



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

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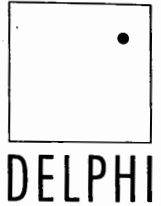
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Green Procurement**

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Development of Criteria for Green Procurement

Phase I: A Survey of Existing Criteria

Prepared for:

**The National Round Table on the Environment and the
Economy**

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1.0 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.

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, delivered and consumed.

To motivate change it is important to highlight the benefits, which are many. 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 relating to 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 to 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)"

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 requisition 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 project was divided into two phases. This report conveys the results and conclusions of Phase I.

1.1 Objectives of Phase I

Phase 1 of this project had two specific objectives:

- 1. Create an inventory of green procurement criteria in use or prepared for the use of organizations in Canada and internationally;**
- 2. Develop a framework for assessing and comparing the key elements of those green criteria identified, emphasizing both the general and the specific.**

2.0 Methodology for Research and Analysis

Phase I of the project featured a detailed investigation of green procurement activities of the public and private sector throughout North America and internationally. Research methods included literature searches, electronic database searches, use of existing files and documents and, for the bulk of the research, direct contact with the organizations being surveyed.

Five groups were targeted for research:

- Public sector agencies in Canada (federal, provincial);
- Public sector agencies in the United States and internationally;
- Private sector companies in Canada and internationally;
- Non-profit organizations in Canada and the United States; and
- International agencies and organizations.

Potential contacts in each of the five identified sectors were divided among the project team members. These contacts were identified in several ways: contacts familiar to the Project Team; contacts suggested by Task Force and Advisory Group members, and contacts suggested by people and documents during the course of our research. A list of contacts is presented in Appendix A.

In its research the Project Team opted for oral interviews as opposed to written surveys for two reasons. First, the response rate to non-compulsory written surveys is generally very low. Second, with such a short time frame for the entire study it was felt that more information could be obtained in a shorter time period through direct telephone contact.

The goal of the contact was to establish whether the organization was involved in green procurement activities and the level and nature of involvement. Team members extended the inquiry to determine whether any initiative had been taken to incorporate the principles of waste reduction, recycled content, water conservation, energy conservation, toxicity reduction, life cycle analysis, environmental profile of the supplier, social/ethical considerations or environmental certification in procurement policies and programs.

The questions asked were similar for each organization contacted, but often varied according to the type of organization (i.e. public or private, certification body, non-governmental). Typical questions included:

1. Has your organization implemented some form of green/environmental purchasing policy, program or practices?
2. If yes, describe: the approach your organization is taking; the type or range of products/services you have focused on; the criteria you are using to assess and compare products/services; any "green" specifications you have developed.
3. How have you implemented your green purchasing criteria?
4. How did you set these criteria?

The respondent was asked to send copies of all available written material concerning their policies, programs, practices, criteria and specifications.

The information presented in this report was gathered through interviews conducted between April 1 and May 15, 1995, and from various documents, reports, publications and other information sources. The study examined procurement operations from 50 Canadian public organizations (20 Federal Government Departments, 18 Crown Corporations (all levels) and 12 Provincial and Territorial Departments or Ministries), more than 20 U.S. public agencies, several foreign governments and agencies, some 35 private sector companies and more than a dozen non-governmental organizations.

Obtaining tangible, printed information on green procurement activities, not to mention actual criteria, proved to be unexpectedly difficult and laborious. The private sector appears very nervous about sharing its procurement trade secrets with others. Though reluctant to provide information relating directly to green procurement, most of the companies contacted were nevertheless eager to send information about environmentally responsible product design, environmental policy statements, annual reports and environmental fact sheets. A summary of organizations contacted and responses received is found in Appendix A.

It was decided from the outset to cast the net wide in the initial survey of criteria being used or recommended for use by organizations of all kinds. In keeping with this wide approach, the information obtained was extensive and diverse. Criteria identified ranged from the general to the highly specific.

Two broad types of information were received: (i) descriptions of the approach being taken by the organization to purchasing green products and services; and (ii) examples of criteria which the purchaser is using to evaluate its suppliers environmental (or sustainability) profile and that of its product or service.

Organization of Research: Matrices

Organization of the information collected has been based on the development of a series of matrices. Matrix A -- Organizational Approaches (Appendix A), summarizes the general approach of the participating organization. Further discussion is provided in section 4.0 below. Matrix A provides an overview of the current state of green procurement at the respondent level. A second matrix of Green Procurement Criteria (Appendix B), presents an inventory of available green procurement policies, guidelines, checklists, and specifications.

Advisory Group

An advisory group of prominent Canadians working in the area of green procurement was enlisted to provide feedback on the reports:

- Lou Pagano, City of Toronto and GIPPER
- Ahmed Hussein, Canadian Standards Association
- Kasia Introwski, Build Green Program
- Michael Calvert, Office of Environmental Stewardship
- Kevin Gallagher, Environmental Choice Program
- Charles Whitlock, CPP, Regional Municipality of Waterloo
- Wendy Cook, Canadian Buy Recycled Alliance
- Gayle McCaskill, CIBC
- Sheila Finn, Creative Purchasing Solutions Inc.

3.0 Summary of Findings

3.1 Public Sector- Canada

In all cases, the public sector organizations contacted indicated that some green procurement activity was ongoing. The use of criteria to guide green procurement varied extensively between organizations, however, with some focusing on single criteria, such as recycled content, and others using eco-labeling organizations such as Environmental Choice, to conduct product assessments. The following is a summary of the major findings.

Organizational Approaches

- Federal government representatives are usually quick to point out that not all departments operate in the same manner. This may act as a barrier to developing criteria that can apply equally to all situations.
- In the public sector, procurement is governed by policy. Most federal government departments have lengthy policy manuals for Materiel Management. The trend towards decentralization, and by extension empowerment, has had the effect of encouraging managers to fulfill functional requirements in the most efficient way possible. Policies are being overhauled to make them concise and relevant.
- Federal departments have moved towards decentralization of procurement authority. Managers have been given authority to specify purchases and select suppliers. This has had the effect of placing more emphasis on low price and it has made it virtually impossible to monitor purchasing. The latter point is continuously raised as a barrier to additional controls as they become impossible to enforce.
- The purchasing limit for goods, commonly referred to as a Local Purchase Order (LPOs), has gone up to \$5,000 from \$2,500. LPOs allow employees with delegated purchasing authority to make local purchases without going to tender.
- Despite the trend towards decentralization, many feel that the most effective means of promoting environmentally responsible procurement is through policy. The federal government is taking environmental responsibilities in general more seriously and most departments are developing environmental management frameworks or systems (EMF/S). Environmental procurement policy would fit nicely within an EMF/S, especially in a climate where the managers who have inherited decentralized responsibilities are now concerned with the liability that those responsibilities brings forward.

- Despite this renewed emphasis on policies, either within Materiel Management or within an EMF/S, only 3 of 20 surveyed reported having an environmental policy in place, although 10 departments reported that they had a draft policy in place. Generally speaking, the departments adopting the policy approach are also advocating greater use of environmental criteria.
- Finally, standing offers represent an interesting opportunity for promoting green products. Standing offers are agreements negotiated between a supplier and the federal government pertaining to product characteristics and price. The government sets a benchmark that can include performance and specifically requested features such as speed or memory, and suppliers who can meet these criteria also offer a maximum allowable cost for that product or service. All federal purchasers have access to federal standing offers. A large number of federal purchasers rely on standing offers to fulfill their purchasing requirements. In some instances the products are stocked in stores (e.g., toner cartridges and paper), while in other cases purchasers quote a standing offer number to access the product at the government price (e.g., computers and office equipment).

Use of Criteria

- All federal government departments indicated that they "buy some green products". The most commonly cited criteria used to define green are recycled content, energy efficiency, packaging, products that promote waste reduction, water efficient products, alternative fuel or "reduced pollution" vehicles and products which have less impact on indoor air quality. Some departments use the Environmental Choice Program as a guide to environmental criteria. In almost all cases, the major criteria is cost.
- Generally speaking, federal purchasers are comfortable buying products which have been assessed by an independent third party such as the ECP. The advantage of this approach is that ECP, and other programs such as Green Seal, tend to focus on more than single criteria, and guidelines may include references to packaging, toxicity and recycled content.
- Provincial governments and crown corporations have concentrated on recycled content, energy efficiency and packaging, and have made more use in general of the Environmental Choice Program (ECP). They are also more inclined to use other "tools" such as cooperative purchasing, price preferences and the use of standard environmental clauses.
- Analysis of criteria used by the provincial governments and crown corporations must be viewed in relation to the management issues cited above. The survey showed that though some of these organizations still

operate centralized procurement regimes in which only a few buyers make all the decisions for the organization, many are decentralizing and delegating purchasing authority to non-specialist employees. As a result, it is increasingly difficult to put in place and monitor compliance with directives such as "must purchase EcoLogo products where available".

Case Study: Transport Canada

In March 1992, Transport Canada initiated an environmental procurement program. The commencement of this program coincided with the launch of the Environmental Coordinators Network, an initiative of the Office of Federal Environmental Stewardship (OFES) of Environment Canada. At the time, only the House of Commons had been active in the area of procurement at the federal level.

The program produced two key deliverables in 1992 and early 1993: a course entitled: "Implementing Green Procurement Policies", and a manual and products directory entitled "Choose Green". Both initiatives were well received, and the course itself was taught to over 200 Transport employees over the next two years. Both projects received financial support from the OFES, and represent early successes of the program.

The Choose Green guide was distributed to over 300 people within Transport Canada, and to others outside of the department. The guide attempted to do two things: provide useful advice on what constituted "green" purchasing and how that might be achieved; and provide a list of "green" products for use by the department. Along with the GIPPER guide, it represents one of the earliest attempts to "list" environmentally preferred product and service options.

One of the major drawbacks of the program at Transport Canada was the lack of an environmental procurement policy. In early 1994, the development of such a policy began in earnest. After lengthy review, green procurement became a part of a proposed Deputy Minister's Circular entitled Transport Canada's Green Workplace Commitment. The key points relating to green procurement include:

- The broad-based policy reads as follows: "It is Transport Canada's policy that managers will ensure that their activities and decisions have the least possible negative impact on the environment."
- Included in the policy is a specific focus on reduction of the use of fine paper through a number of means. The intention is to measure the total paper used within a defined work area to gauge progress in this area.
- Where Environmental Choice program (ECP) products exist, Transport Canada employees are instructed to purchase these products. Two exceptions exist:

situations where it is prohibited by the North American Free Trade Agreement, and where the cost differential exceeds 10%.

- In instances where purchase of an ECP product is not possible, managers "shall make every effort to purchase products that bear other recognized environmental certification, or use their best judgment to obtain products with the least harmful impact on the environment."
- The policy requires the use of low sulphur fuels, where possible. Publishing guidelines specify consideration of electronic options before selecting a paper option. They also require that paper meet or exceed the requirements of the ECP.
- They also focus on facility management and indicate that managers should ensure that the "use of environmentally preferred cleaning products is enforced and included in cleaning contracts."
- Energy and water audits are also prescribed, along with the purchase of resource efficient products.

As of April 1, 1995, the DM circular still had not been signed, a step necessary to turn the policy into a binding directive. The Choose Green guide has not been updated in two years and the role of the products directory is unclear. The procurement course has been turned into a computer based training course, that serves a secondary role as an electronic reference source. Hundreds of pages of text are contained in the course document, and are connected with electronic hyper-text links that provide instant access.

No effort has been made to attempt to measure the impact of the training program or the Choose Green guide. A number of factors have prevented the full integration of environmental criteria into procurement at Transport Canada, the two most important being the lack of an environmental procurement policy and the decentralization of purchasing.

Transport Canada was selected as a case study from amongst the federal departments because it demonstrates in many ways the challenges faced by many departments. In addition, it is interesting to examine the role of the Choose Green guide as a tool for green procurement.

Follow UP: The AMMIS System at Statistics Canada

The idea of having access to a guide of "green" products is popular with a number of government employees with purchasing responsibilities. Many simply do not have the time to do the research required to see if any environmentally preferred products exist. This was one of the main driving forces behind the Choose Green guide and others listing products.

At Statistics Canada, they use AMMIS (Automated Materials Management Information System), a federal on-line purchasing system now being used by several departments. What is noteworthy is that Statistics Canada has modified the system so that it automatically highlights "green products" when on-screen orders are placed.

The aim of the program is to encourage purchasers to buy products that are considered "green". To become green within the system, a product must meet one of three criteria:

1. It must be an ECP product; or,
2. It must be certified by another eco-labeling program or meet criteria laid out within a "green" standing offer established by PWGSC; or,
3. It must be approved by the Stats Can Environmental Initiatives Program.

Case Study: Environmental Specifications for Office Furniture, Government Services Canada

The federal government is one of the largest single purchasers of goods and services in Canada. In 1994, an estimated \$142 million was allocated towards the purchasing of new office furniture throughout the federal government. To help promote more environmentally responsible purchases of office furniture within the federal government, an environmental specification for office furniture was developed.

The environmental specification for office furniture has been highlighted because it is the first of its kind in North America and is based on the key features of life cycle assessment including: product design, resource inputs, manufacturing, packaging and distribution, consumer use and post-consumer use. The specification is designed in a manner that permits the procurement officer to use the specification complete or to select key clauses for incorporation in existing office furniture specifications. In addition, the specification identifies environmental activities that are considered mandatory for industry to meet and those which are desirable. This enables industry to set goals for future environmental achievements.

The incorporation of the environmental specifications into existing office furniture specifications is proceeding slowly. While some of the clauses have been added to federal specifications designed by OASIS (Government Services Canada), none have been introduced into the national standard specifications. A first attempt to introduce mandatory environmental specifications into the national standards for chairs received negative feedback by industry. Working with industry, the environmental specifications introduced in the national

standards for chairs have been revised to be interpreted as recommended but not required. This revision is expected to be passed in the next ballot. The intent is to send a clear message to furniture manufacturers that environmental requirements are coming.

3.2 Private Sector

Thirty companies from a wide range of industrial categories were contacted during the course of Phase 1. In addition, a number of organizations promoting environmental procurement amongst businesses were contacted. This included the Buy Recycled Business Alliance (BRBA), the Canadian Buy Recycled Alliance (CBRA), the Green Seal Environmental Partner Program and the Washington Retail Association. Private companies shown in the matrices below are among the leaders in the field.

