used paper for the purpose of draft copies.
- Small personal copiers can consume as little as one quarter the energy of a medium sized photocopier.
- Conducting a life cycle cost assessment will help identify long term savings through reduced energy costs.
- Energy consumed by computers can be significantly reduced by turning it off at night and weekends.
- Information on the Energy Star program, specific to photocopiers, is available through the internet address: http://www.epa.gov/docs/GCDOAR/EnergyStar.html or call (202) 775-6650

## Resources


American Council for an Energy-Efficient Economy (ACEEE). 1994. *Guide to Energy-Efficient Office Equipment*. Berkeley, California

Environmental Partners Program. 1995. *Office Green Buying Guide.* Washington, D.C.

Environmental Choice Program. *1995 Photocopiers ECP-46-93 (Draft).*

Green Seal. April 1995. *Environmental Criteria for Office Photocopiers Machines. Washington, D.C.*

Green Seal. on-going. *Choose Green Report.* Washington, D.C.

USEPA. April 1995. *Introducing ... Energy Star Copiers.* Washington, D.C.

Office of Federal Environmental Stewardship, Environment Canada, *Cost-Benefit Analysis.*

# Fax Machines

**Overview:**
Ten years ago office equipment, including fax machines, photocopiers, computers, and printers accounted for less than 1 percent of total energy use; today, they can account for 30% of energy consumption. The widespread use of fax machines has also contributed significantly to the consumption of paper and the resulting generation of solid waste. Opportunities exist to conserve energy and paper and reduce waste.

*Reduce Energy Consumption*

- ✔ Fax machines should be EcoLogo$^{M}$ certified or meet Environmental Choice guidelines.
- ✔ The fax machine should be equipped with an energy-saver feature that acts as a low standby feature if not in use over a period of time.
- ✔ The low standby feature should use 15 watts or less of energy.

*Encourage Waste Reduction*

- ✔ Preference should be given to built-in fax modems where practical
- ✔ The fax machine should use plain sheet paper rather than thermal roll paper which is difficult to recycle due to the chemical coating.
- ✔ Preference should be given to the fax machine that can accept paper containing high recycled content.
- ✔ Packaging should be minimized by implementing a take-back program with the supplier.
- ✔ Packaging which cannot be returned to the supplier should be recyclable in the existing recycling program.
- ✔ Use of rechargeable toner cartridges should not nullify the warranty or service agreements.
- ✔ Preference should be given to ink jet fax machines, followed by laser machines with an automatic duplexing feature.
- ✔ The fax machine should be easily dismantled to encourage reuse, refurbishing or recycling.
- ✔ The supplier should offer a trade-in program to enable the fax machine to be refurbished or recycled.
- ✔ Consider whether the fax machine contains recycled material.

### Tips

- Consider installing a fax modem for staff to enable them to send faxes directly from their computer which reduces the use of paper and wear on the fax machine.
- Use fax transmission stickers, wipeable fax sheets or the backs of used paper as cover pages when sending faxes.
- Information on the Energy Star program is available through the internet address: http://www.epa.gov/docs/GCDOAR/EnergyStar.html or call (202) 775-6650

## Resources


American Council for an Energy-Efficient Economy (ACEEE). 1994, **Guide to Energy-Efficient Office Equipment.** Berkeley, California

Environmental Partners Program. 1995. **Office Green Buying Guide.** Washington, D.C.

Green Seal. on-going. **Choose Green Report.** Washington, D.C.

Harmony Foundation. 1991. **Workplace Guide: Practical Action for the Environment.** Ottawa, Ontario.

# Office Paper Products

**Overview:**
Paper is one of the largest continual purchases within the government with approximately $39 million purchased annually. This product alone provides one of the greatest opportunities for government agencies to support and promote the recycling market by purchasing paper containing post-consumer recycled content and by recycling used paper.

*Increase Recycled Content*

- ✔ Paper products should be EcoLogo$^{M}$ certified or meet Environmental Choice guidelines.
- ✔ Paper products should bear recycled content information, where applicable.
- ✔ Supplier should provide proof of compliance with environmental programs (i.e. Environmental Choice, Green Seal).
- ✔ Preference should be given to higher post-consumer recycled content (i.e. paper collected from retail, office buildings, residential recycling programs).

*Encourage Waste Reduction*

- ✔ Shipments should contain minimal packaging or packaging that can be sent back to the supplier, reused on site or recycled in the existing recycling program.
- ✔ Paper products should not contain coatings or laminate which may be difficult to recycle.
- ✔ Manufacturers and suppliers should adhere to the policies and targets of the National Packaging Protocol and the Code of Preferred Packaging Practices.

*Encourage Pollution Prevention*

- ✔ All emissions should be controlled to conform with federal or provincial/state regulations whichever is more stringent.
- ✔ Paper products should be non-chlorine-bleached.
- ✔ Envelopes should use water-based glues and have no plastic or cellophane windows, which may be difficult to recycle.
- ✔ No chlorine or chlorine compounds should be used in the bleaching process, if bleaching is unavoidable (oxygen or hydrogen bleaching processes are acceptable)
- ✔ All paper products should not contain wood from unsustainable forestry programs or "old growth" timber.

**Tips**

- Before purchasing large quantities of new paper, test a small batch in different areas and with different office equipment.
- The Environmental Choice Program is developing multi-criteria guidelines for fine paper, converted paper and coated paper which will evaluate the manufacturing process including chemical use, effluent discharges, toxicity.

See Appendix B for the recycled content standards of the Environmental Choice Program(Canada) and Environmental Protection Agency (US).

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**Resources**

British Communications. June 1993. *BT Environmental Specifications for Paper Procurement.* London, UK.

Environment Canada. October 1992 .*Canadian Environmental Protection Act* - Section 8.(1) (b).

Governments Incorporating Procurement Policies to Eliminate Refuse (GIPPER). October 1992. *GIPPER's Guide to Environmental Purchasing.* Toronto, Ontario.

Harmony Foundation. 1991. *Workplace Guide: A Practical Action for the Environment.* Ottawa, Ontario.

Metropolitan Toronto. 1993. *A Guide to Institutional Purchasing.* Toronto, Ontario

United States Environmental Protection Agency. May 1995. *Recovered Materials Advisory Notice.* Washington, DC

Environmental Choice Program guidelines

# Lights and Light bulbs

**Overview:**
Many programs have been introduced in Canada and the United States to promote energy conservation in government office buildings. Lighting alone is estimated to represent 40 to 60% of energy use in an office building. One way to reduce energy consumption is to install energy efficient light bulbs and lamps.

*Energy Conservation*

- ✔ Light fixtures should be EcoLogo$^{M}$ certified or meet Environmental Choice guidelines certified wherever possible.
- ✔ Use bulbs/lamps which provide the minimum standard for light for the task, at the lowest cost over their life cycle.
- ✔ Minimum light output should be 55 lumen per watt.
- ✔ Electronic ballasts are preferred wherever possible.
- ✔ Use compact fluorescent bulbs or tube fluorescents wherever possible.

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*Resources*

The Body Shop. April 1995. *Environmental/Ecological Guidelines for Buyers*
Harmony Foundation. 1991. *Workplace Guide: Practical Action for the Environment.* Ottawa, Ontario
Environmental Choice Program Guidelines

# Sample Procurement Policies

**Overview:**

Treasury Board has a materiel management policy that makes reference to the environment:

> "It is government policy that departments plan for, acquire, store, transport and dispose of materiel in a manner that supports government environmental objectives. Materiel and line managers must include environmental considerations in all aspects of managing materiel, from the planning phase through acquisition, use and disposal of materiel."

Some departments, such as Environment Canada, Transport Canada, Statistics Canada and the House of Commons have moved one step further by adopting new policies or amending existing policies to ensure that materiel and line managers have clear direction regarding the inclusion of environmental considerations into procurement. The majority of federal departments, like their counterparts in other sectors surveyed, have not yet taken this next step. It is those organizations with clear direction on "green" procurement, however, that have enjoyed the greatest degree of success in this area.

As a result it was felt that the development of a model green procurement policy based on all of the policies examined would be a useful tool. A model policy should contain at least five distinct parts:

## A. Vision Statement

A vision statement clearly states the reasons for embracing environmental procurement. It should be clear, concise and goal-oriented. It should be the first part of the policy and it should be included with all supplier communications. It will not constitute a clause and certainly will not suffice on its own as a policy. The following serve as examples:

> **The Quaker Oats Company of Canada Limited** believes that a healthy Environment and a healthy Economy go hand in hand. To this end, we will integrate economic and environmental decision-making in all aspects of our business planning and operations, including our choice of suppliers of materials and services.