The work carried out by the project team was hampered in this area because most companies contacted were reluctant to discuss procurement policies and procedures, viewing them as competitive advantages.

Organizational Approaches

- Most of the companies have developed an environmental policy statement and the company president, CEO or director of environmental affairs has made a statement about the company's commitment to the environment.
- Some companies have begun to produce separate environmental reports, highlighting environmental initiatives, such as pollution prevention, 3Rs, energy and water conservation, toxicity reduction, education and promotion.
- A small percentage of the environmental policy statements and/or guiding principles made a reference to environmentally responsible purchasing.
- It should be noted that the term "sustainable development" did not appear in any reference to purchasing and appeared in the environmental policy statement of only one company. The Body Shop refers to environmentally sustainable resources.
- Price continues to be the most important factor. The motto of private sector purchasing was revealed during one conversation: "make it attractive, make it economical, force me or leave me alone."

- Private sector companies are generally wary of recycled content products. They feel that the products are overpriced due to the high prices that the public sector in the US is willing to pay. Additionally, they are concerned with the limited ability to verify environmental claims such as percentage of recycled content.
- Many companies do not appear to specifically endorse products certified by Environmental Choice, Green Seal or other eco-labelling programs.

Use of Criteria

- The main environmental criteria used by private sector companies are: recycled content of product, pollution created in product production (e.g., air emissions), hazardous byproducts, minimal packaging, recycled content of packaging, reusable packaging.
- Several companies ask suppliers if they have an environmental management system in place, if they are in full compliance with environmental legislation, and who has the responsibility within the supplier company for environmental issues.
- Some companies ask general questions that pertain to broad areas such as management systems, while others ask a series of specific questions within the topic area.
- Some organizations have very general questions which would make other criteria implicit. For example, "Have you carried a formal review of all discharges and emissions from your works?" (British Gas)
- A number of companies and organizations ask if a life-cycle analysis has been carried out on a product, and some ask for results of the study. These questions cover a wide range of environmental impacts.
- Very few companies ask suppliers social or ethical questions although British Gas included one general question ("Have you launched or contributed to any environmental or social initiatives on a local/national scale?") in its criteria.
- Quaker Oats has introduced a site inspection questionnaire to be used for claims verification, and Home Depot has worked carefully with Scientific Certification Systems to ensure that product suppliers are certified.

- The Body Shop has the most comprehensive set of criteria for specific items such as sea sponges, bananas, cotton and T-shirts. Criteria looks at all aspects of the life-cycle, and some social/ethical criteria which is employed in its 'Trade Not Aid' program. The Body Shop also insists upon suppliers signing a declaration that they have not tested on animals in the past five years.
- British companies are concerned about forestry practices, asking very specific questions. British Telecom asks about the production of paper from "old growth" forests and The Body Shop warns of buying wood products from countries such as Chile, USA and Canada where "old growth and boreal forest are rapidly disappearing".

Case Study: The Body Shop

The Body Shop stands out for the thoroughness of its ecological procurement considerations. It provides guidelines for the products and services it purchases, has a detailed questionnaire for suppliers of raw materials and/or packaging components that looks at the entire product life cycle as well as a detailed 'Animal Protection Questionnaire' that all suppliers must answer.

Guidelines exist for the purchasing of products such as synthetic detergents and soap bases, cocoa butter, sea sponges, bananas, cotton products, recycled paper, fragrances, computers, light bulbs and services such as cleaning, building maintenance, gardening and catering. These guidelines are very detailed and include issues such as the long term sustainability of the resource and ecosystem, social impact, employment conditions for workers, hazardous wastes that are used, produced or emitted, and packaging issues. Explanations of the various social and environmental issues are also included to give buyers some insight as to the reasons for criteria. See, for example, the detailed guidelines for timber and wood products listed in Appendix D.

Case Study: Quaker Oats Canada

Quaker Oats Canada has become a leader in waste reduction and energy conservation, boasting 90% reduction in waste requiring disposal and 30% reduced energy conservation. Over the past years the company has endeavoured to apply the principles of waste reduction and environmental responsibility to its suppliers. This case study has been selected because it illustrates a company that makes suppliers, co-manufacturers, and other business associates responsible for maintaining an acceptable level of environmental performance. Quaker Oats has developed a program that requires suppliers to:

- undergo an annual environmental site inspection administered by Quaker Oat representatives which applies an "Environmental Site Inspection" audit checklist; and
- sign the "Environmental Purchasing Policy" which commits suppliers, co-manufacturers, co-packagers and business associates to comply with environmental laws and regulations, undergo an environmental appraisal, and inform Quaker Oats of any environmental incidents.

The environmental objectives identified for Quaker Oats own facilities are much more comprehensive and aggressive than those required of the suppliers.

Quaker Oats is proceeding slowly with the program due to a lack of assigned personnel to carry out the work. In the second year of its implementation, the environmental site inspection program has been administered to 15 companies, most of which are co-manufacturers, co-packagers and business associates. Many of these companies are responding in a positive manner and have begun to anticipate the need for environment-related information. Quaker Oats has recently begun training its quality assurance inspectors to also perform the environmental site inspection, which will help to increase the number of companies audited. Purchasing agents also have been brought into the program and will become responsible for ensuring that new suppliers meet the requirements of the program. The program is considered a success by Quaker Oats staff.

3.3 Public Sector- International

While a strong response was obtained from U.S. government agencies, the same cannot be said for European countries contacted, from whom little information was received. Additional queries are being made and material collected will be incorporated into any subsequent phases of this study.

The US federal and state agencies represent the most powerful buying force in North America. It is reported that the US federal government alone purchases over \$200 billion worth of goods and services annually and manages over 500,000 buildings. Several dozen US state agencies and non-profit organizations were contacted during the course of the study. The following are the major findings:

Considerations

- As with the consideration of provincial government purchasing practices, the analysis of activity in the US is incomplete without a fuller understanding of the operations of procurement.
- Some of the agencies surveyed have environmental procurement policies in place that include procedures to implement the policies.

- A number of US agencies use price preference policies to encourage the production of green products. With the principle focus being recycled content, this practice has the potential to distort the true market value of recycled content goods. Some private sector companies believe that public price preference policies have pushed prices for recycled content goods to an artificially high point.
- Green procurement criteria for environmental and social issues beyond recycled content are in the infancy stage of development.
- There are no well organized initiatives for procurement of energy or water conservation products, non-toxic products, or products that promote waste minimization. In general, state agencies seem reluctant to pursue these issues without direction from the US federal government.
- The Norwegian Ministry of the Environment developed in cooperation with organizers of the 1994 Lillehammer Olympics an extensive guide to green purchasing. The guide recommends criteria for purchasing products and services from dozens of categories. The guide has now been adopted by most federal ministries and more than 120 local governments.

Use of Criteria

- The majority of US state agencies have addressed recycled content issues, and only recently have some begun to explore other criteria such as source reduction and toxicity concerns.
- Some require that printers use vegetable based ink for printing jobs and in packaging.
- The State of Illinois has developed an evaluation system for selecting energy service companies.
- The impact of recycled content laws should not be underestimated. The US federal government revised its mandatory post-consumer recycled fibre content to 20% and received immediate response. In fact, mills seem reluctant to produce paper products that do not reflect the new US requirement.
- The State of Minnesota focuses on the reusability and recyclability of products and their parts.
- Some agencies use EPA product standards and the criteria contained within.

- The Norwegian "Green Office" buyer's guide to environmentally-preferred products recommends criteria for purchasing several hundred products and services from dozens of categories. Products and packaging carrying the "Nordic Swan" label are preferred, as are recycled and reusable materials. Materials to be avoided include carcinogenic agents, PVCs, ozone-depleting materials, lead, cadmium, chrome, mercury and other toxic metals, formaldehyde and certain detergents.

Case Study: State of Minnesota

The State of Minnesota is considered a leader in promotion of environmental issues in purchasing and work environments. In the early 1990's it introduced the first "Environmentally-Aware Purchasing Checklist" which introduced the concepts of product durability, reparability/reusability, recycled content, toxicity, packaging, resource use and disposal to procurement officers and supported the information with checklist style questions. Its leading edge initiatives have not stopped with the checklists but have extended into the realm of statutes.

The State Government has passed a series of statutes promoting green procurement. The list of state statutes is as follows:

- 16B.121 *Purchase of Recycled, Repairable and Durable Materials* - requires the commissioner of administration to take recycled content, recyclability/reuse, durability and toxicity into consideration in bid specifications with a price preference of 10%;
- 16B.122 *Purchase and Use of Paper Stock; Printing* - requires that paper/printing be on uncoated stock, contain 10% post-consumer fibre, contain no chlorine bleach, use soy-based inks, etc.;
- 16B.123 *Packing Materials* - requires packing materials if used to be biodegradable with 10% price preference;
- 115A.15 *State Government Resource Recovery* - stipulates that the commissioner of administration shall develop a waste reduction procurement program and a cooperative purchasing program;
- 115A.965 *Prohibition on Selected Toxins in Packaging* - requires that packaging sold in the state shall not contain heavy metals.

In response to the statutes, the State Office of Waste Management has developed "Purchasing Guidelines for Source Reduction" as well as a "Source Reduction Purchasing Guidelines Chart" which acts as a checklist for procurement officers.

The impact from the statutes (particularly the promotion of durable and repairable materials and the ban on selected toxics in packaging) is difficult to evaluate due to measuring and tracking complications.

No effort has been taken to develop a means by which to measure the impact of the statutes. It is argued that until more states adopt similar legislation there is no incentive for industry to change its product design and production operations. Industry has incorporated recycled content into its products as a result of the collective effort of the federal government and state agencies to mandate recycled content in their purchases. No similar collective effort, however, has been taken to address the concepts of reparability, durability, and toxicity.

Minnesota State also has not developed a tracking system to help in the evaluation of the companies offering bids for products and services. Where as the State has a policy to incorporate statements about durability, reparability and toxicity in its product/service bid documents, there is no requirement for companies to respond to the statements. Consequently it is difficult to compare the different claims and to quantify the results. Evaluation becomes subjective and not very effective in promoting change.

Case Study: New York State - Evaluating Life Cycle Costs of Energy Input

New York State has developed an evaluation system, called "Life Cycle Cost" (LCC) for 22 products which require energy inputs or conserve resources. This case study was selected because it exemplifies a procedure used to evaluate some aspect of environmental preference of designated products. The system developed is easy to use and requires the potential supplier to provide appropriate information on energy efficiency, recycled content, or other conservation issues which are then judged against other criteria, such as cost and performance.

The evaluation process uses a formula requiring a number of inputs which take into consideration price and energy efficiency. For example, the formula used for fans (electric and free air type) is as follows:

$$\text{LCC} = \frac{\text{PP} + (\text{T} \times \text{E} \times \text{OH} \times \text{PEP})}{\text{R} \times 1000} \times \text{DF}$$

Whereby:

PP = purchase price T = target capacity

E = energy consumed OH = operating hours per quarter

PEP = standard energy price per kiloWatt hour

R = rate of air flow

1000 = factor for conversion of Watt hours to kilowatt hours

DF = discount factor (assumes a life expectancy of 5 years. & discount rate of 6%)

The procedure also applies to products containing recycled content or virgin materials. A copy of the specification is provided in Appendix D.

The development of procedures and formulas to evaluate energy use and recycled content has encouraged all procurement officers to participate in the program. New York State has adopted a policy of allowing more flexibility in the evaluation of specifications and procurement activities which has enabled procurement officers to evaluate goods and services beyond the cost factor. These ingredients have made the incorporation of LCC very effective.

3.4 Environmental Certification Programmes

A number of countries have now implemented some form of "eco labeling" system for identifying green consumer products and, in a few cases, services. The German "Blue Angel" program was the first of its kind and is, to date, by far the most ambitious in terms of the number and type of products and services included. Countries like Canada, Japan and the Nordic Countries have followed with state-run programs, whereas the United States has both private certification organizations (Green Cross, Green Seal) and the government-led EPA initiatives in a limited number of areas (e.g. computer equipment, home appliances).

While all can be termed "eco-labelling", these programs differ in the range of products or services included, the range and rigour of criteria used to determine whether a company or its products/services qualify, and the success of the programs to date.

The key aspect of any eco-labelling system, for the purposes of this study, is the criteria being applied. Here there appear to be several basic approaches (although numerous variations of each exist). The simplest can be termed "single criteria" -- that is, a product is judged on one specific environmental attribute, such as recycled content, as is common throughout the United States. More complex, is the "multi criteria" approach, which attempts to evaluate or compare a product/service according to various possible impacts (e.g. recyclability, energy efficiency, water consumption). Most complex of all is an approach we have termed "multi-criteria/multi-stage" -- which assesses not only a full range of environmental impacts, but does so for each stage of the product's life, from cradle to grave (e.g. production, distribution, consumption, disposal).

While the multi-criteria/multi-stage approach is clearly the most comprehensive and would appear to be the most accurate way to assess and compare products/services, this approach is severely limited by its own complexity. It can be highly complex and resource intensive and ultimately yield results which, though comprehensive and accurate, cannot be usefully compared with the results of other products/services tested.

By the same token, the single criteria approach has been roundly criticized as not sufficiently rigorous -- too many ordinary products can qualify for an eco-label based on one simple attribute (e.g. recyclability).

Most eco-labelling systems have thus chosen to aim for the middle ground: some combination of multi-criteria and/or multi-stage assessment. The greatest challenge identified by most eco-labelling organizations is to be, at the same time, transparent, accurate, rigorous, fair and yet flexible. To accomplish the objective of encouraging companies to produce and seek eco-labelling approval for their product/service, most have been forced initially to go easy in the area of rigour, and emphasize fairness, accuracy and flexibility. Hence the common accusation that these programs are catering to the lowest common denominator.

The stark reality is that if eco-labelling is to be widely used and recognized, a large number of products/services in a large number of areas will need to be seen on the market by purchasers. Most eco-labelling organizations have opted to boost the number of certified products/services initially, with the intention of : (a) encouraging more companies to match or surpass the initial standard and (b) raising the minimum level required after some specified period has been reached or after an agreed number of suppliers have been certified.

Case Study: Canada's Environmental Choice Program

The Environmental Choice Program (ECP) is a voluntary program which aims to create incentives for manufacturers and suppliers to reduce the burden on the environment of their products or services. This is achieved by establishing and promoting standards of performance against which products/services can be certified. Those which meet or exceed ECP performance criteria are eligible for certification. Scientifically-based criteria are used to set benchmarks for identifying leaders and innovators in a specific market segment. Scientific, technical and industrial experts contribute to the development of the criteria which form the basis of ECP technical guidelines. As the marketplace changes and new technologies and products emerge, a process of review is used to revise the guidelines accordingly.

A product or service may be certified because it is made or offered in a way that improves energy efficiency, reduces hazardous or toxic by-products, uses recycled material, prolongs its life, can be reused or is, in some other way more environmentally responsible. In order to identify characteristics that qualify a product or service to display the EcoLogo label, the ECP relies on two main certification processes: Technical Guidelines and Panel Review.

Technical Guidelines are prepared by reviewing the life-cycle of the product and outlining environmental, technical, market and economic considerations associated with the proposed category. The guideline sets out the particular

product or service characteristics that resulted in a "demonstrated significant environmental benefit" and establishes the criteria that must be met in order to be licensed to use the EcoLogo. Parameters examined for each guideline might include: energy consumption, water consumption, air pollution, waste minimization, water effluent, soil contamination and degradation, effects on ecosystems, durability and more (see Appendix E).

For each draft guideline the ECP forms review Committees to ensure that: (1) all relevant technical issues are addressed; (2) the scientific validity of the life-cycle review is maintained; and (3) the economic feasibility of meeting the criteria is taken into account. Guidelines may be revised at any time if significant technical or market developments occur. They are generally reviewed every three years to ensure relevance and stringency. Guidelines may then be reconfirmed, revised or revoked.

A Panel Review Process allows applicants to seek EcoLogo certification for products or services for which a technical guideline has yet to be developed. The process enables products or services which achieve a significant reduction in the environmental burden to be considered for certification. An independent expert panel examines documentation submitted by the applicant and uses environmental and performance criteria to make its recommendation to the ECP. Once recommended for licensing, companies are subject to the normal rules of testing, verification and ongoing compliance.

Panel Review Applications are assessed according to relevant life-cycle review information provided by the applicant. Applicants are asked to describe environmental benefits that occur at any of the following stages: raw materials extraction and acquisition; materials processing and manufacturing; product manufacture, including components and packaging; product distribution; product use or consumption; product disposal; and service delivery practices.

The ECP also suggests specific criteria or parameters that may be used by applicants to describe the environmental benefits of its product or service over its life-cycle.

In summary, the ECP approach is both multi-criteria and multi-stage. Criteria used varies according to the product or service. A strength of the ECP approach is that it is capable of evaluating a wide number of criteria over the full life-cycle, but does not necessarily do so. In this way it remains both flexible and as rigorous as market, technical and economic conditions will allow.

Case Study: Scientific Certification Systems -- Verifying Claims of Suppliers

This multi-disciplinary scientific organization, based in California, has developed a number of programs to assess the environmental claims of companies. There is no equivalent operation in Canada according to SCS sources. It has two well established programs:

- The Environmental Claims Certification Program verifies specific environmental claims of manufacturers and retailers; and
- The Environmental Report Card Program provides an environmental profile of products and packaging based on life cycle assessment.

One program gaining attention is the Forest Conservation Program which compares forestry management programs and timber harvesting practices of timber companies and rates them out of a possible score of 100. The evaluation process focuses on three concepts:

- Sustainability of the Timber Source - which includes an evaluation of harvest regulation; stocking and growth control; pest and pathogen management strategy; forest access; harvest efficiency and product utilization; and management plan and information base.
- Forest Ecosystem Management - which includes forestry community structure and composition; long-term ecological productivity; wildlife management actions, strategies and programs; watercourse management policies and programs; pesticide use; and ecosystem reserve policies.
- Financial and Socio-Economic Considerations - which includes financial stability; community and public involvement; public use management; investment of capital and personnel; and employee and contractor relations.

A Chain of Custody procedure ensures that the manufacturers of wood products are using wood from a forestry company that has been certified by the Forest Conservation Program.

This method of rating the environmental performance of other companies enables companies to be effectively compared, knowing that the same evaluation technique and criteria has been administered to all companies. Consequently, over 6 forestry companies have been evaluated by the Forest Conservation Program and 15 manufacturers and retailers have been certified for "Chain of Custody". SCS finds itself in a situation whereby the certification program is not widely recognized and companies are not being asked to show that they are practicing sustainable forestry management and harvesting practices.

3.5 Use of Criteria for Services

Few organizations have included service providers in their green purchasing efforts. Having not yet come fully to terms with the challenges of green procurement for products, most tend to shy away from evaluating services, which they see as more complex. Those that have tackled service procurement have focused primarily on the products being used in the provision of the service. In several cases they have addressed some of the impacts of the service itself. For example, energy consumption and greenhouse gas emissions.

Case Study: Building Design, Construction and Demolition

An area where significant efforts have been taken to incorporate criteria for green service procurement is in building design, construction and demolition. Though standards and guidelines are still in their infancy, there are a number of programs and organizations currently addressing these issues.

It is important for the federal government to incorporate all existing environmentally improved C&D practices into its refit and construction projects. In doing so, the government will promote development of the technologies and infrastructures necessary to help contractors in the private sector reduce the impact of their C&D practices. Since C&D waste accounts for an estimated 30-40% of all material sent to landfill, even a small reduction in its generation would significantly alleviate the pressure being exerted on landfill sites across the country.

The Building Environmental Performance Assessment Criteria (BEPAC) were developed in 1993 by a large stakeholder group including Environment Canada, the British Columbia Buildings Corporation, and ASHRAE B.C. BEPAC is a comprehensive method of evaluating buildings with respect to:

- Ozone Layer Depletion
- Environmental impacts of Energy Use
- Indoor Environmental Quality
- Resource Conservation, and
- Site and Transportation

While BEPAC only applies to the evaluation of existing buildings, the findings of a BEPAC assessment can easily be used as an indicator of where environmental initiatives should be focused.

Five BEPAC assessments have been completed in B.C. and Ontario, and six more have been commissioned by the Ontario Realty Corporation. The federal

government has been considering the use of BEPAC or a similar evaluation criteria, and is expected to make a decision in the near future.

Green Demolition

Improving demolition practices from an environmental perspective primarily involves ensuring minimal damage to all materials so that they may be reused, or recycled. Construction materials reuse centres already exist in many cities across the country. These centres serve as a destination for demolition materials, and as a source for construction materials.

Pilot projects conducted by Natural Resources Canada at their headquarters in Ottawa have revealed that specifying green construction practices can be accomplished on a cost neutral basis. In this pilot project approximately 90% of the demolition material was diverted from landfill for reuse or recycling.

Green Construction

Minimizing the environmental impact of new construction and refits necessitates the participation of all parties involved in a project, from architects and designers to contractors. Initial consideration must be given to the overall design of the project in terms of energy use (i.e. lighting & heating), and layout (space optimization). Once the general design has been developed, environmentally improved construction materials must be specified. A number of companies are currently active in this new area of design and construction.

In the Natural Resources Canada Green Floor project, a full range of environmentally improved products were sourced for use. While some of these products are more expensive than their traditional counterparts, many more are competitively priced.

3.6 Consideration of Social/Ethical Concerns

Very few organizations have attempted to seriously address social and ethical concerns as part of their criteria for green procurement. Most expressed the view that this area was a "Pandora's box" laden with subjective value judgments -- a box which they would prefer not to open. While purchasers (The Body Shop being a notable exception) may have stayed clear of social and ethical concerns, a number of organizations exist in North America and Europe (most countries have at least one or two) which have attempted to rate or blacklist companies according to their records on issues as diverse as minority and women's advancement, involvement in the arms trade and animal testing. These organizations (see cases study below) are sometimes used by purchasers to provide them with ratings of different suppliers.

Assessing Social Responsibility - Two Cases

The Council on Economic Priorities has developed a comprehensive evaluation system for assessing manufacturers of consumer products from a socially responsible perspective. Manufacturers are rated on selected issues such as: charitable giving; women's advancement; minority advancement; community outreach; disclosure of information; animal testing; the environment; family benefits; and workplace issues.

Reference to the environmental performance of a company is very superficial, based on the use and encouragement of recycling, alternative energy sources, waste reduction, green products and packaging.

EthicScan Canada performs a similar assessment of companies in all sectors and industries, rating their performance against nine categories: Candour, Women's Issues, Charitable Giving and Community Involvement, Progressive Staff Policies, Labour Relations, Environmental Management, Environmental Performance, Management Practices and Consumer Relations, and Canadian Content. EthicScan believes these nine headings reflect strong consensus in the field (advocacy groups, consumer affairs professionals and business ethics academics) that they are the principle issues in social responsibility.

4.0 Frameworks for Evaluation and Comparison of Criteria

To assist in summarizing and comparing both organizational approaches to green procurement and the criteria being used, two frameworks were initially constructed. In keeping with the objectives of Phase I of this project, a third framework has also been proposed – a Framework for Assessing and Comparing Elements of Criteria for Green Procurement. These frameworks take the form of matrices, as described below.

Matrix A - Organizational Approaches

Each organization contacted takes its own approach to procurement or products and services, not to mention "green" procurement. That approach will affect significantly any attempt to introduce, encourage or enforce green procurement policies and practices. In order to evaluate and compare these organizational approaches, Matrix A was designed and used.

The matrix isolates some key issues in public sector procurement in Canada. The key issues are: use of the Environmental Choice Program; development and use of departmental environmental specifications; development and use of standard

environmental clauses; use of price preferences; and use of cooperative purchasing.

Matrix B - Green Procurement Criteria

The greatest challenge of Phase I is to evaluate and compare the numerous and diverse "criteria" that organizations use to identify, compare and verify the sustainability or "greenness" of both the product/service and the supplier. Each organization has its own specific slant, which makes comparison difficult. For example, some focus heavily on recycled content, whereas others have taken a multiple-issue approach.

To illustrate the wide range and depth of criteria in use, a matrix was constructed which lists the entire spectrum of issues being examined and questions being asked. These criteria were organized into three types: Life Cycle Assessment; Organization's Environmental Profile; and Organization's Social/Ethical Profile. The Life Cycle Assessment section was further broken down into a series of sub-categories, ordered where possible in a chronological sequence. Criteria were put in the form of questions that the purchaser might ask of the supplier.

Recognizing that specific criteria and guidelines from around the world exist for over 200 different products and services, it was decided to exclude from Matrix B those criteria which apply to only one or a few types of products.

Matrix C - Proposed Framework for Assessing and Comparing Elements of Criteria for Green Procurement

One of the main objectives of Phase I was to propose a "framework" or matrix that might be used to assess and compare types of criteria and their general and specific elements. By comparing elements of criteria for green procurement against such a framework, we should be able to draw a series of conclusions which might assist us in identifying those features or elements which are commonly used, useful, effective or desirable. The results of such an analysis would ultimately guide us in the development of appropriate criteria, approaches and tools for government purchasers.

A Framework for Assessing and Comparing Elements of Criteria for Green Procurement is proposed below. Because every organization has its own unique activities, needs and methods of purchasing, no one framework will be a perfect fit. This framework attempts to address the most important factors identified in our study of green procurement approaches and criteria.

Framework for Assessing and Comparing Elements of Criteria for Green Procurement

Each organization's "set" of green procurement criteria can be run through a framework for assessment and comparison of this type.

General Assessment Criteria

- Single Criteria Approach
- Multi-Criteria Approach
- Multi-Criteria/Multi-Stage Approach

Level of Assessment

- General
- Specific

Verification of Claims

- internally (i.e. survey, on-site inspection)
- external agency used

Certification

- mandatory
- desirable
- used for guidance

Certification Body

- Canadian agency (i.e. eco-label)
- international agency (i.e. green cross)
- by product/service
- by company

Scoring system applied

- ordinal
- integral

Grading systems for multi-criteria used

- type of grading system

Minimum standards/levels for single criteria

Product/Service Specific Criteria

Targeted Product/Service Areas

- product/services identified

Level of activity

- mandatory requirements
- desirable requirements
- notification only

Criteria for Services

- according to products used
- other criteria/factors considered

Product Group [answer for each group]

- product design specifications
- production specifications
- packaging/shipment specifications
- consumer use
- disposal

Product Group [answer for each group]

- toxicity issues
- waste reduction issues
- durability issues
- recycled content issues
- etc.

Economic Issue Criteria

Price Preference Used

Evaluates Impact on local/domestic industry

5.0 Conclusions

While a great deal of activity is taking place in the field of green procurement in all sectors, it is not unfair to conclude that both the concept and its practice are still in the formative stages. Practitioners of green procurement are still grappling with questions of definitions, criteria and verification, not to mention such obstacles as higher costs of preferred products, a limited selection of suppliers and products in some categories and the absence of strong policy direction and support from within the organization or from political leaders.

From those organizations surveyed, and the criteria and related information they provided, the following useful conclusions can nevertheless be made:

- There is a broad range in approaches being taken: some organizations go for very general criteria and questions in the hope of influencing and educating both the buyers and the suppliers; others have identified specific areas to focus on and have developed precise and technical criteria and even specifications.
- Purchasers rarely verify the claims of suppliers. This is due primarily to the time commitment and expertise necessary to carry out such verification.
- General (or generic) criteria which give an indication of the environmental qualities or sustainability of both the supplier and the product/service are more often used than detailed, product- or sector-specific criteria, owing to the relative simplicity of assessment and verification.
- Government organizations would benefit from a clear and shared definition of "green procurement".
- The growing trend in the public sector in Canada toward decentralization in purchasing is proving to be an obstacle to any joint, concerted or measurable movement toward green procurement.
- Government purchasers suffer from a lack of strong policy direction and support.
- Purchasers would benefit from examples of "best practices" in terms of the methodology and criteria used by leading organizations.
- Purchasers would benefit from a strong system of "eco-labelling" for products/services as well as certification of suppliers, so that they can rely on an independent, accurate source of information.
- Purchasers may be ready to endorse programs that assess the supplier's production process on the basis of its environmental impact.