**Xerox** is committed to the protection of the Environment and the Health and Safety of its Employees, Customers and Neighbors. This commitment is applied worldwide in developing new products and processes.

We, at **Black and Decker Canada**, are committed to a safe and healthy environment and believe this to be of prime importance to our employees, their families, our communities and our customers. To this end, we will ... [at this point a list of objectives appears].

## B. General Policy Description

A general description of the policy should follow the vision statement. Specifically, the general description should be a blanket statement of purpose regarding the environment and decision-making in procurement. Some specific examples follow:

It is **Transport Canada's** policy that managers will ensure that their activities and decisions have the least possible negative impact on the environment.

From the **House of Commons**: In order to increase the awareness and use of environmentally sound products, the responsible manager, in co-operations with the Purchasing Branch, shall regularly review contracts, standing offers and tender specifications for goods and services to ensure that wherever economically justifiable specifications provide for the use of products and services ...[a list of generic criteria appears]

**GIPPER Statement of Principle:** In order to contribute to waste reduction and to increase the development and awareness of environmentally sound purchasing, acquisitions of goods and services will ensure that, wherever possible, specifications are amended to provide for expanded use of durable products, reusable products and products (including those used in services) that contain the maximum level of post-consumer waste and/or recyclable content, without significantly affecting the intended use of the product or service. It is recognized that cost analysis is required in order to ensure that the products are made available at competitive prices.

## C. Generic Criteria Applicable to All Procurement

The policy document itself should contain references to environmental objectives that may apply to all operations and be consistent with an Environmental Management System(EMS) or principles of sustainable development. The generic criteria should focus on considerations such as waste reduction, energy conservation, 3Rs hierarchy, reduction of emissions, evaluation of production processes and compliance with regulations, legislation and voluntary guidelines.

**Quaker Oats** reserves the right to discontinue Contractual Agreements with any supplier who is not in compliance with Environmental Laws and Regulations.

From the **County of Volusia, Florida**: All procurements of energy consuming products shall also take into consideration the amount and types of energy to be used, the potential pollution effects, and alternative energy sources during specification development.

From **King County, Washington**: All Departments, Offices, and Agencies shall use, and require their contractors and consultants to use, products manufactured with the maximum practicable amount of recovered material, especially post-consumer material.

## D. Product Specific Guidelines

The model policy can be assembled as a package and include very specific guidelines within an appendix. **Environment Canada's** policy has two appendices; one which lists all of the product guidelines put out by Environmental Choice, and another which lists four specific target areas for green procurement and outlines criteria specific to those areas. The Body Shop has a number of product and service guidelines that act as appendices to their procurement policy.

It is important to keep product specific information out of the policy itself. The information is bound to change and it is usually much more difficult to get changes to a policy approved than changes to procedures or guidelines. In fact the policy itself should clearly state that product specific guidelines will be updated on an as needed basis.

## E. Background Information

Explaining the organization's reasons for adopting environmental criteria is very important to ensure employee and senior management acceptance of a commitment to the policy. Background information should be separate from the rest of the policy -- either as an appendix or a preamble. The State of Minnesota uses a preamble made up of "whereas" clauses in its generic green procurement policy.

Whereas, the volume of material disposed of in waste facilities has been increasing annually, and,

Whereas, it is becoming increasingly difficult to site new landfills and other waste facilities, and, ...

# Sample Product/Supplier Verification Forms

## *Introduction*

Increasingly public and private sector purchasers want to verify the environmental claims from suppliers of their products/services. Verification procedures have been developed by individual organizations to verify product and service claims. Third party verification programs (e.g. Environmental Choice) also exist for various products/services.

A further trend, however, is to move beyond products and services and look at the operations of the company from an environmental management system(EMS) perspective. Still under development, programs such as the ISO 14000 series and the CSA Z750 program will help to standardize environmental management practices in the future.

## 1. Organizational Initiatives

Verification forms can be used to evaluate the environmental attributes of a product or service and/or to evaluate the environmental performance and claims of the product manufacturer or service company.

***Product or service verification forms***
Environmental verification forms or check-lists can be general or specific to a product. They should include the following elements:

- an acknowledgment that the product is certified by an independent ecolabeling organization;
- the level of recycled content (post-consumer and pre-consumer);
- the life expectancy of the product (related to durability and warranty issues);
- notification of chemical or harmful ingredients in the product;
- the level of packaging associated with the product;
- reparability and recyclability of the product after its useful life; and
- certification by the supplier that the information provided is accurate.
- Information provided by the supplier should be accompanied by supporting documentation and signatures of executive officer(s) certifying the accuracy of the information.

GIPPER provides an example of a model verification form in Table 1, and Employment and Immigration Canada (now Human Resources Canada) provides a more detailed verification form as shown in Appendix C .

# Table One

## Verification of Environmentally Sound Attributes of Product Content

**This document forms part of our quotation number:**_____

***This form is intended to establish environmentally sound attributes of product content and/or certification of product by EcoLogo Symbol. The firm assumes all responsibility for integrity of the information provided.***

Product Name:

**1.** Product carries EcoLogo Symbol: ☐ Yes ECP Guideline No.(s)_____
☐ No *** Complete item 2 or 3 or 4 as applicable ***

**2.** Product Recycled Content is made of: *** Complete if answer to Item 1 is No ***

| Post Consumer Material | | Recovered Material | |
|---|---|---|---|
| % Composition | Type of Material | % Composition | Type of Material |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

DEFINITIONS

**Post Consumer Material** means only products which have served their end uses and which have been separated or diverted from wastes for collection, recycling and disposition.

**Recovered Material** means materials and by-products recovered or diverted from waste but does not include materials and by-products generated from and commonly reused within an original process such as mill broke or processing scrap. **Recovered Paper Material** may include waste generated in envelope making, trimmings, rejects in printing operations, butt rolls, mill wrappers, obsolete inventories and unused stock.

**3.** Product: *** Complete and submit supporting evidence only if answer to item 1 is No ***

a) Conforms to:_____Performance Standards (print name of standard)
Set By:_____ (print name of government, issuing agency, etc.)

b) Meets specific environmentally sound attributes:

| Attributes | Environmental effects |
|---|---|
| | |
| | |
| | |

c) Test Data attached; (Specify):_____

**4.** Environmental Seal of Approval: **** EcoLogo ** The official Mark of Environment Canada is an Environmental Seal of approval awarded by the Environmental Choice Program (ECP) to products or services considered environmentally preferable compared to similar products or services and carries with it a marketable environmental image.**

Please answer YES or NO if your firm:

a) Applied for EcoLogo:_____; Date:_____; ECP Guidelines No.:_____
b) Plan to apply for EcoLogo:_____; ECP Guidelines No.:_____

If answer is NO, briefly state reasons:_____

**I have knowledge to certify and do so certify that our product(s) content, certification, standards, environmental attributes and effects are as shown on this form and that, where applicable, our products content conforms with the definitions as shown above.**

| | |
|---|---|
| Firm name: | Telephone #: |
| Mailing Address: | Postal Code: |
| Title of Person Signing: | Name of Person Signing (print): |
| Date: | Signature: |

This form developed by ACCESS (Association of Canadian Cities on Environmentally Sound Strategies)

***See Next Page for Line Item Content Verification***

*Environmental Performance Verification Forms*:

Until recently, the process used by companies to assess the environmental commitment and performance of a supplier or manufacturer has been based on individual initiatives. With the advent of environmental management system (EMS) evaluation procedures, the verification process will significantly change in the future.

Performance verification forms cover a series of environmental reporting topics, including:

- development of an environmental policy statement;
- involvement by senior management and staff in environmental programs;
- development of an environmental management system and status;
- employee training efforts;
- management of chemicals and hazardous materials;
- acquisition of certificate of approvals and permits;
- monitoring of emissions, effluents, and wastes;
- resource conservation and product stewardship efforts; and
- environmental compliance.

Bell Canada is currently evaluating a verification form (see Table Two) for possible use with its supplier community.

The form used by Quaker Oats is found in Appendix D. Quaker Oats requires the supplier to sign a statement confirming its commitment to acting in an environmentally responsible manner and comply with all relevant environmental laws and regulations.