- Phase II will need to come up with a set of criteria and an approach to procurement based on the "best of" what we have found, rather than copying any one outstanding example.
- The best approach is to produce clear, general and generic criteria in several key areas, and then refer users to resources (ones that can be regularly updated) for their more specific and technical needs.
- In the absence of universally accepted definitions and criteria and of verifiable lists of "green" suppliers, this project can help to provide the information and tools to take the appropriate next steps, while at the same time working with appropriate agencies to hasten and improve the quality of labeling, certification and product identification

6.0 Recommendations and Proposed Next Steps

Based upon the development of an evaluation framework, the conclusions reached from an analysis of the material examined as well as from comments made by the scores of procurement practitioners interviewed, the project team recommends the following course of action for Phase II:

Step 1.

The Framework for Assessing and Comparing Elements of Criteria for Green Procurement will be reviewed by the Task Force and the Advisory Group for the purpose of providing comments and direction. Upon final approval, the criteria will be developed into a matrix and the documents collected will be evaluated using the criteria, which will help in the subsequent development of supporting tools for use by procurement officers.

Step 2.

Based on the green procurement information collected from private and public sector agencies, a series of tools will be developed to promote green procurement within the federal government. The two or three most preferred tools – based on comments from Advisory and Focus Group members – will be developed as deliverables for Phase II. The tools include:

1. Environmental clauses/criteria ("immediately achievable" and "leading edge") based on life cycle assessment that can be included in existing specifications and used at the discretion of the buyer. Any product developed will propose a two-tier approach to greening procurement within the federal government.

- The first tier will consist of a basic, immediately-achievable level of practice with a focus on general criteria in several key areas (to be determined) for initial action: a combination of highest spending, highest volume, highest environmental impact, most positive economic benefit and the greatest likelihood for early success.
 - The second tier will propose a "leading edge" approach, based upon those "best practices" in use in other organizations.
2. Documents requiring the top executives of companies to certify the company's environmental claims, with an understanding that a false claim will result in action taken against the company.
 3. Questionnaires targeting the environmental activities of potential suppliers, including environmental legislative compliance, company environmental policies, waste reduction efforts, toxicity reduction efforts, etc.
 4. A form of "hypertext" and/or computer BBS presentation will be proposed for the final deliverable. Such a tool might contain lists of products and services (consistent with top priority purchasing areas) for which environmental performance guidelines and specifications exist. It might also present an efficient method for obtaining available guidelines and specifications.

Each of the tools may be evaluated according to a set of principles or priorities including: ability to be achieved by majority of Canadian industry, reduces waste, maintains product integrity, permits the product to remain price competitive, does not create a trade barrier, does not impede purchasing activities, etc.

Possible Future Steps

A future project might usefully develop procedures for evaluating the environmental performance of suppliers through the development of a scoring system, recognizing that price plays an important role in the evaluation process.

Appendices

Appendix A	Matrix A - Organizational Approaches
Appendix B	Matrix B - Criteria for Green Procurement
Appendix C	List of Consultations
Appendix D	Bibliography
Appendix E	Attachments

Appendices



Organizational Approaches to Green Procurement

	Body Shop	British Telecom	Thorn EMI	British Gas	Quaker Oats	Bell Canada	New York	Santa Monica	King County	Minn. State
Environmental Procurement Policy	√	√	not widely available	√	√	√	√	Toxic Use Reduction	√	√
Procedures to Implement Policy	√	√	not widely adopted	assume yes	√	√	√	√	√	Some
Communications and Training	√	√		assume yes	√	√	No	√	√	√
Recommend EcoLogo products or equivalent (e.g. Green Seal)						√				
Must use EcoLogo products or equivalent (e.g. Green Seal)					?	?	US EPA standards			US EPA standards
Use guidelines and standards other than EcoLogo				will use BS7750 in future				-use MSDS data sheets		
Developed company environmental specifications	√	paper			No	?		some cases	√	some
Uses Standard Environmental Clause					√	?	?			?
Price Preference	implicit				No	No	√		√	√
Cooperative Purchasing						No	No			√
Centralized/Decentralized Purchasing					?	?	?			C

	BC Prov. Gov't	Alta. Prov. Gov't	Sask. Prov. Gov't	Man. Prov. Gov't	Ont. Prov. Gov't	Que. Prov. Gov't	NB Prov. Gov't
Environmental Procurement Policy	yes	yes	yes	yes	yes	yes	no
Procedures to Implement Policy	draft	yes	yes	some	yes	some	no
Communications and Training	no	yes	yes	some	yes	some comm.	some comm.
Recommend EcoLogo products or equivalent (e.g. Green Seal)	some	-	no	?	-	yes	no
Must use EcoLogo products or equivalent (e.g. Green Seal)	?	yes	no	no	yes	no	no
Use guidelines and standards other than EcoLogo	?	?	no	yes	yes	yes	no
Developed company environmental specifications	no	no	yes	no	yes	yes	no
Uses Standard Environmental Clause	?	no	yes	yes	yes	no	yes
Price Preference	no	within existing resources	no	no	some cases	yes	no
Cooperative Purchasing	standing offer	standing offer	yes	gov't only	standing offer	standing offer	yes
Centralized/Decentralized Purchasing	C	C	C	C	Some Cent.	Some Cent..	C

	House of Commons	Stats Can	Auditor General	CIDA	Finance TB	Fisheries Oceans	HRD	Indian/Northern
Environmental Procurement Policy	yes	yes	no	no	being developed	no	being developed	being developed
Procedures to Implement Policy	yes	yes	-	-	?	-	?	?
Communications and Training	yes	yes	?	no	yes	yes	yes	no
Recommend EcoLogo products or equivalent (e.g. Green Seal)	yes	yes	no	yes	no	no	yes	no
Must use EcoLogo products or equivalent (e.g. Green Seal)	no	no	no	no	no	no	no	no
Use guidelines and standards other than EcoLogo	?	yes	?	yes	no	?	yes	no
Developed company environmental specifications				?	yes	no	yes	no
Uses Standard Environmental Clause	?	?	no	no	no	no	?	yes
Price Preference								
Cooperative Purchasing								
Centralized/Decentralized Purchasing	D	D	D	D	D	D	D	D

	National Archives	Revenue Canada	PWGSC
Environmental Procurement Policy	?	no	no
Procedures to Implement Policy	-	-	-
Communications and Training	yes	no	no
Recommend EcoLogo products or equivalent (e.g. Green Seal)	?	no	no
Must use EcoLogo products or equivalent (e.g. Green Seal)	no	no	no
Use guidelines and standards other than EcoLogo	no	no	no
Developed company environmental specifications	no	no	no
Uses Standard Environmental Clause	no	no	no
Price Preference			
Cooperative Purchasing			
Centralized/Decentralized Purchasing	D	D	D



Abbreviations

CEP	Council on Economic Priorities
BG	British Gas
SCS	SCS's Forest Conservation Program
WS	Washington State Indoor Air Quality Specifications
NW	National Wildlife Federation
CSA	Canadian Standards Association
KC	King County
SM	Santa Monica Toxic Use Reduction
Min	Minnesota
GIP	GIPPER
QO	Quaker Oats
WR	Washington Retail
BC	Bell Canada
BS	The Body Shop
BT	British Telecom

Table Codes

1. specified amounts
2. own products
3. own list of hazardous materials
4. contain toxins?
5. asks about hazardous wastes
6. energy requirements?
7. water conservation efforts on-site
8. plan to phase out ODSs
9. gives specifications
10. are hazardous materials released into the aquatic environment?
11. LCA
12. from sustainable sources?
13. more detailed analysis
14. implied for paper
15. own products, eliminate by 1997
16. water requirements
17. own specifications
18. "catch-all" question
19. any legal action taken against you?
20. senior management support?
21. asks for position of person
22. at least 3
23. housing assistance

Material Acquisition	CEP	SCS	WS	NW	CSA	KC	SM	Min	GIP	QO	IBM	WR	BC	BS	BT	BG
• Are environmental and social impact assessments conducted before activity commences?					•								11	•		
• Does product substitutes renewable materials for non-renewable resources?					•		•							•		12
• Does extraction method prevent water contamination?														•		
• Does extraction/acquisition create hazardous by-products?										•				•		
• Does acquisition cause displacement of local peoples?														•		
Agricultural	CEP	SCS	WS	NW	CSA	KC	SM	Min	GIP	QO	IBM	WR	BC	BS	BT	BG
• Do you use sustainable harvesting methods?		13												•	•	
• Do you use methods to prevent soil erosion?		13												•	14	
• Do you use pesticides/insecticides?		13			•									•		
• Do you use fertilizers?		13												•		
• Do you use 'certified organic' products?					•									•		
• Does paper come from old growth forest?														•	•	

Packaging/Shipment	CEP	SCS	WS	NW	CSA	KC	SM	Min	GIP	QO	IBM	WR	BC	BS	BT	BG
• Do you use "Canadian Code of Preferred Packaging Practices" guidelines or equivalent?													•			
• Does company comply with National Packaging Protocol?																
• Does product eliminate packaging?					•			•	•	2	2	•				
• Does packaging use minimal packaging?				•	•		•		•	2	2	•	•		•	
• Does packaging contain recycled content?				•			•	•	•	2	2	•	•	•	•	
• 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?				•	•			•	•	2		•	•	•	•	•
• Does packaging use soy-based inks?								•		15				•		
• Can packaging be recycled locally?					•		•	•					•	•	•	
• Can packaging be recycled in an economically/technically viable manner?					•		•	•	•	2	2	•		•	•	
• Are alternatives use to polystyrene "peanuts"?								•				•				
• Is a return loop in place for recycling?				•				•					•			
• Can packaging be reused for another purpose?									•	2	2					
• Does product come in a concentrated form?							•								•	
• Are there toxic materials in packaging?									•						•	

Consumer Use/Product Use	CEP	SCS	WS	NW	CSA	KC	SM	Min	GIP	QO	IBM	WR	BC	BS	BT	BG
• Is product energy efficient?				•	•				•		2					
• Is product water efficient?					•											
• Does product generate little or no waster during use?					•				•	2	2					
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?			•				17							•		
• Is off-gassing from product eliminated or significantly reduced?			•		•											

End Use/Disposition	CEP	SCS	WS	NW	CSA	KC	SM	Min	GIP	QO	IBM	WR	BC	BS	BT	BG
• 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 labeled to inform user to relevant disposal information?				•	•								•	•		

Organization's Environmental Profile	CEP	SCS	WS	NW	CSA	KC	SM	Min	GIP	QO	IBM	WR	BC	BS	BT	BG
• Is an environmental Management System (EMS) in place?				18						•			•		•	
• Has an environmental audit been conducted?				•	•				•	•			•		•	•
• Does company have a comprehensive waste management/recycling program in place?				•	•				•					•		•
• Does company comply with all environmental legislations?				•	•				•	•			•	•		19
• 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?					20					21			•		•	•
• Is there environmental issues training for all staff?				•									•		•	
• Is there an Environmental Policy Statement?				•	•				•				•		•	•
• Is there an Environmental Policy Statement available to the public?				•									•		•	
• Does company conduct an environmental appraisal of suppliers and subcontractors?													•		•	



Appendix C List of Consultations

US Contacts			
US States and Jurisdictions	Publications	Contact	Comments
California, Office of Procurement	"Life Cycle Costing" training program	Lee Cooper	will send a copy if any left
Florida	"Development of Environmental Procurement Goals"	Greg Baker	have looked into the issue but none available right now due to move; call back end of June
Illinois, Procurement Services Division		Scott Cofled	have a policy for purchasing recycled paper
Iowa, General Services Purchasing Department		Ken Paslon	working on recycled content issues; no guide or manual produced
Michigan Southeast Michigan Council of Governments	"Buying Recycled: Procurement Assistance for Local Governments"	Carl Davidson	information received
Minnesota	"Environmentally Aware Purchasing Checklist"; "Source Reduction Purchasing Guidelines Chart"	Laura Milberg/Ken Brown	information received
New Jersey	"Business Guide to Recycled Products"; "Guide to Public Procurement"	Barbara Derer	information received
New York	"Energy Efficient /Conserving Contracts"	John Morrioni	information received
Northeast Maryland Waste Disposal Authority	"Buy Recycled Training Manual" and "State and Local Procurement Efforts for Buying Recycled Products"	Richard Keller	information received
Pennsylvania, Procurement Office	"Requirements for the Procurement of Recycled Materials"	Bill McDowell	information received
Kings County, Washington	"Recycled Procurement Policy"	Internet	information received

Massachusetts		Rick Murphy	preparing document, available soon
Portland, Oregon	"Buy Recycled Guide"; "Buy Recycled: Recycled Products Index"	Kerry Lorance	some information received
Wisconsin		Jan Abrahamson	
Washington, Office of State Procurement	"Indoor Air Quality Specifications for Office Furniture"	David Block	some information received

Associations & Organizations	Publications	Contact	Comment
USA			
Californians Against Waste Foundation	"Buy Recycled: A Guide for Business and Government Procurement"	Susan Kinsella	left message May 1
Coalition for Environmentally Resonsible Economies	"Environmental Principles"; "Guide to the CERES Principles"	Brad Sparbara	information received
Council on Federal Recycling and Procurement Policy		Gail Wray	left 2 messages
Office of Environmental Policy	"Environmentally Preferred Guidelines"; " Procurement Guidelines for Government	Alberta Messia	received information
General Accounting Office	"Solid Waste: Federal Program to Buy Products with Recycled Materials Proceeds Slowly"	Dexter Peach	received information
Green Seal	"Office Green Buying Guide" will be available June; "Green Seal Environmental Partner Program"	Chris Middings	information received
Ralph Nader Centre	"40 Ways to Make Government Purchasing Green"; "Energy Efficient Offices"	Alicia Culver	information received
National Association of State Purchasing Officials (NASPO)	"State Purchasing Contract Manual"	Jody Sears	no comprehensive work undertaken; received publication ordering list
Council of Economic Priorities (socially responsible organization)	"Shopping for a Better World"		information received

Washington Retail Association	"Preferred Packaging Procurement Guidelines"		information received
Centre for Policy Alternatives	"Creating Markets"	Richard Schrader	information received
Energy Efficient Procurement Collaborative		Pricilla Richards	formed less than 1 year; working on network and database; nothing available yet