# Table Two

## Bell Canada

## Bell Canada Procurement Standard -Environmental Impacts

### Requirements – Part A

To complete this questionnaire simply enter the appropriate score for your answer in the right hand column

| | | Score |
|---|---|---|
| 1. | Has a written preparatory environmental review of your company been carried out? Yes (8) or No (0) | |
| 2. | Have you a written environmental policy statement signed at Company Director level? Yes (4) or No (0) | |
| 3. | Is overall responsibility for environmental issues at Company Director level? Yes (2) or No (0) | |
| 4. | Have you allocated responsibilities to implement the policy? Yes (2) or No (0) | |
| 5. | Have you allocated resources to implement the policy? Yes (2) or No (0) | |
| 6. | Do environmental issues form part of the training program for all staff? Yes (3) or No (0) | |
| 7. | Is there a mechanism in place within the company to deal with public enquiries and concerns with respect to environmental matters? Yes (2) or No (0) | |
| 8. | Have you identified and documented: | |
| | a) Legislation relevant to the environmental aspects of your company's operations? Yes (2) or No (0) | |
| | b) The significant environmental aspects and impacts, associated with your company's activities, products and services? Yes (2) or No (0) | |
| 9. | Have you set yourselves quantified objectives and targets for environmental improvements? Yes (7) or No(0) | |
| 10. | Have you a plan for implementing these objectives and targets with set timeframes? Yes (5) or No (0) | |
| 11. | Do you make the following available to the public: | |
| | a) Your Environmental Policy Statement? Ys (2) or No (0) | |
| | b) Your objectives, targets and progress on achievements? Yes (2) or No (0) | |
| | c) Your company's listing of environmental management system? Yes (3) or No (0) | |
| 12. | do you have a written, formal, environmental management system? yes (3) or No (0) | |
| 13. | does your management system include the environmental appraisal of suppliers and sub-contractors, including contractors? Yes (4) or No (0) | |
| 14. | Has the management system been implemented on:<br>a) site basis (1) or b) a national basis (2) or c) company-wide basis (3)? | |
| | *Companies with only one site, answer c)* | |
| 15. | Has an on-going environmental audit and review program been implemented? Yes (5) or No (0) | |
| | **Maximum score** | **60** |

# Table Two (continued)

**Requirements – Part B**

To complete this questionnaire simply enter the appropriate score for your answer in the right hand column

| | | Score |
|---|---|---|
| 1. | Has a full life cycle environmental evaluation been carried out on the product or service your are offering: | |
| | a) Identifying Life Cycle stages? Yes (1) or No (0) | _____ |
| | b) Identifying environmental effects? yes (3) or No (0) | _____ |
| | c) Including measurement of significant environmental effects? Yes (3) or No (0) | _____ |
| 2. | Is the product or service you wish to supply free from any emissions to air or water which have an adverse environmental effect when in use or during maintenance, such as emissions of solvents: CFCs, NOx, SOx, CO, ozone, particulates, carcinogens, hydrocarbons and so on? Yes () or No ()<br>If no, please supply details separately for individual assessment by Bell Canada | |
| 3. | Is the product labelled to inform the user of any relevant environmental information such as disposal information? Yes (2) or No (0) | |
| 4. | Have your package designers used the "Canadian Code of Preferred Packaging Practices" guideline, or equivalent (Specify _____), in designing the packaging? Yes (2) or No (0) | _____ |
| | Is the packaging for the item: | |
| | a) The minimum necessary for protection? Yes (2) or No (0) | _____ |
| | b) Of recycled material? Yes (1) or No (0) | _____ |
| | c) Capable of being recycled? Yes (1) or No (0) | _____ |
| | d) Re-usable? Yes (2) or No (0) | _____ |
| 5. | Does the product contain any substances or material, that, at the end of its useful life would be classified as hazardous waste in the Canadian provinces of Quebec and Ontario? Yes () or No () | |
| | If yes, please supply details separately for individual assessment by Bell Canada | |
| 6. | Has the product been produced from recycled materials? Yes (4) or No (0) | _____ |
| 7. | Is the item designed for disassembly and recycling? Yes (4) or No (0) | _____ |
| 8. | To what extent can the product be recycled? (This should be both practically and economically feasible) | |
| | Extent by weight is greater than or equal to:<br>a) 20% (1) or b) 40% (2) or c) 60% (3) or d) 80% (4) or e) 100% (5) | |
| 9. | Is there a return loop in place - an existing logistical route to return the item to the supplier or its agent for: | |
| | a) Responsible disposal? Yes (4) or No(0) | _____ |
| | b) Recycling? Yes (6) or No (0) | _____ |
| | **Maximum score** | **40** |
| | **Total maximum score A and B** | **100** |

## 2. Existing Environmental Verification Programs

Over the past several years, a number of third party verification programs have emerged to promote standardization of environmental claims for products and services. Throughout Canada and the United States several programs have emerged as leaders. Some of these are listed with contact information in the Directories section.

*Eco-Labeling Programs*

Canada and the United States have established eco-labeling programs to address products, and, to a lesser extent, services from an environmental perspective. In Canada the eco-labeling program is called Environmental Choice (recently privatized and now managed by TerraChoice Environmental Services Inc.), while in the United States the largest program is called Green Seal. Both programs require that products and services undergo testing procedures to determine the degree of compliance with previously developed environmental guidelines. Compliance with the guidelines enables the product to carry the Environmental Choice logo or the Green Seal logo. These logos ensure that the products meet minimum environmental standards. Several other countries operate similar eco-labeling programs.

A similar program is underway for energy conservation, through the implementation of the Power Smart program operating in Canada and the Energy Star program operating in the United States. These programs set energy conservation standards for designated products and evaluate energy conservation features against these standards. Products which meet the energy saving standards are permitted to carry the Power Smart logo or the Energy Star logo.

For further information contact:

Environmental Choice Program
Ottawa, Ontario
(613) 247-1900

Green Seal Program
Washington, D.C.
(202) 331-7337

Power Smart Program
Vancouver, British Columbia
(604) 688-4637

Energy Star Program
Washington, D.C.
(202) 775-6650

*Buy-Recycled Alliances*

The concept of a buy recycled alliance was first conceived in the United States with the establishment of the Buy Recycled Business Alliance. In 1994, Canada followed suit with the establishment of the Canadian Buy Recycled Alliance (CBRA). The organization helps promote the use of recycled content in products by requiring members to commit to purchasing products containing recycled content and to incorporate recycled materials in manufactured products.

For further information contact:

Canadian Buy Recycled Alliance
Toronto, Ontario
(416) 594-3461

Buy Recycled Business Alliance
Washington, D.C.
(202) 625-6406

*Sustainable Forestry Programs*

There is increasing interest in developing procedures for verifying sustainable forestry management practices of companies to ensure that wood is sourced from certified sustainable, well managed forest sources. One program that is gaining attention is the Forest Conservation Program developed by Scientific Certification Systems, a multi-disciplinary scientific organization based in California. The company evaluates the environmental performance and forestry management activities of forest companies, certifying those which achieve a minimum score based on a set of evaluation criteria. The program has been extended to include retailers of wood products to ensure that only wood is used and sold from a forestry company that has been certified by the Forest Conservation Program.

For further information contact:

Scientific Certification Systems
Oakland, California
(510) 832-0359

## 3. *Future Trends*

In the future, the environmental management system (EMS) process should become a common feature of a company's operations. The Canadian Standards Association (Sept. 1994) defines an EMS as

> an ongoing, interactive planning process that consists of defining, documenting and continuously improving the required capabilities, namely: resources, training, information systems, operational processes and procedures, documentation, measurement, and monitoring criteria (xi).

In essence, an environmental management system incorporates the principles of environmental stewardship and effective management. The onus is placed on the corporation to evaluate, monitor and regulate its activities from an environmental perspective. The ultimate aim is to work towards a healthier environment which will have a positive impact on human health.

### *Environmental Management System Targets*

An EMS targets the following corporate activities:

- development of an environmental policy and mission statements;
- support of environmental policies and programs by senior management and Board of Directors;
- assessment of environmental impacts of activities;
- development of procedures for registering and monitoring legal and other requirements;
- establishment of procedures for developing and monitoring environmental objectives and goals;
- assignment of accountability and responsibility for environmental performance;
- establishment of procedures for effective communications of environmental issues internally and externally;
- supporting environmental documentation and reporting procedures;
- establishment of an appropriate training program for staff;
- development of emergency procedures; and
- environmental audits and management reviews.

*ISO 14000 Series*

To help companies achieve an effective EMS program, several efforts are underway to develop a standardized and recognized EMS approach. On the international front, the International Organization for Standardization (ISO) is developing the ISO 14000 series, a comprehensive environmental management approach. The ISO 14000 series establishes standard requirements for the following environment-related activities:

Environmental Management Systems (series 14000 & 14001)
Environmental Auditing (series 14010, 14011, 14012)
Environmental Labeling (series 14024)
Life Cycle Assessment (series 14040)
Environmental Aspects in Product Standards (series 14060)

With the EMS program expected to be finalized in 1997, companies will have an opportunity to undergo a vigorous certification program to become an accredited 14000 member.

Other similar programs include:

British Standards - BS 7750 Specification for Environmental Management Systems; and

Canadian Standards Association - Z750-94 A Voluntary Environmental Management System.