Private Sector Contacts			
Private Sector	Publications	Contact	
3M	"3M and the Environment"	Lee Talbot	seinding information
Bell Canada	"The State of the Environment: Corporate Management Strategy"	Rob Bickerdike	information received
Canadian Buy Recycled Alliance		Wendy Cook	no documents available yet
Herman Miller	"Companies Going Green"	Paul Murry	left 2 messages
IBM	"IBM and the Environment"	Al Voss	informaiton received
Canadian Standards Association	"Environmentally Responsible Procurement: Green Procurement"	Ahmed Huissini	received information
McDonalds Corporation		Bob Langert (USA)	information internal, not willing to send
Home Depot	"Environmental Marketing Claims: Evaluation Program"; "Corporate Responsibility Report"; "Timber Certification Program"	Vince Nelson (CDN) Randy Ziffer (USA)	USA hires CSC; Canada not

Proctor and Gamble		Glenn Parker or Judy Temple	willing to send
Quaker Oats	"Environmental Purchasing Policy"; "Environmental Site Inspection Checklist"	Frank Stewart	received information
Pepsi Cola Canada	"Pepsi Cola Canada Beverages' Environmental Policy Statement"	Jan Whitelaw	
Coca Cola Ltd.	"Coca Cola Company and the Environment: A Global Commitment"	Sheila Kerr	green procurement efforts internal, no guidelines or documents produced
General Mills		Garry Ohnsted	envirnomenal and energy checklists for internal use only; not willing to send
Scientific Certification Systems	"The Forest Conservation Program"	Debbie Hammel	information received
The Body Shop	"No time to Waste"; "Values and Vision '94"	Shaun Quinn	information received
Ben and Jerry's		Todd Kane	left 3 messages
Johnson and Johnson		Peter Britian	not interested in helping
XEROX	"Environmental Leadership Plus Total Quality Equals Continuous Improvement"	T. Armstrong	information received

Canadian Public Sector contacts			
Canadian government and associations	Publications	Contact	Comment
Association of Canadian Cities for Environmentally Sound Strategies (ACCESS)		Bob Lalonde, Greater Vancouver Regional District	discussed initiatives of ACCESS relating to procurement. Expecting more information to be delivered in late June.
Canada Mortgage and Housing Corporation		Kevin Warren	received information in phone interviews. No documents to follow.
Correctional Services Canada		Lynn Farrell	received information by phone, No documents to follow.
Department of Foreign Affairs and International Trade		Yves Sicard, Andre Martin	received information in phone interviews. No documents to follow.
Environment Canada		Robert Graham, Bernie Latreille, Michael Calvert, Chris Hanlon, Margo Novak (Vancouver)	received information over past six months relating to most aspects of green procurement.
Environmental Choice	International Directory, Guidelines	Jacinthe Seguin, Kevin Gallagher	received information over the phone and in document format. Will be participating in phase 2 as well.
Finance/Treasury Board		Eileen Bays-Coutts	received information in phone interviews. No documents to follow.
Fisheries and Oceans		Romeo Poirier, Michel Tessier	received information in phone interviews. No documents to follow.

Health Canada		Wayne Chorney	received information in phone interviews. No documents to follow.
House of Commons		Marian Campbell	received update by phone, relied on existing publications relating to procurement.
Human Resources Development Canada		Sylvia Stock (Toronto), Ron Gascoigne	received information and some documentation.
Indian and Northern Affairs		Ted O'Connor	received information in phone interviews. No documents to follow.
National Archives		Mary Ann Laprade	received information in phone interviews. No documents to follow.
National Defence		Peter Studer	received information in phone interviews. No documents to follow.
National Research Council		Rob Hart	no response to date
Natural Resources Canada		Claude Menard, Marc Beaudoin	used information from previous work.
Public Works and Government Services Canada		Janet Thorsteinson, John Read, John Fisher (Vancouver), SIPSS Sector (Ottawa), Wayne Doucet (Halifax), Mike Shaw (Edmonton)	received information conversations, meetings, training sessions, and indirectly from documentation submitted. Still waiting to talk to some members and for additional
Revenue Canada		Fred Nadeau	received information in phone interviews. No documents to follow.

Statistics Canada		Richard Sirois	received information earlier for similar purpose and used it for study.
Transport Canada	"Choose Green" guide	Ian Malcolm, David Chappell	received information through several discussions, meetings and documentation.
Canadian Council of Ministers of the Environment (CCME)		Carl Hbranchuk	discussed initiatives of CCME relating to procurement.
Ontario Ministry of Environment and Energy		Louis Leung	received information and documentation.

European Contacts			
Public Sector	Publications	Contact	Comments
Department of Environment, UK		Ms. Hurlock	Awaiting policy documents
Department of Environment, Norway	Grone Kontor	Inge Aarhus	information received in Norwegian; summarized orally
European Commission		general inquiry	Two calls not returned
Blue Angel Certification Programme	Reports on file		
Nordic Swan	Reports on file		
Government of France	Reports on file		
Private Sector			
B&Q, UK	Purchasing policy; Wood sourcing poster		information received
ICI	General environmental policy		
Shell International	Environmental policy	Peter Bright, environmental officer	information received
British Gas	Policy, questionnaires to suppliers		information received
DHL	General questionnaire		information received
Skippingdale	oral only	David Lee	Oral discussion: no policy or criteria on paper
Body Shop, UK	Full policy and questionnaire	Rob Forster	information received
Danish Steelworks		Mr. Booetcher	awaiting documents
British Telecom	Policy and questionnaires		information received
IBM UK	Policy and questionnaire	Brian Whitaker	awaiting documents
BSO Origin	Policy and criteria	Renee Herdingh	awaiting documents
Norsk Hydro		Jay Spears	Calls not returned
NatWest Bank	environmental policy		

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- State of New Jersey. *Guide to Public Procurement of Recycled Products*. 1992.
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Attachments

Body Shop. Timber and Wood Products. *Environmental /Ecological Guidelines for Buyers*. April 1995.

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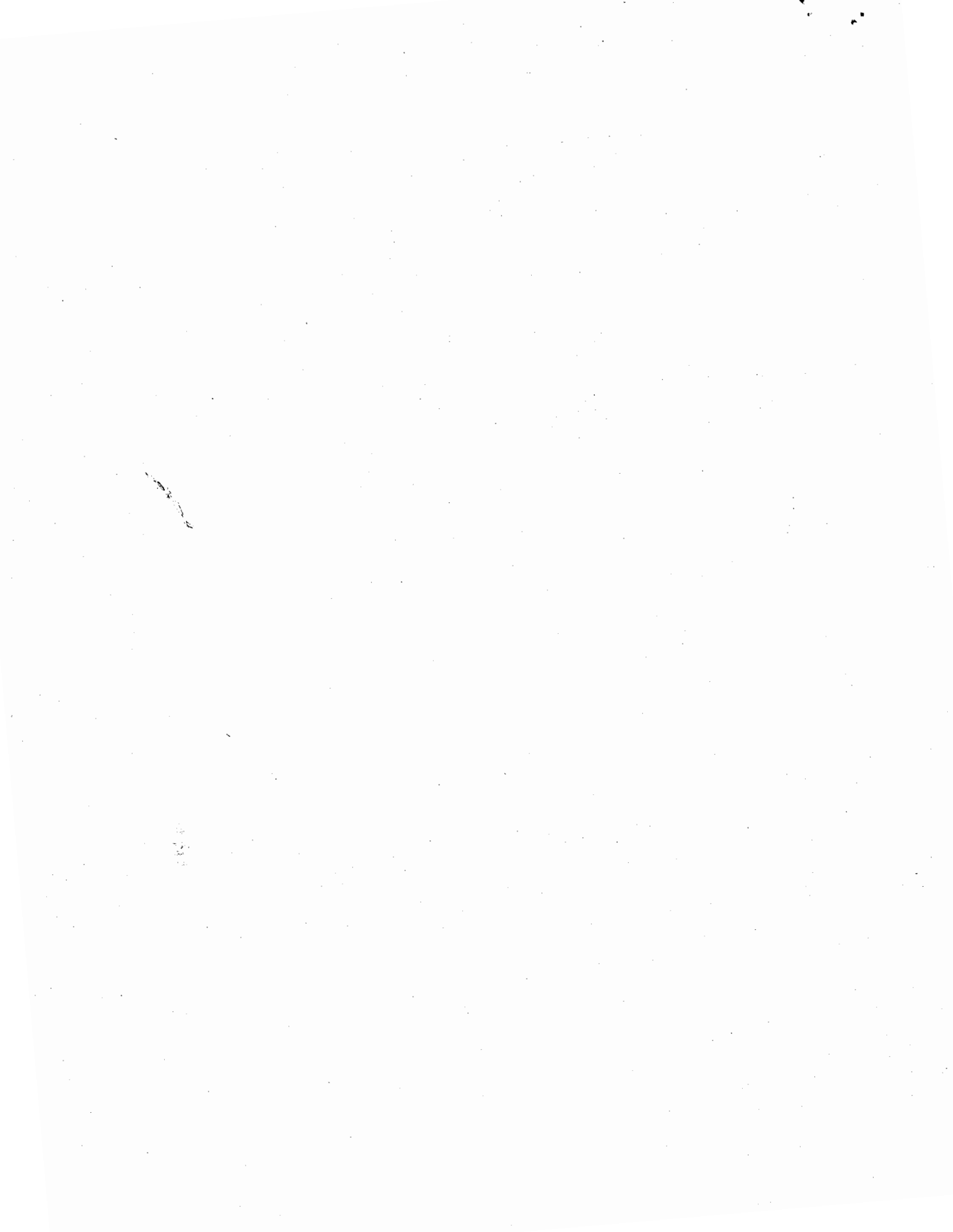
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(e) Timber and Wood Products

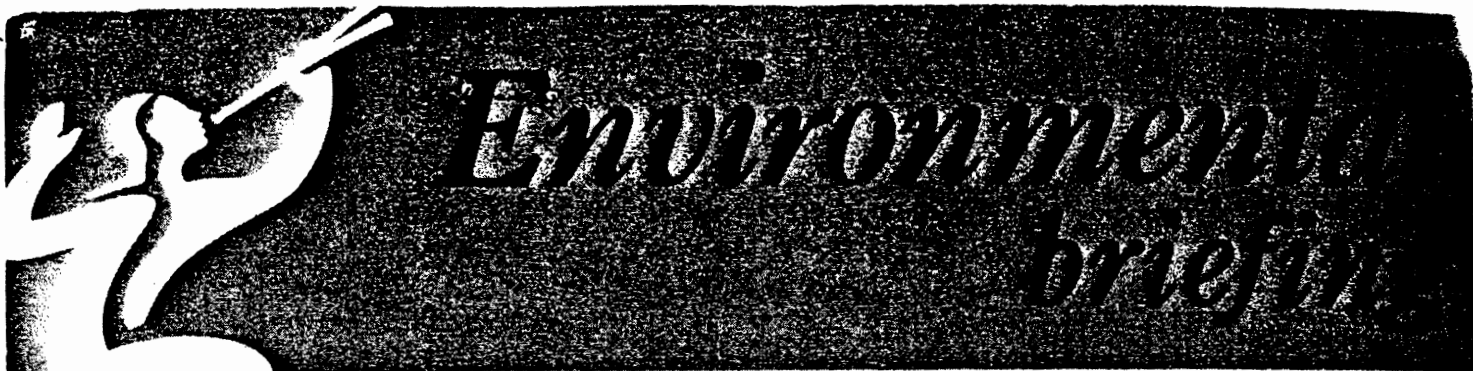
As a first priority for new items, or when re-sourcing, buyers should:

- * Avoid timbers for which no detailed description of the forest management plan being implemented is made available. Sources should have been independently certified as being sustainably managed by Forest Stewardship Council approved organisations. For alternatives consult Friends of the Earth's *Good Wood Guide*, the Ecological Trading Company and the Green Wood Trust (details from the Ethical Audit Department).
- * Avoid timber or any wooden product which has originated from a national park, site of special scientific interest (SSSI) or similar reserve intended to protect wildlife habitats from loss of biological diversity and the local people most directly affected by forest issues.
- * Avoid timber or any wooden product that has originated from forests which are being clear-felled.

More generally, and for existing items, buyers should:

- * Ask suppliers of timber if they are familiar with the Forest Stewardship Council (FSC) and its Principles and Criteria for Forest Management. Suppliers should be urged to support the target of dealing only in sustainably produced timber, as defined by the FSC, by the end of 1995.
- * Ask suppliers for the following:
 - Information on the exact source of timber specifying the forest area (exact map reference).
 - Management plans for the forest area (including details of erosion and pollution control).
 - Details of concessions (eg name of company awarded the concession, duration, area, environmental obligations, etc).
- * Be particularly wary of timber or any wooden product originating from the forests in the former Soviet Union and the Pacific forests of Chile, the USA and Canada. These and other old-growth temperate and boreal forests are disappearing rapidly.
- * Give preference to products from forest estates which are (a) managed to provide yields over the long-term, (b) do not encroach on primary forest, (c) involve a mix of native species and (d) do not replace or threaten other important habitats of conservation value.
- * Advise supplier that they should provide equal opportunity within forest estates, for employment, training and advancement without discrimination of any kind, and without risk to health and safety. They should not use forced labour or exploit children. Employment conditions for full-, seasonal- and part-time workers should include wages and benefits that meet their basic needs, and reasonable working hours including regular rest periods and paid leave. They should provide access to health care and respect the right of all workers to join representative organisations of their own choosing.
- * Advise supplier that land rights of indigenous peoples or other resident populations should be respected. Any evidence of displacement, erosion or abuse of land rights must be reported.
- * Advise supplier that guidance notes on pesticides should have been followed (see Annex 4). A full inventory of pesticides used on any forest estate should be requested.
- * Avoid resins and glues in laminated wood products which release formaldehyde or phenolic vapours. Where solvent-based preparations are used advise supplier that steps should be taken to control the emissions of volatile organic compounds (see Annex 3).

- * **Avoid timber products that have been treated with preservatives such as pentachlorophenol or any of the materials listed in Annex 1 or Annex 4.**



PURCHASING AND THE ENVIRONMENT

BT spends around £4b each year on equipment, services and materials. This represents approximately 1% of UK GDP and, after the Government, makes BT one of the largest buyers in the country. The company sees the development of environmental procurement standards as a priority area for a number of complimentary reasons:-

1. A responsible attitude to product stewardship requires knowledge of whole life impacts.
2. Minimising environmental risks at the procurement stage can provide significant long term benefits such as reduced disposal costs.
3. A supplier that runs an active environmental programme is more likely to deliver a quality product.
4. The benefits to the environment from improved supplier performance could be significant, especially if knock-on effects down the supplier chain are taken in to account.

Any company wishing to become a qualified supplier to BT receives a copy of the "Selling to BT" pack. This pack introduces BT's Environmental Purchasing Policy, and serves to raise awareness of the importance BT places on the environment within its supply base. On formal application to become a supplier to BT a company will be asked to declare whether or not it operates an environmental policy. Currently it is not a firm requirement to operate such a policy, although it may become so in the future.

BT has also developed a procurement procedure that builds environmental considerations into the tendering process for requirements in excess of £750,000. This ensures maximum effect as companies can gain competitive advantage by demonstrating sound environmental practice. The mechanism used to enable the assessment is through BT's use of an Environmental Generic Purchasing Standard which was completely revised early in 1994.

As its name implies the generic standard can be applied to any type of product or service. It does not place detailed specific requirements on suppliers, but rather asks for cradle to grave data on the item being purchased. In the main, suppliers have responded very well to this approach. The standard specifically encourages companies to give details of any improvement plans and, in turn, suppliers have welcomed the opportunity to explain their own environment programmes.

The information supplied to BT in response to the Environmental Generic Purchasing Standard is used, along with all other commercially relevant data such as whole life costs, product reliability, quality, functionality etc., to determine who wins the contract. The weighting given to the environmental aspects vary according to the type of product being purchased and its associated whole life environmental impact. For example, environmental considerations would play a much larger part in purchasing vehicles than computer software.

BT's procurement department was one of the winners of the 1993 RSA Environmental Management Awards. The company's environmental purchasing initiative was described by the judging panel as indicative of "a sense of responsible stewardship at a high level".

A copy of Issue 2 of GS13 is attached.

Standard 13

Environmental impact

BT is committed to minimising the impact of its operations on the environment. As a major purchaser of goods and services, our suppliers have a key impact on our environmental performance. We seek to work with suppliers that have a responsible approach to environmental management.

This standard aims to establish the relative whole life environmental impact of goods and services purchased by BT. It is used at the tender stage and the overall score based on your response to the standard becomes part of the contract adjudication decision alongside other factors identified in the invitation to tender.

The requirements of the standard fall into two broad areas:

- **Part A**
supplier's environmental policy and practice and progress towards the introduction of integrated environmental management systems;
- **Part B**
specific information to enable an informed approach to environmental issues throughout the life cycle of your goods and services.

You will find it helpful to address the requirements in the order laid out in the standard. You should attempt to answer all the questions in each part of the standard.

There is no pass or fail level for environmental issues and we encourage you to make a realistic and open response to the standard. You may also choose to use the standard to address environmental issues with your own suppliers so that environmental responsibility can begin to be considered throughout the supply chain.

We may highlight areas for improvement which we would expect you to address as part of any subsequent contract. We also invite your comments and suggestions for improvements to the content and structure of the standard itself.

Internally, BT has launched a range of initiatives aimed at minimising its own environmental impact

- BT publishes an Annual Environmental Report which publicly measures our achievements against targets (phone 071-356 6025 for a copy)
- We run an annual Environmental Supplier Award to recognise suppliers' environmental achievements and to encourage improvement (phone (0793) 544774 to get on our mailing list for an entry form)

All queries or comments on this document should be referred to the Helpline on (0793) 544476.

Scope

If you already responded to this issue of Generic Standard 13, and intend to refer to all or part of your earlier submission, you must state the date the previous submission was made, the contract number and the name of the BT buyer to whom the submission was sent.

Definitions

The definitions in BS 7750 paragraph 3 shall apply.

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 programme 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 compiled:-
 - a A register of legislation relevant to the environmental aspects of your company's operations - yes (2) or no (0)?
 - b A register which identifies and evaluates the significant environmental effects, both direct and indirect, of your company's activities, products and services - yes (2) or no (0)?
- 9 Have you set yourselves quantified objectives and targets for environmental improvement - yes (7) or no (0)?
- 10 Have you a plan for implementing these objectives and targets with set timescales - yes (5) or no (0)?
- 11 Do you make the following available to the public:-
 - a Your Environmental Policy Statement - yes (2) or no (0)?
 - b Your objectives, targets and progress on achievements - yes (2) or no (0)?
 - c Your company's register of environmental effects - yes (2) or no (0)?
- 12 Do you have a written, formal, management system which includes environmental factors - yes (3) or no (0)?
- 13 Does your management system include environmental appraisal of suppliers and sub-contractors, including waste disposal contractors - yes (4) or no (0)?
- 14 Has the management system been implemented on
 - a) site basis (1) OR b) a national basis (2) OR c) company-wide basis (3)?

Company's with only one site, answer c)
- 15 Has an on-going environmental audit and review programme been implemented - yes (5) or no (0)?

Requirements part B

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

Score

- 1 Has a whole-life environmental effects evaluation been carried out on the product or service you are offering:-
 - a Identifying Life Cycle stages - yes (1) or no (0)?
 - b Identifying environmental effects - yes (4) or no (0)?
 - c Including measurement of significant environmental effects - yes (4) 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 ?
 If no, please supply details separately for individual assessment by the relevant BT technical advisory unit.

- 3 Is the product labelled to inform the user of any relevant environmental information, such as disposal information - yes (2) or no (0)?

- 4 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)?
 - e Is there a mechanism in place to allow return of packaging - yes (3) or no (0)?

- 5 Is the product free of substances such as mercury or beryllium, and components like nickel cadmium or mercury / lead batteries which require special forms of disposal, such as high temperature incineration or chemical stabilisation, or which render it difficult to recycle or incinerate, yes or no ?
 If no, please supply details separately for individual assessment by the relevant BT technical advisory unit.

- 6 Has the product been produced from recycled materials - yes (4) or no (0)?

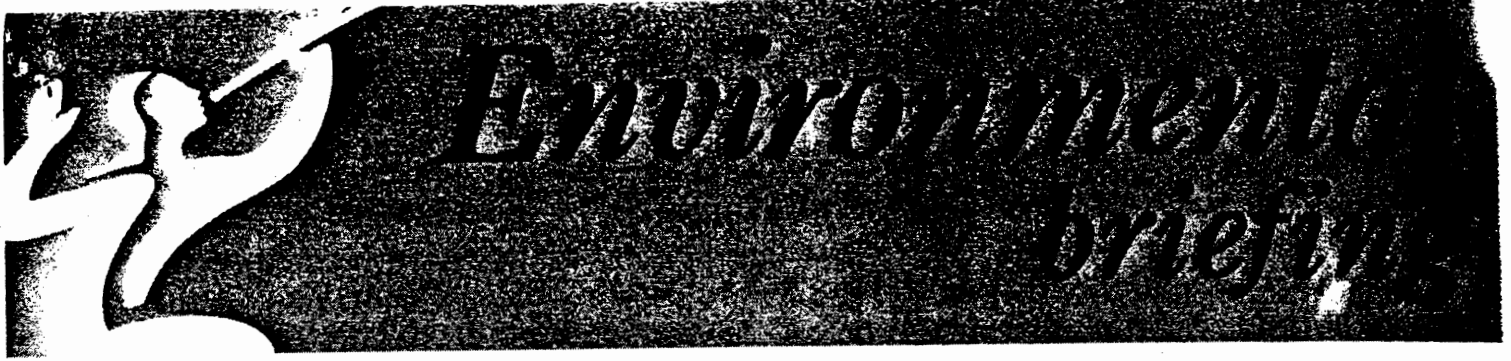
- 7 Is the item designed for disassembly and recycling - yes (4) or no (0)?

- 8 To what extent can the product be recycled? (This should be both practically and economically feasible).
 Extent by weight
 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 (7) or no (0)

Maximum score
 Total maximum score A and B

40
 100



BT ENVIRONMENTAL SPECIFICATIONS FOR PAPER PROCUREMENT

1. Introduction

BT is one of the UK's biggest buyers and specifiers of paper products. During 1992/93 BT used in the region of 77,000 tonnes of paper, this included 62,000 tonnes of telephone directory paper, 2,000 tonnes of photocopy paper, 2,000 tonnes of paper for telephone billing work and around 5,000 tonnes for general printing.

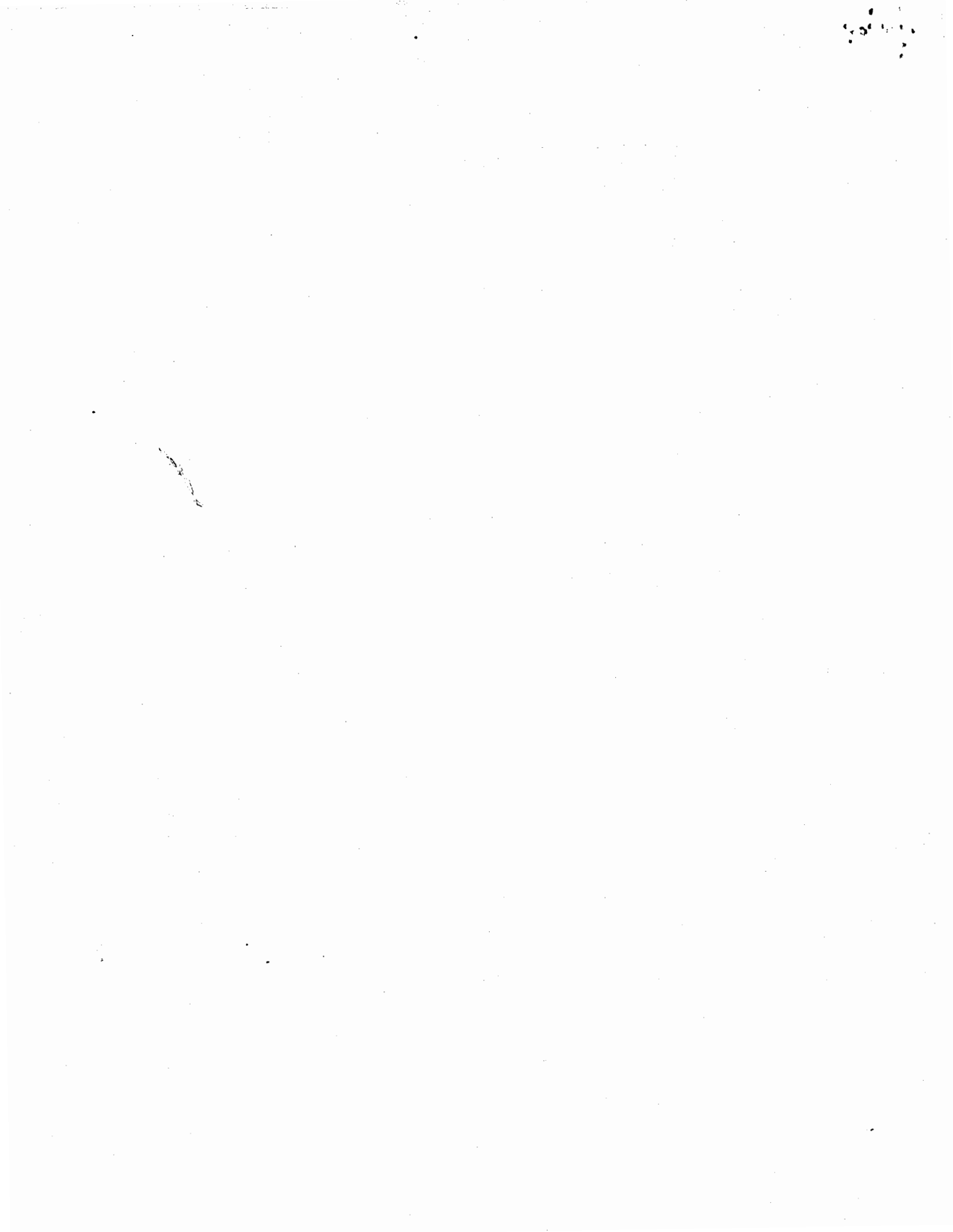
A considerable part of this requirement was sourced by BT's paper procurement group, a part of BT's procurement division. The procurement division seeks to minimise the whole life environmental impact of all bought-in goods. To achieve this, environmental factors are now built into the product and supplier selection process.

2. Background

At present there are a number of different symbols and standards used in various countries to indicate the environmental soundness of differing paper products. However, nothing yet exists which caters for the full range of woodfree and recycled papers BT uses.

During 1992 BT worked with Leslie Webb of Envirocell (an independent environmental paper consultant) to establish a set of environmental paper purchasing specifications which cater for the entire life cycle of any paper product. These are now applied by BT's central procurement division as a part of the supplier and product selection process for all paper products.





3. The Criteria

The criteria aim to provide BT with details on the principal environmental indicators and are based on achieving a minimum environmental impact. It is important to note that for each paper product being sourced, only certain criteria will apply. The areas for which criteria have been developed are as follows:-

- 3.1 General
- 3.2 Management practices for forests supplying pulp wood
- 3.3 Mechanical pulp
- 3.4 Chemical pulp
- 3.5 Wastepaper recycling
- 3.6 Production of recycled paper products
- 3.7 Photocopier and coated paper

Full details are attached.

BT has set guideline values for each of the questions being asked. Potential suppliers are asked to provide detailed responses for each question, without knowing what the guideline values are. The questions and values have been set at levels which mean potential suppliers who see compliance with environmental issues as a high priority should achieve BT's required standards.

The specifications will be reviewed by BT on an ongoing basis. BT will also monitor the target figures and may establish tighter limits in line with the company's aim of continuous improvement.

From time to time BT also funds independent environmental audits of selected suppliers to ensure the validity of the details supplied.

4. Progress To Date

Since 1st April 1993 the environmental specifications for paper procurement have been applied to all those paper products which the procurement division has sourced by competitive tender. For example, in the case of the paper and board used for BT's 1993 Annual Review and Financial Report, of 10 tenders received only 6 provided details against the environmental specifications and the papers eventually chosen were those which most fully met these, as well as offering good overall value for money, in terms of price, quality, performance and service.

The application of these environmental specifications are now a core part of all BT's central paper procurement, and will feature in contract award decisions alongside the established adjudication factors of cost, delivery performance, service and fitness for purpose.

5. Further Information

If you have any questions about the specifications or their application and use by BT, please contact BT's main paper buyer, Andrew Lewcock, on 071 728 9492.