In the future, a simple question concerning EMS certification will help purchasers determine whether a company has achieved a standardized and recognized level of environmental performance. This effort will help to establish a level playing field among companies and a basis for confirming minimum environmental performance standards during purchasing.

# Directories

Various kinds of directories exist to help purchasers to "buy green". Determining the value of each is not an easy task. The following is an evaluation of directories based on a study conducted by the Office of Federal Environmental Stewardship at Environment Canada. Directories frequently fall into one of four categories:

1. **Products and services which have been verified by a third party**

   Some organizations establish product guidelines or standards that include environmental criteria. Suppliers wishing to demonstrate that their products are environmentally responsible and meet or exceed such guidelines will submit their products for "third party verification". Products which meet such guidelines are often listed in a directory.

2. **Self certified products and services**

   These directories include products or services whose manufacturers or suppliers have made clear, although unverified, claims regarding environmental performance. These manufacturers are staking their reputations on the claims they make, and should therefore be considered accordingly. Directories may require self-certification in which senior company officials sign a claim form to "certify" that the product meets specified environmental criteria.

3. **Sources of general environmental information**

   These sources do not provide lists of "green" products or services but identify relevant environmental issues pertaining to products or services.

4. **Defunct or outdated directories**

   The directories in this section are either out of circulation, or outdated. They can, however, provide a good point from which to start as many of the items included within them may still be in existence. The manufacturers or service providers can be contacted for up-to-date information.

## 1. Products and services which have been verified by a third party

- *Environment Canada, **EcoLogo Certified Products Directory,** Ottawa, Ontario, 1995*
  **Contact:** TerraChoice Environmental Services Inc., (613) 247-1900

The Environmental Choice Program has established guidelines for 40 types of products, including motor oil, latex and oil based paints, and diapers. This directory lists all products which are certified to carry the EcoLogo$^{M}$. Each of these products has been tested against the product guideline and proven to have less environmental impact than comparable products. All EcoLogo$^{M}$ endorsed products must also meet industry standards for performance. Criteria, which must be met before a company can use the EcoLogo$^{M}$ on its products, are established by the Environmental Choice Program in cooperation with industry, environmental groups, and independent technical advisors. A technical agency tests all products and ensures continued compliance.

- *Power Smart Inc., **PowerSmart Product Endorsement Program,** Vancouver B.C., 1994.*
  **Contact:** Moira-Ann Handford, Product Evaluation Engineer, Power Smart Power Product Endorsement Program (604) 688-4637

The PowerSmart Program classifies energy conserving products into seven categories. These categories include:

- appliances (microwaves, freezers, refrigerators);
- building envelope (caulking materials, insulation, weather-stripping, windows, vapor barriers, etc.);
- electrical goods (heat pumps, photocells, etc.);
- hot water savers (low-faucet aerators, low-flush shower heads, etc.);
- lighting (holiday lights, fluorescent fixtures, etc.); commercial/industrial products high efficiency air conditioning, thermostats, heaters, etc.); and,
- miscellaneous (swimming pool covers).

To obtain the PowerSmart Seal, all products must adhere to specific evaluation criteria. For example, products must meet or surpass established performance standards, power quality characteristics, safety standards, functional standards, and design and manufacturing standards.

Due to the use of technical "jargon" (e.g. product evaluation information) this directory is not considered to lend itself to easy interpretation and reference by non-technical minded users.

- *Environmental Protection Agency,* ***Energy Star Product Endorsement Program,*** *Washington D.C.*
  **Contact:** Environmental Protection Agency, Energy Star Program, (202) 233-9114

The EPA has established energy consumption guidelines for office equipment, including computers, printers, and facsimile machines. This directory lists all products which have received the EPA's Energy Star logo. Each of these products has been tested against the product guideline and fulfilled the low power consumption requirement. All Energy Star endorsed products must also meet industry standards for performance. Criteria which must be met before a company can use the Energy Star on its products are established by the EPA in cooperation with industry, environmental groups, and independent technical advisors. The EPA tests all products and ensures continued compliance.

## 2. Other directories of products and services

- *Recycling Data Management Corporation* ***Recycled Products Guide*** *(RPG) 5th Edition. 1993.*
  **Contact:** Bob Belanger, President, Recycling Data Management Corporation (RDMC) (613) 448-2383 or 1-800-267-0707.

The Directory lists a broad range of product information under such classifications as paper, rubber, plastic, oil, glass, metal, wood, construction materials, and packaging. Listings include company name, address, contact, telephone, fax, type of company (manufacturer, distributor, etc.), minimum recycled content, special remarks, and brand names.

The Guide classifies the green products based on the material used and the intended use of the product. For example, containers are classified based on the material they are constructed from (metal, plastic, etc.), and what the intended use is (refuse collection bin, laundry basket, etc.). Specific green products can also be cross-referenced alphabetically and by geographic region.

- *Canadian Buy-Recycled Alliance (CBRA)* ***Recycled Products Guide*** *1st Edition. 1995.*
  **Contact:** Wendy Cook, Acting Executive Director, ph. 1-800-945-6555 or (416) 594-3461.

The Canadian Buy-Recycled Alliance is an industry-led not-for-profit organization formed to generate demand and expand markets for recycled products. CBRA is a membership organization that provides a number of services including a quarterly newsletter, a membership list, access to training services, an electronic forum and a guide book that includes a products directory.

The directory is based on the RPG (see above) and consists of two versions: the first national Canadian directory consisting of over 800 products and 400 companies, and a North America wide directory with almost 6,000 products and 1,800 companies.

- *Boston Society of Architects* ***The Sourcebook for Sustainable Design: A Guide to Environmentally Responsible Building Materials and Processes,*** *November 1992.*
  **Contact:** Richard Fitzgerald or Elizabeth Simmons, Boston Society of Architects (617) 951-1433

The directory is designed to educate Architects with respect to alternative types of building products and materials available. Building products and materials have been categorized into twelve divisions. These divisions include:

- sitework (e.g. earthwork, piping, paving, etc.)
- concrete
- masonry
- metals
- thermal and moisture protection
- doors and windows
- specialties (e.g. toilets, fireplaces, etc.)
- finishes
- equipment (e.g. appliances)
- special construction (e.g. solar/wind energy systems)
- mechanical (e.g. ventilation and plumbing systems)
- electrical systems (lighting)

Lists of organizations which offers insights into energy/water conservation, recycled products and innovative building technologies, are also included in the directory.

The directory does not evaluate any of the building products or materials listed, however it does identify environmental claims made by manufacturers. The most common claims made by manufacturers include some reference to recycled content or use of post-consumer materials.

- *Sabourin Publishing,* ***The Canadian Recycling Handbook and Directory,.***
  **Contact:** Mark Sabourin, Sabourin Publishing, (416) 423-0182.

This directory focuses on the identification of services and contacts for businesses which are either directly involved in the environmental industry or are seeking to implement workplace waste reduction or recycling programs. The directory identifies environmental services found in Ontario.

The purpose of the directory is to both list "who's-who" in the environmental industry in Ontario, but also provide all the necessary information to conduct waste audits, how to design and implement waste reduction workplans, and how to implement waste recycling programs. The directory categorizes environmental services into two broad categories. The first category focuses on environmental expertise (e.g. air, water and waste consulting firms), and the second category identifies businesses that actually collect, process, dispose, or otherwise deal directly with an environmental problem (e.g. metal recyclers, spills clean-up, etc.).

The directory identifies products which are either recyclable or are made of recycled materials. This information was gathered via a self-administered questionnaire.

- *Canadian Environmental Enterprises* ***Products & Services Buyer's Guide,*** *Victoria, British Columbia, 1994.*
  **Contact:** Terry Bersord, Green Products and Services Guide (604) 361-2613

The directory lists manufacturers and distributors of environmental products, and services in some 48 categories (e.g. absorbents, balers, drum remediation, recycling equipment, spill control, etc.).

Environmental businesses pay a $ 300 fee for the following services: placement of a 50 word ad in the directory, subscription to a monthly newsletter, a network referral service, client specific marketing research, and OBS scanning

The information is available in both a computer format (e.g. simple DOS database) and in a book format.

- *Center for Resourceful Building Technology (CRBT),* ***A Reference Guide to Resource Efficient Building Elements*** *4th edition. 1994*
  **Contact:** Tracy Mumma, Center for Resourceful Building Technology (406) 549-7678.

The Center for Resourceful Building Materials has identified building materials that meet the following "resource efficiency" principles:

- efficient use of primary resources
- use of recycled or secondary resources
- energy savings in product manufacturing
- provide an alternative to dimensional lumber
- durability over the life of the house.