ENVIRONMENTAL CRITERIA FOR BT PAPER PROCUREMENT

1. General

- 1.1 All manufacturing sites must confirm they comply in full with all local and international environmental and health/safety regulations. In the event of any environmental prosecutions during the last 2 years full details must be supplied, together with all remedial action.
- 1.2 No use should be made of any papermaking chemicals termed "DANGEROUS TO THE ENVIRONMENT" by 12th amendment to EC Directive 67/548.
- 1.3 All wastewater discharges must be non-toxic to aquatic species.
- 1.4 All forests supplying wood pulp must be managed to conform with local/national laws.

2. Management Practises For Forests Supplying Pulp Wood

- 2.1 Potential suppliers must provide a copy of their pulp suppliers policy on forest management.
- 2.2 Does the pulp producer use any 'old growth' timber? If so reasons why must be stated.
- 2.3 All forests must be managed in a manner that is consistent with the needs and wishes of local people.
- 2.4 Details must be provided on the proportion of pulp wood derived from:-
 - roundwood thinnings
 - roundwood clearcut
 - sawmill residues?

3. Mechanical Pulp

The specification requires details on the following:


- 3.1 The process is used to debark wood.
- 3.2 The amount of non-wood derived primary energy used, expressed in GJ/tonne of pulp. If any steam is generated for use elsewhere then this should be stated as a proportion of energy input.
- 3.3 If pulp is bleached, the amount of chelant used. If any other chemicals are used in bleaching these must be stated, expressed in kg/tonne of pulp.
- 3.4 The amount of wood substance lost in the mill's raw wastewater, expressed in kg/tonne of pulp. (NOTE: to be measured as total suspended solids plus soluble COD).

ENCLOSURE 3

ENVIRONMENTAL DISCUSSION DOCUMENT

The attached questionnaire has been used as a basis for discussion with most of our major suppliers.

At present, there is no generally accepted method of judging a company's environmental excellence although BS.7750 will eventually provide a systematic approach to the problem.

In the meantime, we would be concerned if you were unable to give positive answers to the questions marked 

DBD/FD/wps.757
20.12.93



ENVIRONMENTAL DISCUSSION DOCUMENT

1. Policy

- a) Do you have a Company or Corporate Environmental Policy?
- b) Does it conflict in any way with British Gas's Policy Statement enclosed herewith?

2. Management Issues

- a) Who is your nominated Environmental Manager or Co-ordinator?
- b) Are the environmental responsibilities defined in his job description?
- c) Which of your Board Directors takes ultimate responsibility for environmental issues?
- d) Has your business been audited environmentally by a recognised independent body? If so who/when? What was their brief? Please supply a copy of the summary document.

If not, do you have any plans to instigate such an audit?
- e) Have you carried out a formal self assessment or environmental impact assessment or life cycle analysis? If so, when? Please supply a copy of the summary.
- f) How do you monitor your performance and what actions are you taking to improve your performance where it is considered inadequate?
- g) Have you adopted BS.5750?
- h) Do you intend to adopt BS.7750 or any similar system such as Eco Audit?
- i) Have you set yourselves separate environmental targets and do they follow the BS.7750 pattern?

2. Products

- a) Do any of the products which you supply have inherent health or environment problems?
- b) Has a "cradle to grave" analysis been carried out on any of your products? If so, which?

3. Discharges & Emissions

- a) Have you carried out a formal review of all discharges and emissions from your works? If yes, please supply details.
- b) Have you had any legal action taken or threatened against you over the last three years on environmental matters? Have you for example, been warned or prosecuted by the National Rivers Authority or H.M.I.P.? If yes, please supply details.
- c) Do you discharge any atmospheric pollutants such as volatile organic compounds (VOC's), CFCs sulphurous gases, heavy metals, dioxins, carbon dioxide or any other recognised pollutant? If so, please supply list.
- d) Are your emissions checked and approved by H.M. Inspectorate of Pollution or your Local Authority? Do you have discussions with H.M.I.P./L.H.A./N.R.A?
- e) Have you readily available all appropriate discharge consents? Please supply details.
- f) How do you monitor emissions and discharges?
- g) Do you employ any emission filters/scrubbers? If so, please give details.
- h) Do you keep a record of complaints received about noise, dust, smells etc. Are you aware of such problems?

- i) Please list any materials which you use which present environmentally related storage problems.
- j) What possibility is there of an environmentally damaging accident occurring on your premises and what steps have you taken to cover prevention, containment and response?

4. Energy

- a) Do you have any energy management systems in place to increase your energy efficiency?
- b) If yes, what are the results?

5. Waste

- a) What controls do you operate to ensure waste minimisation?
- b) Do you recycle any of your production generated waste? If so, what and how much?
- c) Do you have arrangements with reputable waste disposal contractors for your notifiable and/or non-notifiable waste in line with the Environmental Protection Act and how do you comply with your Duty of Care?
- d) Have you a policy about reducing paperwaste, recycling wastepaper and using recycled paper?

6) Materials

- a) Do you operate a control system which identifies the original source of all your raw materials? Do you endeavour to obtain these from sustainable sources?
- b) Do you use returnable packaging materials? If so, what proportion?
- c) Are you involved in using any post-consumer recycled materials? If so, what and how much?

- d) What solvents do you use? What quantities?
How do you dispose of waste?
- e) How do you deal with C.O.S.H.H. Regulations?
- f) Have you plans to phase out the following Ozone Depleting Substances:-

- Chlorofluorocarbons
- Hydrochlorofluorocarbons
- Halons
- Methyl Chloroform
- Carbon Tetrachloride

- g) Have you any potential problems arising from the presence of:-

- Polychlorinated Bi Phenols (P.C.B.)
- Asbestos

7. Environmental Initiatives

- a) Have you launched or contributed to any environmental or social initiatives on a local or national scale?
- b) Are you taking part in any industry wide environmental initiative; are you members of any environmental organisations? If yes, please give details.
- c) Do you monitor the environmental activities of your own suppliers? How?

CITY OF TORONTO
MANAGEMENT SERVICES DEPARTMENT
PURCHASING AND MATERIAL SUPPLY DIVISION

ENVIRONMENTAL INITIATIVES

April/94

CFC's

In 1988, purchasing specifications were reviewed and revised so that, where possible, all items containing CFC's or manufactured using CFC's would no longer be purchased. A CFC By-law (By-law No 230-89) was passed by City Council on April 6, 1989.

The Department of Public Works and the Environment purchased a CFC recovery unit to remove CFC's from discarded refrigerators. Very little CFC was recovered from the appliances and the program was discontinued.

Statement of Principle

The Statement of Principle which was developed at our Symposium in June, 1989, was approved by Toronto City Council on September 21, 1989. As a result of the adoption of the Statement of Principle, our contract and tender specifications were revised to allow for the purchase of products and services that contain the maximum level of post-consumer reusable or recyclable content, without significantly affecting their intended use.

Toner Cartridge Recycling/Printer and Typewriter Ribbon Recycling

In July 1989, we started a laser printer toner cartridge recycling program. The City and Metro Departments were instructed to send their empty toner cartridges to one of our warehouse locations, or pick-up of the cartridges could be arranged through the Purchasing and Material Supply Division. Once sufficient quantities are accumulated, companies that refill the cartridges are contacted to pick them up. At first the cartridges were given free of charge, now there is a charge for them. In 1990, this program was extended to include printer and typewriter ribbon recycling.

Double Sided Printing

As of 1989, all our tender and quotation documents are printed double sided.

Alternate Fuels

Investigation of alternate fuels has resulted in the conversion of two automobiles to natural gas/gasoline powered plus the purchase of an electric powered van, delivered in April, 1991. (Toronto Hydro also purchased one electric powered van and Metro has purchased a methanol powered car.)

Investigation of alternate fuels is on-going.

"Reclaimer" Vehicle

The City of Toronto's Department of Purchasing and Supply (now incorporated under Management Services Department), developed and sold the patent and manufacturing rights for a refuse vehicle which allows for the curbside sorting of recyclables. The patent and manufacturing rights were sold to Lindsay Steel Fabricating Limited.

Recycled Paper Products

The following recycled paper products are now being purchased by the Purchasing and Material Supply Division.

Envelopes:

- 10-25 % recycled paper content
- 50 % recycled paper content
- 100 % recycled paper content

File Folders:

- 100 % recycled paper content

Fine Papers:

The highest use item, No. 7 Bond and Photocopy Paper used by City and Metro Toronto are 50 % recycled paper (40 % post commercial and 10 % post consumer) - 100 % recycled paper was purchased for a while, but it did not perform well in existing photocopiers.

Sanitary Paper Products:

Most are 100 % recycled.

Stationery Items:

Almost all forms and pads purchased contain recycled paper. The forms and pads display the recycle logo to indicate this.

Computer Paper:

50 % recycled paper content.

All types of recycled papers are continually being evaluated by the Standards and Specifications Section with regard to their performance and acceptability.

A Symposium on recycled papers was held in February, 1990, at Toronto City Hall. Representatives from the major paper mills addressed City and Metro politicians and staff on the status of recycled paper products.

Office Products

Binders:

Three ring binders made of 100 % recycled plastic are now stocked in Material Supply Warehouses and are available for purchase by City and Metro Departments.

Staple-less Stapler:

A staple-less stapler which binds papers without the use of a staple was evaluated and found to be acceptable, but limited in performance (it will only bind up to six pages and it is difficult to separate the papers without tearing). A small quantity is being stocked as an alternate to the metal staple type stapler.

Reusable Fax Cover Sheet:

We are presently evaluating a fax cover sheet and telephone message pads which have a wipe-clean plastic coating which enables them to be re-used.

Pencils:

Pencils with a lacquer free finish are being purchased.

Toner Cartridges:

We now purchase and stock in our warehouses re-manufactured toner cartridges for use by City and Metro Departments.

Correction Fluid:

Environmentally sound correction fluid containing no trichlorethane (an ozone depleter) and requiring no solvents was evaluated and found to be acceptable. It is now being purchased for City and Metro Departments.

Desk Tray Sets:

Desk tray sets purchased for the City and Metro Toronto are made of 100% recycled plastics.

Paper Reduction Subcommittee

A paper reduction Sub-committee was formed to look into internal paper use. Suggestions of this Sub-committee include sending out a letter, in lieu of the entire quotation package, for quotes with large mailing lists, and encouraging the use of electronic mail. The Sub-committee is also looking at internal forms in an attempt to reduce the number of forms being used.

Printing Unit

The Department of the City Clerk's Printing Unit makes scratch pads from off cuts and from waste paper which has gone through one-sided copying. The Printing Unit has also started a recycling program for the cardboard boxes they use to package printed materials for delivery to clients. The boxes are labelled "Reduce-Reuse-Recycle" along with instructions as to where they should be returned.

Cardboard boxes used by the Printing Unit have a message on them instructing recipients to return the boxes to Printing or to the Material Supply Section, of Management Services Department for re-use.

"Purchasing for A Healthy Environment"

Six issues of this brochure have been published. These brochures inform City and Metro Departments what is being done in the area of purchasing environmentally sound products.

G.I.P.P.E.R.

"Governments Incorporating Procurement Policies to Eliminate Refuse" Committee is chaired by the Purchasing and Material Supply Division. This Committee includes representatives of Federal and Provincial Ministries, and Municipalities (mostly of the Greater Toronto Area), along with representatives of Standards Writing Organizations (CSA, CGSB). The Committee is investigating ways in which waste can be diverted from the waste stream through Government purchasing.

Re-Refined Oils

City of Toronto Purchasing Specifications now allow for re-refined oils. The OEM informed us at a Symposium arranged by the Metro Works Department, that the use of re-refined oils in vehicles will not affect vehicle warranties as long as the oils meet the specifications outlined by the OEM. Re-refined 10W30 motor oil is now being used in all Metro Works Department vehicles.

Directory of Environmentally Sound Products

In cooperation with A.C.C.E.S.S. a two volume directory of suppliers who sell environmentally sound products/services has been produced. Ads were placed in major newspapers and magazines and over 800 applications were received and have been included in both volumes of the Directory.

Cruelty Free Products

With the assistance of the Public Health Department, Toronto Humane Society, Animal Rights Groups and Industry, purchasing specifications have been revised, stating that "City of Toronto discourages the use of cleaning and maintenance products tested on live animals". As of January, 1992, all Quotation Requests for cleaning products include this statement.

A Quotation Request has recently been issued for a liquid hand cleaner where the product and/or ingredients have not been tested on live animals. As a result of this quotation request, we now purchase a liquid hand cleaner which has not been tested on live animals.

Inter-Departmental Co-ordinating Committee on the Environment

In January 1990, the above committee, made up of City of Toronto Departments, was formed. It responds to all issues relating to the City of Toronto and the environment and will report through the Committee of Heads of Departments. Management Service's Purchasing and Material Supply Division is an active member of this Committee.

Packaging

We have started to include the following clauses in our Quotation Requests:

"Where possible, the Supplier shall use packaging manufactured from recycled material."

"In an effort to reduce, reuse and recycle, we encourage bidders to minimize the packaging of their submissions. The evaluations of all bids are based on the 'contents' of the submissions, not the way the submission is packaged. Thank you for reducing."

We have reviewed the guidelines developed by the National Task Force on Packaging (a task force of the Canadian Council of the Ministers of the Environment) and we will be keeping up to date on their activities.

Environmental Choice Guidelines

When ECP guidelines exist they are referenced in our purchasing specifications.

Committee on the Evaluation of the Role of the Automobile

Purchasing and Supply Department (now amalgamated under Management Services Department) was an active member of this committee, the purpose of which was to achieve traffic calming and emission reduction in the downtown core. The Committee submitted its report in 1991.

WRAP (Waste Reduction Action Plan) Committee

We have an active member on this committee which is investigating ways of reducing waste at City Hall. A recycling program was implemented in 1993, whereby employees sort out their own garbage and bring it to various recycling stations located on each floor of the City Hall.

Cleaning Products

We are always looking for environmentally sound alternatives for cleaning products, however, as there are no ECP guidelines or other standards available, they are therefore difficult to specify. We have a representative serving on a CGSB Committee which is addressing the issue of the environmental soundness of cleaning products, however, at this time it is still in the development stage.

The Canadian Manufacturers of Chemical Specialties gave our staff a presentation on cleaning product issues (home versus traditional products, safety, packaging, and cruelty free).

Quotation Requests for cleaning products request that environmentally sound alternatives be offered, if available. The alternatives are evaluated prior to purchase.