The guide provides both a list of manufacturers (e.g. addresses) and a descriptive outline of specific building materials that exemplify an efficient use of resources in their manufacturing and application. Building materials have been segmented into eleven categories based on product function. The categories include: foundations, framing, panel systems, sheathing and wallboard, roofing, exterior siding and trim, insulation, window and doors, interior finishes, floor coverings, and landscaping.

Although the guide specifies the need to evaluate the relative merits of building products based on embodied energy (e.g. energy used in manufacture, energy used in structural assembly, maintenance, repair and durability, and operating energy used throughout the buildings life), it does not quantify or evaluate any of the products/materials listed in the guide.

- *McDonald's Corporation* ***McRecycle USA Program,*** *Illinois, USA, 1992*
  **Contact:** Bob Landry, McRecycle USA, McDonald's (708) 575-5779.

The directory identifies products in five categories containing recycled content which could be used in the operation or maintenance of McDonald's restaurants. The categories listed include construction/architecture, equipment, paper, seating/decor, and services.

The directory is designed so that McDonald's Restaurant proprietors can search for environmental products based on material composition, percent recycled content, geographic locality, and type of ownership.

The directory evaluates products based on proportion of recycled content (percent) of a particular type of material (e.g. polyethylene, glass, wood, HDPE, Polyvinylchloride, etc.).

- *The Recycling Council of Ontario (RCO)* ***3Rs Buyer's Guide for Business: A Guide to Technologies, Products, and Services.*** *February 1994.*
  **Contact:** Clarrisa Morowski, Recycling Council of Ontario (RCO) 1-800-263-2849.

The Directory is segmented into four sections. The sections include: products, equipment, services and waste management/environmental consultants. The products section has been further segmented into six categories (e.g., paper, general office, construction, landscape, toner cartridges and ribbons, and other

Although the guide specifies that it "will help purchasing managers, consultants, facilities managers and environmental directors implement effective environmental programs", the directory fails to specify with any level of detail, the proportion of recycled content in a product, the relative recyclability of a product, or what is meant by "less toxic". In short, the authors of the directory have included a plethora of environmental terms and "catch-phrases" which greatly adds to the confusion of what is actually environmentally preferred and what is not.

- *Leclair and Rousseau* ***Environmental by Design: A Sourcebook of Environmentally Aware Material Choices,*** *Volume 1: Interiors. Hartley and Marks Inc., 1992.*
  **Contact:** Hartley and Marks Inc. Publishers (604) 739-1771

The building products and materials reviewed have been segmented into eight categories. These categories include:

- thermal insulation (e.g. fiber batt, board, loose fill, foamed-in-place insulation)
- interior construction panels (e.g. plywood, chipboard, particle board, gypsum, etc.)
- carpeting (e.g. natural and synthetic fibers)
- flooring (e.g. wood, stone, ceramic, resilient, etc.)
- installation materials (e.g. caulking, joint compounds, mortar, grout, adhesives, etc.)
- wall coverings (e.g. fibers, vinyl, plaster, paper, foils, etc.)
- finishes (e.g. paints, stains, varnishes, sealers, etc.)
- furniture and accessories

Using a self-administered questionnaire, manufacturers were asked to identify the environmental and human health impact of their products and materials at all stages of its life-cycle, as well as the company's policies and practices. Criteria used to evaluate the environmental characteristics have been divided into four broad categories. These categories include: (1) *production*: recycled content, sustainability, in-plant energy efficiency and recycling, and low plant emissions; (2) *packaging and shipping*: minimum recycled content,

recyclable packaging, minimum installation hazards, low toxic emissions in use, durability and simple non-toxic maintenance; (3) *resource recovery*: reusable, salvageable and recyclable; and, (4) *social and ethical issues*: fair business practices and research/education programs.

## 3. Sources of general environmental information

- *American Institute of Architects* ***Environmental Resource Guide,*** *Technology, Practice and Education. Washington D.C., 1994 (update).*
  **Contact:** John Hope, American Institute of Architects, (202) 626-7300

Although the guide does not list or evaluate the environmental characteristics of any building product or materials it is "recommended reading" for anyone interested in environmental and human health issues associated with the home construction industry. Some of the issues identified include: building ecology, embodied energy, indoor air quality, technologies to conserve energy and water, building techniques, etc.

No environmental evaluation criteria is used to assess the characteristics of any product or material mentioned in this guide. However, the guide does list key factors that may be associated with a particular environmental or health concern. For example, the guide identifies such issues as heat recovery, microbial control, air cleaning, exhaust locations, and air intakes, when discussing the critical issues associated with indoor air quality (IAQ).

- *Canadian Almanac & Directory,* ***Canadian Environmental Directory 1994/1995,*** *Canadian Almanac & Directory Publishing Company. 4th Edition. 1994.*
  **Contact:** Peter Asselstine, Editor, Canadian Almanac and Directory Publishing Co. Ltd. (416) 972-6645.

The information contained in the directory includes: government contacts at all levels; professional associations and agencies associated with environmental issues; legislation and regulations related to environmental conduct and quality, research funding and educational institutions, technical reference materials and seminar/conference schedules, a list of 1000 largest Canadian companies, and an extensive list of environmental products and services.

The directory is based on classes of activities rather than based on specific types of products. For example, in the category of "Heating/Air Conditioning Products and Systems" the directory does not differentiate whether the product is a metal duct, a gas/oil furnace, or is a product which uses solar energy. Depending on the needs of the directory user, they will have to flip back and forth between the index and the business description until they find the type of product they are seeking; this can be a frustrating and time consuming task.
The directory makes no attempt to evaluate the environmental characteristics of any service or product listed. This directory classifies data based on two stand-alone factors (e.g. geographical location and class of product/service). This type of information is only sufficient to obtain a cursory idea of who might offer a particular product/service. Information outlined in the company profiles section covers the following areas: firm type (e.g. manufacturing,

consulting), number of staff, chief contact at the firm, product/services/areas of expertise, domestic markets served, and whether they have a library.

- *Canadian Home Builders Association (CHBA)* ***Environmental Choices for Home Builders and Renovators,*** *1994.*
  **Contact:** John Broniek, Canadian Home Builders Association, (613) 230-3060

This guide identifies and describes environmental issues associated with:
- windows
- doors
- space and water heating systems
- water-conserving products
- appliances
- lighting
- finishes
- ventilation
- home automation
- building products and materials

For each of these categories, the building materials and products have been assessed according to the following headings: product types, performance, installation, costs, availability and marketing.
Although no building materials or products have been evaluated, specific issues have been identified for each category. For example, environmental characteristics associated with environmentally preferred windows includes: two or more glazing, low-E coating, inert gas fill, insulated frame and spacer materials and R-value.

An attractive feature of this guide is the inclusion of contacts and reference materials that the user can refer. Where ever possible a green products guide should use illustrations and graphics to illustrate the benefits of certain products and materials relative to more traditional products and materials. An example of this, is the use of a bar graph to illustrate the difference between a compact fluorescent light, an energy-saving fluorescent light and the standard incandescent light bulb.

- *City of Toronto,* ***Governments Implementing Policies and Purchasing to Eliminate Refuse (G.I.P.P.E.R): Guide to Environmental Purchasing.*** *1995 Edition.*
  **Contact:** Ann Carino, Purchasing & Material Supply Division, City of Toronto (416) 392-7313

The GIPPER Guide is designed for use by all purchasing professionals. One of the stated goals of the directory is to influence government procurement in order to provide markets necessary for recovered materials. This Second Edition is a tool to assist purchasers' to incorporate enviromental considerations into the procurement process. One method for doing this is the application of environmental criteria to target product categories. The GIPPER guide suggests such criteria for products such as cleaning products, compost, construction and demolition

materials (e.g. lumber substitutes, drywall and post-consumer content), paint, paper, plastics, rubber, lubricants and lighting products.

- *Federal Government of Canada* ***Green Procurement Computer Baased Training (CBT) Course*** *Version 1.0, 1995 Edition.*
  **Contact:** Michael Calvert, Office of Federal Environmental Stewardship, Environment Canada (613) 997-8346

The Green Procurement CBT is licenced for the exclusive use of the federal government. It serves as both a training course and as a reference tool for purchasers seeking to integrate environmental criteria into every day procurement. The course itself takes about a day and a half to complete and it reviews legislative requirements, terms and definitions, product and service examples and tips to implementation. The resource sections of the CBT include a glossary of terms and government programs and the reference section includes information on Environmental Choice, furniture specifications and and other guides and sources of information.

## 4. Defunct or outdated directories

- ***Directory of Environmentally Sound Products and Services,*** *City of Toronto in cooperation with the Association of Canadian Cities on Environmentally Sound Strategies (ACCESS), 1991.*
  **Contact:** Ann Carino, Purchasing & Material Supply Division, City of Toronto (416) 392-7313

- *Industry, Science and Technology Canada and External Affairs and International Trade Canada.* ***Industry and the Environment: Directory of Manufactures of Environmental Products.*** *Industry Canada/Foreign Affairs. 1991.*
  **Contact:** John Mihalus, Director, Environmental Affairs, Industry Canada, (613) 954-1890.

There are six broad categories of environmental products and services listed in the directory. These categories include:

- chemicals
- heating/cooling systems and equipment
- air quality equipment
- sewage treatment equipment
- waste management equipment
- scientific/monitoring equipment

Very little detail is provided as to the specific types and qualities of products available from the manufactures. The information is generally restricted to company name and address only, with an occasional mention of the specific product manufactured within a product class (e.g. information for A.E.P. Thermal Inc. of Quebec, under the product class of "Boiler, Power, Parts Of, Other" is supplemented by the words "for electric power boilers").

No attempt has made to evaluate the products listed in the directory relative to any environmental criteria.

- *Stewart's Green Line Ltd.* ***The Environmental Directory*** *Vancouver, B.C., 1993*
  **Contact:** Malcolm McFee (604) 872-5498

The directory lists products, technologies, environmental services, manufacturers and environmental organizations. The directory also contains advertisements for specific environmental services and products. Products and services are listed based on the class of service offered (e.g. architecture, environmental certification services, etc.) or by product function (e.g. building partition). For example, the product class which is dedicated to building materials, contains sub-classes related to flooring, insulation material, caulking, drywall, etc.).

Although the directory does not set out to evaluate any of the products listed, it does indicate the environmental merit(s) of the product. For example, recycled content, recycled material used, lower toxicity level, ability to contribute to greater fuel/energy efficiency, biodegradability and use of natural fibers are noted environmental characteristics.

The organization of the directory is structured in an easily readable and understandable format. This directory's strong points include aesthetic appeal and use of post-consumer paper.

# Resources

## 1. Generic Criteria

Bell Canada, ***Procurement Standard - Draft - Environmental Impacts.***
**Contact:** Rob Bickerdike, (514) 391-8869

*A generic standard that asks questions of the suppliers environmental practices and specific information of the product's impact throughout the lifecyle. See Verification section of Tools.*

British Gas, ***Environmental Discussion Document.*** **20.12.93.**
**Contact:** K.A. Nixon, 2 Bessborough Gardens, London, SW1V 3JE. Tel: 0171 821 144/ Fax: 0171 611 2136.

*A set of criteria covering management issues, discharges and emissions, energy and waste questions to ask of suppliers.*

Quaker Oats Canada. ***Environmental Site Inspection Checklist.***
**Contact:** Frank Stewart, (705) 743-6330

*Has 3 page set of questions covering operations,the surrounding area and grounds and regulatory compliance of the supplier.*

Council on Economic Priorities. ***The Better World Investment Guide.*** 1991.
**Contact:** Steven D. Lyndenberg, (212) 420-1133

Council on Economic Priorities. ***Shopping for a Better World.*** 1993.
**Contact:** Steven D. Lyndenberg, (212) 420-1133

Environmental Protection Agency. ***Comprehensive Guideline for Procurement of Products Containing Recovered Materials: 40 CFR Part 247.*** May 1995.
**Contact:** Alberta Messia, Office of Environmental Federal Execcutive Order (202) 260-9293

State of Minnesota, Department of Administration. ***Environmentally - Aware Purchasing Checklist.*** November 1991.
**Contact**: Laura Milberg/ Ken Brown, (612) 215-0261

*Provides a general checkist of criteria of nine different factors to consider when evaluating product requirements and developing bid language.*

## 2. Examples of Specific Guidelines and Specifications

Body Shop. ***Environmental /Ecological Guidelines for Buyers.*** April 1995.
**Contact:** Sean Quinn, (416) 441-3202
*Provides checklists designed to assist buyers in their daily dealings with suppliers. Guidelines cover products ranging from sea sponges to recycled paper and cars.*

City of Santa Monica, ***Toxics Use Reduction Program.*** Written by Brian J. Johnson, Deborah O. Raphael.
**Contact:** Environmental Programs Division, (310) 458-2227
*Guidelines for the reduction of toxic cleaning products and cleaning product specifications.*

Environmental Choice Program. ***International Listing of Product and Services Guidelines/ Criteria.*** Environment Canada. 23 January 1995.
**Contact:** Jacinthe Seguin, Kevin Gallagher (613) 952-9440
*Can provide the specifications used to determine a product's eligibility for the EcoLogo.*

Environment Canada and Public Works and Government Services Canada, ***The Environmentally Responsible Construction and Renovation Handbook,*** 1995.
**Contact:** Environment Canada, 819-953-0608

Environmental Research Group, ***BEPAC Building Environmental Performance Assessment Criteria,*** 1993.
**Contact:** Peter Horvatis, (905) 546-0831

Governments Incorporating Procurement Policies to Eliminate Refuse. ***G.I.P.P.E.R.'s Guide to Environmental Purchasing.*** October 1992.
**Contact:** Ann Carino, Department of Purchasing and Supply (416) 392-7311
*Recommendations and guidelines for greening procurement of cleaning products, compost, construction and demolition materials, paint, paper and packaging.*

Office of Federal Environmental Stewardship and OASIS, Government Services Canada. ***Environmental Specifications for Office Furniture.*** 1994.
**Contact:** Jill Bissenthal, (819) 956-1082

Public Works Canada, ***Environmental Criteria for Building Design,*** March 1993.
**Contact:** Craig Boyle, Environmental Services, (613) 736-2385

State of Pennyslvania. ***Requirements for the Procurement of Products That Contain Recycled Material.***
**Contact:** Bill McDowell, (717) 787-5733

Scientific Certification Systems. ***The Forest Conservation Program: Program Description and 1994 Operations Manual.*** 1994.

**Contact:** Debbie Hammel, (510) 832-1415

State of New Jersey. ***Guide to Public Procurement of Recycled Products.*** 1992.
**Contact:** Barbara Derer, (609) 292-2994

Washington State. ***IndoorAir Quality Specifications.*** December 1989.
**Contact:** David Block, Jack L. Brown, (206) 586-5952
*Requirements and specifications to ensure an acceptable standard of indoor air quality*

## 3. Packaging

Canadian Council of Ministers on the Environment, ***National Packaging Protocol,*** 1991.

Federation of Canadian Municipalities.***The Packaging Waste Reduction Guide: Minimizing Solid Waste through Efficient Procurement Practices.***
**Contact:** Kathy Thompson (613) 241-5221
*A tool to assist purchasers reduce packaging waste .*

Washington Retail Association. ***Preferred Packaging Procurement Guidelines.*** 1992.
**Contact:** Patty Schwegman, (206) 943-9198

## 4. Procurement Policy

Alberta Government, ***Procurement Policy on Environmentally Responsible Products, April,*** 1991.
**Contact:**

Alberta Public Works, Supply and Services, ***Continued Focus on Green Products and Practices,*** December, 1992.
**Contact:**

City of Toronto, Management Services Department, Purchasing and Material Supply Division, ***Environmental Initiatives,*** April 1994.
**Contact:** Lou Pagano, Department of Purchasing and Supply (416) 392-7311
*A summary of the green purchasing initiative that the City of Toronto has taken.*

King County, ***Model Recycled Product Procurement Policy.*** King County Purchasing Agency. Seattle, WA.
**Contact:** Solid Waste Division, (206) 296-4471

*Provides an example of a model recycled product policy.*

Canadian Standards Association (CSA), ***Environmentally Responsible Procurement ("Green Procurement"), Z766-95.*** January 1995

**Contact:** CSA., Ahmed Husseini, (416) 747-4000

*Designed to assist organizations to implement and sustain an environmentally responsible procurement plan.*

Centre for Study of Responsive Law. ***Forty Ways to Make Government Purchasing Green.*** Written by Eleanor J. Lewis, Eric Weltman. 1992.

**Contact:** Alicia Colver, (202) 387-8030

KPMG - UK, ***Buying Into the Environment: Guidelines for Integrating the Environment Into Purchasing and Supply,*** 1994.

**Contact:** Business in the Environment, 8 Stratton St. London, UK W1X 6AH, tel: 44 171 629 1600, fax: 44 1a71 629 1834

## 5. Other Guides

Department of the Environment, England. ***Selling to DoE. A green guide for Suppliers of Goods and Services to the Department of the Environment.*** May 1995.

*Provides advice to suppliers on how to meet DoEs requirements on environmental procurement.*

**Contact:** Ms. Jill Jennings, Department of Environment, 43 Marsham St., London UK SW1 3PY Tel: 171 276-8389 Fax: 171 276-8430

Northeast Maryland Waste Disposal Authority, ***Buy Recycled Training Manual, A Guidebook for Government Buyers and Using Agencies.***

**Contact:** Northeast Maryland Waste Disposal Authority, (410) 333-2730.

*Provides an overview of American guidelines and legislation pertaining to green procurement, suggests ways to increase the amount of recycled products bought, prevent waste, and monitor programs.*

# *Appendices*

# Additional Environmental Criteria

## General Environmental Criteria

- Is the product necessary?
- Is the product size/magnitude necessary?
- Are all features necessary?
- Can the product be shared, borrowed?
- Does product comply with standards and regulations?
- Are green procurement guidelines, standards or specifications available from Environmental Choice/CGSB?
- Is the product "certified" green? (e.g. Ecologo / Green Seal etc.)

## Product Design

- Is the product durable / long lasting?
- Is it reconditionable after use?
- Is it recyclable after use?
- Does it contain recycled material?
- Does it contain post consumer recycled material?
- Is it easily updated or upgraded by replacing or adding a part?
- Is it easily maintained and repaired?
- Are parts easily reused?
- Are parts easily reconditioned?
- Are parts easily recycled?
- Does product contain toxins? (as defined by Enviromental Protection Agency or Canadian Environmental Protection Act)
- Does product contain banned or restricted substances (e.g. CFCs)?
- Does product contain ozone depleting substances?
- Does product design consider energy conservation
- Does product contain VOCS ?

## Manufacturing/ Production Process

- Has manufacturer complied with National Pollution Release Index (NPRI)?
- Is manufacturer participating in ARET (Accelerated Reduction/Elimination of Toxics) program?
- Does manufacturer comply with any quality perfomance standards(e.g. ISO 9000)?
- Does manufacturer comply with any environmental performance standards(e.g. ISO 14000, BS7750, CSA standards)?
- Is manufacturer willing to sign a statement verifying that it complies with environmental legislation?
- Is manufacturer willing to undergo an environmental audit ?
- Does process produce greenhouse gases?
- Does process minimize energy expenditures?
- Does process minimize discharges to water bodies?
- Does process use ozone depleting substances?
- Does manufacturing process create NOx emissions?
- Does manufacturing process create SOx emissions?
- Does manufacturing process create CO emissions?
- Does manufacturing process create ground level ozone emissions?
- Does manufacturing process create particulates emissions?
- Does manufacturing process create carcinogens identified by the International Agency for Research on Cancer (IARC)?
- Does manufacturing process create hydrocarbons?
- Does manufacturing process use halogenated solvents (e.g chlorinated, brominated etc.)?
- Does manufacturing process use aromatic solvents?
- Does product contain, or process use, heavy metals, especially lead, mercury, cadmium, hexavalent chromium and their compounds?
- Do you discharge any air emissions? (general question)

*Water Effluents*

- Are the organic compounds from water effluent biodegradeable?
- What is the level of toxicity to aquatic life, using Environment Canada Biological Test Methods or equivalent?
- What is the level of biochemical oxygen demand (BOD) of effluent from manufacturing sites?

- What is the level of bioaccumulation?
- What is the level of total suspended solids in effluent from manufacturing sites?

## Material Acquisition

- Are environmental and social impact assessements conducted before activity commences?
- Does product substitute renewable materials for non-renewable resources?
- Does extraction method prevent water contamination?
- Does extraction/acquisition create hazardous by-products?
- Does acquisition cause displacement of local peoples?

## Agricultural

- Do you use sustainable harvesting methods?
- Do you use methods to prevent soil erosion?
- Do you use pesticides/insecticides?
- Do you use fertilizers?
- Do you use 'certified organic' products?

## Packaging / Shipment

- Do you use "Canadian Code of Preferred Packaging Practices" guidelines or equivalent?
- Does company comply with National Packaging Protocol?
- Does product eliminate packaging?
- Does product use minimal packaging?
- Does packaging contain recycled content?
- Does packaging use post consumer recycled content?
- Does packaging use non-chlorine bleached paper?
- Does product use bulk packaging?
- Is container refillable?
- Is packaging reusable by returning to supplier?
- Does packaging use soy-based inks?
- Can packaging can be recycled locally?
- Can packaging be recycled in an economically/technically viable manner?

- Are alternatives used to polystyrene "peanuts"?
- Is a return loop in place for recycling?
- Can packaging be reused for another purpose?
- Does product come in a concentrated form?

## Consumer Use/ Product Use

- Is product energy efficient?
- Is product water efficient?
- Does product generate little or no waste during use?

*Indoor Air Quality Issues*

- Do formaldehyde emission rates not exceed 0.05 ppm after 30 days of installment?
- Do VOC emission rates not exceed 0.5 ppm after 30 days of installment?
- Is off-gasing from product eliminated or significantly reduced?

## End Use / Disposition

- Does product require special disposal considerations?
- Can components be effectively separated into identifiable materials and be salvaged/repaired/ recycled?
- Can product be recycled in an economically/technically viable manner?
- Is product labelled to inform user of relevant disposal information?

## Organization's Environmental Profile

(questions about company)

- Is an environmental Management System (EMS) in place?
- Has an environmental audit been conducted?
- Does company have a comprehensive waste management/recycling program in place?
- Does company comply with all environmental legislation?
- Does company apply stricter environmental standards than required by law?
- Can it substantiate all environmental claims?
- Is responsibility for environmental issues at Company Director level?
- Is there environmental issues training for all staff?
- Is there an environmental Policy Statement?

- Is there an Environmental Policy Statement available to public?
- Does company conduct an environmental appraisal of suppliers and subcontractors?
- Has a full life cycle environmental evaluation been carried out on products or services?
- Is the company making demonstrable efforts to maximize resource efficiency (e.g. water, energy etc.)?
- Has the company had any environmental infractions over the past 5 years?
- Does the company have a local purchasing preference policy?

## Organization's Social/Ethical Profile

***Animal Testing***

- Is animal testing conducted?
- *Are in-vitro* tests conducted?

***Advancement of Women / Minorities/ Disabled***

- Are women/minorities on Board of Directors?
- Are women/minorities in top official/management positions?
- Does company hire employees with disabilities?
- Are facilities accessible by wheelchair?
- Are you an Equal Opportunity Employer ?

***Family benefits/ Workplace benefits***

- Does company have a flexible workplace policy and/or work at home arrangements?
- Does company have a non-discrimination policy/program re sexual orientation?
- Does company have a child care assistance and/or day care program?
- Does company have a parental leave program?
- Does company have educational and training assistance?
- Does company have a employee home ownership program?
- Does company have a no lay-off policy?
- Does company offer same benefits to part-time employees as full-time employees?
- Does company have a policy to re-hire former employees?
- Does company have a stress release program?

*Charitable Giving/ Community Outreach*

- Do you have a charitable giving program?
- Do you encourage employee involvement in community volunteer activities?
- Does company donate food to local food banks?
- Does company sponsor a community recycling program?
- Do community members sit on the corporate environmental committee?

## Comparison of Recycled Content Standards for Paper and Paper Products

| *Guideline* | *Minimum Percent Post-Commercial Fibre* | *Minimum Percent Post-Commercial Fibre* | *Total Minimum Percent Recycled Content* |
|---|---|---|---|
| Environmental Choice Program | | | |
| - ECP-08-89 - printing papers | *40* | *10* | *50* |
| - ECP-08-89 - business papers | *40* | *10* | *50* |
| - ECP-08-89 - envelop papers | *40* | *10* | *50* |
| - ECP-08-89 - covers and bristols | *40* | *10* | *50* |
| | | | |
| United States Environmental Protection Agency | | | |
| - Recovered Materials Advisory Notice - office paper | | | *50* |
| - Recovered Materials Advisory Notice - paper for high-speed copiers | | | *50* |
| - Recovered Materials Advisory Notice - envelopes | | | *50* |
| - Recovered Materials Advisory Notice -bond papers | | | *50* |
| | | | |
| United States Executive Order for Federal Agencies | | | |
| - uncoated printing and writing paper | | *20% by 1995* | *50* |
| - uncoated printing and writing paper | | *30% by 1999* | *50* |

Appendix C

# ENVIRONMENTAL CLAIM STATEMENT

*This Environmental Claim Statement is to be completed by the product or service supplier.*

*We will consider this form as a part of your product label, ie: subject to the same laws and regulations as the rest of your product label. If the space provided for additional information is not sufficient, please feel free to attach additional pages.*

*If you have any questions regarding this Environmental Claim Statement please contact Gael Young, Materiel Management, Employment and Immigration Canada, at (416) 954-7782.*

## RODUCT IDENTIFICATION

SUPPLIER:

NAME OF PRODUCT:

TYPE OF PRODUCT:

## RESOURCE / RECYCLING CONSIDERATIONS

Total recycled* content:

Post-commercial* recycled content:

Post-consumer* recycled content:

Does this product carry the Environmental Choice Ecologo ?
If yes, please provide the Ecologo certification number.

Have the environment merits of your product been verified by any other established product verification process ?
If yes, please identify the verification process or group which has verified these merits.

Is your product more energy efficient than other or previous products ?
If yes, please provide details.

Does the manufacture of your product use fewer resources than similar or previous models ? ( ie: less energy, less water, less materials used, or less waste produced during manufacturing). If yes, please provide details.

*PLEASE REFER TO THE DEFINITION OF TERMS ATTACHED



Canada

What is the life expectancy of this product ?

What is the appropriate method for disposing of this product after use ?

Is this product partially or totally recyclable* ? ( this will only be considered an environmental benefit if there are no geographic or economic limitations to the recycling of your product.)

Can this product be upgraded ? If yes, please provide details.

Please provide specific information about the product's warranty and repair schedules.

Are parts and service available in all areas of Ontario ?

What is the average cost for parts and services in all areas of Ontario ?

## CHEMICAL PROPERTIES

Is this product considered a hazardous material ( as per WHMIS legislation or the Transportation of Dangerous Goods Act ) ? If yes, please provide details.

Please attach a copy of the product's Material Safety Data Sheet (MSDS). *ATTACHED* *NOT ATTACHED*

Is this product toxic to humans? If yes, please identify the dose/ratio at which it is considered to be toxic.

Is this product toxic to marine life ? If yes, please identify the dose/ratio at which it is considered to be toxic.

Is this product flammable ? If yes, please identify the conditions which should been maintained to avoid fire.

*PLEASE REFER TO THE DEFINITION OF TERMS ATTACHED*

Is this product biodegradable ? If yes, please identify the environmental conditions and time required for partial and complete degradation.

Are the byproducts of degradation safe for the environment ?

## PACKAGING CONSIDERATIONS

Please identify the packaging material used.

Total recycled* content of packaging material:
Post-commercial* recycled content of packaging material:
Post-consumer* recycled content of packaging material:

Is your packaging material designed for reuse (ie: refillable bottles, reusable plastic shipping cartons ). If yes, please provide details.

Is your packaging material recyclable* ? ( This will only be considered an environmental benefit if there are no geographic or economic limitations to the recycling of your package.)

Will you pick up packaging material and skids ? If yes, please provide details.

If you use foam chips, are they water soluble ?

Has your company adopted a policy of packaging reduction in accordance with the National Packaging Protocol ? If yes, please provide details.

*PLEASE REFER TO THE DEFINITION OF TERMS ATTACHED.*

# AUTHORIZATION OF SUPPLIER

NAME OF SUPPLIER :

TITLE OF SUPPLIER :

signature — on behalf of — company

THE INFORMATION COLLECTED ON THIS FORM MAY BE ACCESSIBLE UNDER THE "ACCESS TO INFORMATION ACT"

"THIS FORM IS PRINTED ON PAPER WHICH CONTAINS 50 % RECYCLED CONTENT AND 10% POST-CONSUMER FIBRE"

# DEFINITION OF TERMS

RECYCLED CONTENT is material which has been diverted from the waste stream and reprocessed. This may include household, institutional, commercial or industrial waste. Post-commercial and post-consumer wastes are both considered to be recycled content, but in-house materials which are routinely reprocessed on the premises as part of the manufacturing process are not considered to be recycled content.

POST-COMMERCIAL recycled content is waste which is generated from an operation which converts an item into a consumer product. For example, the trimmings from an envelope manufacturer are the waste which is generated from the operation which converts paper into a consumer product (envelopes).

POST-CONSUMER recycled content is material which has already served its intended purpose as a consumer product, and has then been diverted from the waste stream and reprocessed.

A product is considered to be RECYCLABLE if at least one third of the consumers who purchase the product have convenient access to recycling facilities through curb-side collection or drop-off depots.

These definitions reflect the standards established by Consumer and Corporate Affairs. For more information regarding these standards, please refer to the "Guiding Principles for Environmental Labelling and Advertising" available through Consumer and Corporate Affairs.

# *The Quaker Oats Company of Canada Limited*
## ***Contract Manufacturers, Packagers and Business Associates.***

# ***Environmental Policy.***

***The Quaker Oats Company of Canada Limited*** *believes that a healthy environment and a healthy economy go hand in hand. To this end, we will integrate environmental decision-making in all aspects of business planning and operations, including our choice of business associates.*

*To this end we require that Contract Manufacturers or Packagers and Business Associates of Quaker Canada show appropriate commitment to Environmental responsibility by managing their activities as to meet or exceed all relevant Environmental Laws and Regulatory requirements.*

*Accordingly it is required that Contract Manufacturers and Packagers and Business Associates of Quaker Canada:-*

*-accept the general principle of operating as good environmental citizens,*

*-be open to an environmental appraisal by Quaker Canada,*

*-inform Quaker Canada immediately of any Environmental incidents, which may impact Quaker Canada including regulatory compliance or public concern issues.*

*Quaker Canada reserves the right to discontinue Contractual Agreements with any Contract Manufacturer or Packager or Business Associate who is not in compliance with Environmental Laws and Regulations.*

*Certification of Agreement with Environmental Policy.*

----------*Signed* ----------*Dated*

*Name and Title* _____ _____

The Quaker Oats Company of Canada
Environmental Site Inspection

Copy: C.C.E.F.

---

Name Address

Phone #
Fax #

---

Contact Name/Title Date of Inspection Name of Inspector

---

Services to Quaker

_____
_____
_____
_____
_____

Reason for Inspection

1. Initial Approval
2. Re-approval
3. Follow up-inspection
4. Environmental Incident
5. Other

Date of Last Inspection

Explain Reason

_____
_____
_____
_____
_____
_____

---

| 1) **Operations** | Yes | No |
|---|---|---|
| a) Is there a person that has environmental responsibilities? If yes what is the persons name?_____ | | |
| b) Are there Environmental Programs is place? If yes what are they?_____ | | |
| c) Do they have Environmental Memberships? If yes what are they?_____ | | |
| d) Does the Company have an Environmental Management System? | | |
| e) Does the Company do annual waste audits and waste plans? | | |
| f) Does the Company do regular sewer monitoring? If yes are they in Compliance When was the last sample taken?_____ | | |
| g) Does the Company do regular Air Emission Inventories? If yes, were they in Compliance? When was the last Air Emission Inventory taken?_____ | | |

| | Yes | No |
|---|---|---|
| h) Do you use chemicals in your plant? | | |
| If yes what are the chemicals? _____ | | |
| _____ | | |
| _____ | | |
| If yes how are the chemicals stored? _____ | | |
| _____ | | |
| _____ | | |
| i) Are there current Material Data Sheets for the chemicals? | | |
| j) Is the Company registered as a generator of hazardous waste? | | |
| If yes for what wastes? _____ | | |
| _____ | | |
| k) What other wastes are generated? _____ | | |
| _____ | | |
| _____ | | |
| L) How are these wastes stored/handled? _____ | | |
| _____ | | |
| m) What materials are re-used/recycled? _____ | | |
| _____ | | |
| _____ | | |
| n) Does the Company have copies of their Waste Carrier's C of A | | |
| o) Does the Company have good spills containment? | | |
| 2 **Surrounding Area/Outside grounds** | | |
| a) Is the surrounding land mostly Industrial? | | |
| If no, what is in the area? _____ | | |
| b) Are there any bodies of water within two blocks? | | |
| c) Are there any parks with in two blocks of the building? | | |
| d) Is there controlled access to the outside grounds? | | |
| e) Are the parking lots paved? | | |

| | Yes | No |
|---|---|---|
| f) Are there storm sewers in the parking lots/grounds? If no where does the run-off go?_____ | | |
| g) Are there any liquid materials stored near drains? | | |
| h) Do all liquid storage tanks have berms? | | |
| i) Is the waste material area neat and in a controlled space? | | |
| j) Are there any underground tanks on the property? If yes when were they last inspected?_____ | | |

**3) Regulatory**

a) What permits & C of A's does the Company have? (Attach Copies)

| Permit/ C of A | Expiry Date |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

| | Yes | No |
|---|---|---|
| b) Does the Company have any Environmental Violations? If yes what are they?_____ | | |
| c) Does the Company have any Environmental Orders? If yes what are they?_____ | | |
| d) Is the Company under any Environmental Investigations? If yes what are they?_____ | | |

**4) General Comments:**_____

_____

_____

_____

**5) Recommended Action:**_____

_____

_____

Quaker Oats Representative

Name_____

Signature_____

Date_____