Glasphalt

A Quotation Request was submitted for paving a Metro Yard with glasphalt. Metro Works Department has paved the Disco Road Transfer Station yard with glasphalt and they are evaluating the suitability of this pavement. So far it has performed satisfactorily.

Traffic Cones

The weighted bases of all sizes (6", 12", 18", 20" and 28") of the traffic cones we purchase contain recycled tire crumb rubber.

Recycled Plastic/Rubber

We are presently researching the use of recycled plastic/rubber sheeting for applications such as traffic signs, lining van interiors, lining doors of Fire Department rescue trucks, hockey arena boards, and other miscellaneous applications.

Traffic signs have been made from the material and have been installed. They will be evaluated as to how they perform in the changing weather conditions. A rescue truck has been lined with this sheeting and will also be evaluated as to the suitability of using the material in this application.

Product Verification Forms

Product verification forms developed by A.C.C.E.S.S. were used on a trial basis with Quotation Requests for environmentally sound products but, since we have detailed specifications for our purchases, it was found the form was not required and was discontinued, however, several other government bodies have adopted and are still using this form.

Masking Tape

Masking tape using unbleached paper is now stocked (and used) by our Material Supply Warehouses.

Demolition Specifications

Specifications for demolitions are being reviewed and revised to ensure there is maximum reuse and recycling of demolition materials.

Incandescent Light Bulbs

We have added to Quotation Requests since 1992, energy efficient lower wattage light bulbs (which give equivalent light to higher wattage bulbs but use less electricity).

Mop Buckets

Mop buckets and wringers made of recycled plastic were evaluated and found acceptable. Future quotation requests for this commodity will no longer be restricted to products made of metal. Plastic buckets and wringers purchased for 1993, will contain 3 to 15% post consumer and 15% post commercial recycled plastic.

Building Materials

We are currently looking into the various developments in building materials containing recycled materials. Some of these are: wallboards containing recycled newspapers, counter tops containing recycled plastics, and ceiling tiles containing recycled newspapers.

Insulation

We are requesting quotes on blown-in insulation from recycled wood based cellulose fibre, meeting Environmental Choice Program Guideline ECP-02 where possible.

Paint

All water based paints purchased in 1992, will meet Environmental Choice Program Guideline ECP-07 "Reduced Pollution Water-Based Paints".

We have evaluated latex and alkyd paints with 50 to 100% recycled content. The evaluations found flat latex (100% recycled) to be unacceptable (dried too quickly leaving streaks and required more paint to cover the same area). Eggshell latex and semi-gloss latex (50% recycled) were found to be acceptable. Semi-gloss alkyd paint containing 40 - 50% recycled content was found to be not acceptable (strong odour and dried too slow). Also, we have added wording to City painting contracts advising bidders that if recycled paint becomes available we may request that they use it.

Wheel Chocks

When purchasing wheel chocks for Fire Trucks, we specify that they contain recycled rubber.

Oil Absorbents

We purchase all purpose absorbent material made of ground-up phone books and papers for spill clean-ups.

Recycled Rubber

We have recently been made aware of A-frame road barriers made of recycled rubber and are evaluating their possible use by City/Metro Departments. Road delineators with recycled rubber bases are now being used by the Department of Public Works and the Environment.

Benches

We have purchased a park bench for City Property made of 100% recycled plastic. The bench has been placed outside at Toronto City Hall for evaluation. The City of Toronto's Parks and Recreation Department is evaluating plastic wood as a replacement material on wooden benches when they are repaired.

Plastic Wood

We have purchased a picnic table constructed with a plastic wood frame and normal wood seats and top. The table has been placed on Toronto Island for evaluation. The City of Toronto's Parks and Recreation Department has been evaluating plastic wood for various applications such as: picnic table frames, park benches, and hockey rink kick boards.

Integrated Pest Management (IPM)

To reduce the use of chemicals for pest control, the Purchasing and Material Supply Division has an active member on a City committee investigating and preparing specifications for IPM.

Environmental ChoiceSM Program

Environment Canada, Ottawa, Ontario K1A 0L3



Programme Choix environnementalSM

Environnement Canada, Ottawa (Ontario) K1A 0L3

Panel Review Certification / Examen par jury

Company Name <i>Nom de la compagnie</i>	
Address <i>Adresse</i>	
Contact Name / Title <i>Nom / Titre</i>	
Telephone / <i>Téléphone</i>	
Facsimile / <i>Télécopieur</i>	
Product / Service Name <i>Nom du produit / service</i>	
Description of Product / Service <i>Description du produit / service</i>	
Environmental Attributes <i>Traits environnementaux</i>	
Date	

For more information / *Pour des renseignements additionnels:*

Telephone / *Téléphone:* (613) 952-9455; Fax / *Télécopieur:* (613) 952-9465.



Environmental Claims for Environmental Choice[®] Panel Review Applications

The Environmental Choice Program identifies leaders in environmental performance. Environmental improvements may be achieved anywhere during the life-cycle of a product from design and material selection to raw material extraction, manufacturing, use, reuse, maintenance, recycling, and disposal.

Your product should exceed the industry norm in terms of environmental performance for the parameters that you identify as forming the basis of your claim. Environmental claims must be substantiated. Please provide copies, where available of test results, technical reports or articles, formulatory data, industry surveys, competing products' specifications, etc. to substantiate your claims. The following are examples of parameters in existing Environmental Choice guidelines that may help you to describe the environmental benefits of your product or service over its life-cycle:

Energy consumption / energy efficiency

Water consumption / water efficiency

Waste minimization (product, packaging)

- source reduction;
- design for reuse; design for recycling
- recycled content.

Water effluent

- biodegradability of organic compounds (Tests: OECD 301A-301F);
- toxicity to aquatic life, using Environment Canada Biological Test Methods (EPS 1 / RM / 9, 11, 21, 24, 25 etc.) or equivalent;
- bioaccumulation (Tests: ASTM E-1022-84, ASTM E-1148-87, OECD 305C, OECD 117 or OECD 107);
- biochemical oxygen demand (BOD) of effluent from manufacturing sites;
- total suspended solids in effluent from manufacturing sites.

Air emissions & indoor air quality

- volatile organic compounds (VOCs), either in the product, with potential to be emitted during use, measured as released to the atmosphere or to a test chamber that simulates indoor air conditions;
- dust

Chemicals and substances of concern

- heavy metals, especially lead, mercury, cadmium, hexavalent chromium and their compounds;
- formaldehyde;
- aromatic solvents;
- halogenated solvents (e.g. chlorinated, brominated, etc.);
- carcinogens identified on the IARC (International Agency for Research on Cancer) lists: Group 1 (Proven), Group 2 (Probable).
- chlorofluorocarbons (CFCs) and other ozone-depleting substances.

General

- durability, design for long life;
- substitution of renewable materials for non-renewable resources;
- performance;
- quality assurance and quality control procedures;
- compliance with standards and regulations;
- compliance with the National Packaging Protocol.



Guideline Update

We are currently working on a number of new guidelines. The following may be out for Public Review in the next four months:

New Guidelines:

Photo-finishing Services
Fax Machines
Hair Fixatives
Personal Care Products
Fabric Softeners
Floor Coverings: carpet, carpet underpad, resilient flooring
Car Cleaning Products
Roofing Materials
Car Washes
Auto Repair Services
Composite Wood Panels
Partitions & Acoustical Screens
Envelopes
Business Forms
Coated Papers

Revised Guidelines:

Automotive Fuels
Fine Paper
Newsprint

Final Guidelines should be published in the next three months for the following:

New Guidelines:

Rechargeable Batteries
Gypsum Wallboard
Driveway Sealers
Photocopiers
Polyethylene Plastic Film Products
Office Furniture
Non-medicated Hair Shampoos
Printing Inks
Biodegradable Non-toxic Chain & Saw Lubricants
Lithographic Printing Services
Sanitary Paper Products: Kitchen Towels
Sanitary Paper Products: Hand Towels
Sanitary Paper Products: Toilet Tissue
Sanitary Paper Products: Table Napkins
Sanitary Paper Products: Facial Tissue

Revised Guidelines:

Automotive Engine Oil
Engine Coolants
Adhesives
Sealants and Caulking Compounds
Products Made From Recycled Plastic
Energy-efficient Lamps
Toner Cartridges
Non-rechargeable Batteries

Guidelines undergoing further study after Public Review:

New Guidelines:

Industrial Cleaners and Degreasers
Biodegradable Non-toxic Hydraulic Fluids

Revised Guidelines:

Automatic Dishwashing Detergents
Laundry Detergents

May 1995



Environment Canada
Environnement Canada



EcoLogo® Paper / Papier Eco-Logo®

Canada



Mise à jour des directives

Nous travaillons actuellement à l'élaboration de nouvelles directives. Le public aura accès aux directives suivantes, à l'état de projet, à l'occasion de l'examen public qui se tiendra probablement au cours des quatre prochains mois :

Directives nouvelles

Services de développement et tirage photographiques
Télécopieurs
Fixatifs pour cheveux
Produits d'hygiène personnelle
Adoucissants pour tissus
Couvre-planchers : tapis, thubaudes, revêtements de sol résilients
Nettoyants pour automobiles
Matériaux de toiture
Lave-autos
Services de réparation d'automobiles
Panneaux de bois composite
Cloisons et écrans insonorisants
Enveloppes
Imprimés administratifs
Papiers couchés

Directives révisées

Carburants automobiles
Papier fin
Papier journal

Les directives suivantes devraient être publiées, dans leur version définitive, au cours des trois prochains mois :

Directives nouvelles

Piles rechargeables
Panneaux muraux de gypse
Produits de scellement pour les entrées asphaltées
Photocopieurs
Produits de pellicule de polyéthylène
Meubles pour bureau
Shampooings non médicamenteux
Encre d'imprimerie
Lubrifiants pour scie à chaîne bio-dégradables non-toxiques
Services d'imprimerie lithographique
Produits de papier sanitaire : papier essuie-tout
Produits de papier sanitaire : essuie-mains
Produits de papier sanitaire : papier hygiénique
Produits de papier sanitaire : serviettes de table
Produits de papier sanitaire : papier-mouchoirs

Directives révisées

Huiles à moteur automobile
Liquides de refroidissement
Adhésifs
Produits d'étanchéité et de calfeutrage
Produits à base de plastique recyclé
Lampes à haut rendement
Cartouches de toner
Piles non-rechargeables

Directives à réétudier après l'examen public :

Directives nouvelles

Nettoyants et dégraissants industriels
Fluides hydrauliques bio-dégradables non-toxiques

Directives révisées

Détergents pour lave-vaisselle
Détergents à lessive



Paper Eco-Logo® EcoLogo® Paper

mai 1995



Final Guidelines

ECP-01-89*	Automotive Engine Oil
ECP-03-89*	Products Made from Recycled Plastic
ECP-04-89	Batteries
ECP-07-89	Water-borne Surface Coatings
ECP-08-89	Fine Paper from Recycled Paper
ECP-10-89	Miscellaneous Products from Recycled Paper
ECP-11-89	Newsprint from Recycled Paper
ECP-12-89	Solvent-borne Paints
ECP-13-89	Heat Recovery Ventilators
ECP-14-89	Diapers
ECP-15-90	Composting Systems for Residential Waste
ECP-16-90	Automotive Fuels
ECP-17-90	Reusable Utility Bags
ECP-18-90	Major Household Appliances
ECP-19-90*	Energy-efficient Lamps
ECP-21-90	Diaper Services
ECP-22-90	Water-conserving Products
ECP-23-90	Compost
ECP-24-90*	Laundry Detergents
ECP-25-90*	Automatic Dishwashing Detergents
ECP-27-90*	Batteries: Non-rechargeable
ECP-33-91	General Purpose Cleaners
ECP-34-91	Domestic Water Heaters
ECP-35-91	Building Materials: Acoustical Products
ECP-37-91	Dry Cleaning Services
ECP-40-91	Building Materials: Thermal Insulation
ECP-42-91*	Toner Cartridges
ECP-43-91*	Engine Coolant Concentrate
ECP-44-92*	Adhesives
ECP-45-92*	Sealants and Caulking Compounds
ECP-67-94	Recycled Water-borne Surface Coatings

* Guidelines are presently under review



EcoLogo® Paper® Paper Eco-Logo®

May 8, 1995



Directives Finales

PCE-01-89*	Huiles à moteur automobile
PCE-03-89*	Produits à base de plastique recyclé
PCE-04-89	Piles
PCE-07-89	Enduits en suspension aqueuse
PCE-08-89	Papier fin fabriqué à partir de papier recyclé
PCE-10-89	Produits divers fabriqués à partir de papier recyclé
PCE-11-89	Papier journal fabriqué à partir de papier recyclé
PCE-12-89	Peintures en suspension dans un solvant
PCE-13-89	Ventilateurs-récupérateurs de chaleur
PCE-14-89	Couches
PCE-15-90	Systèmes de compostage pour déchets domestiques
PCE-16-90	Carburants automobiles
PCE-17-90	Sacs réutilisables
PCE-18-90	Gros appareils ménagers
PCE-19-90*	Lampes à haut rendement
PCE-21-90	Services de couches
PCE-22-90	Produits favorisant l'économie d'eau
PCE-23-90	Compost
PCE-24-90*	Détergents à lessive
PCE-25-90*	Détergents pour lave-vaisselle
PCE-27-90*	Piles non-rechargeables
PCE-33-91	Nettoyants tout usage
PCE-34-91	Chauffe-eau domestiques
PCE-35-91	Matériaux de construction: Produits acoustiques
PCE-37-91	Services de nettoyage à sec
PCE-40-91	Matériaux de construction: Isolants thermiques
PCE-42-91*	Cartouches de toner
PCE-43-91*	Liquide de refroidissement concentré
PCE-44-92*	Adhésifs
PCE-45-92*	Produits d'étanchéité et de calfeutrage
PCE-67-94	Enduits en suspension aqueuse recyclés

* Directives présentement en voie de révision

le 8 mai 1995



***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 _____ 14 _____



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	Explain Reason
_____	1. Initial Approval	_____
_____	2. Re-approval	_____
_____	3. Follow up-inspection	_____
_____	4. Environmental Incident	_____
_____	5. Other	_____
	Date of Last Inspection	_____

1) <u>Operations</u>	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) <u>Surrounding Area/Outside grounds</u>		
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
_____	_____
_____	_____
_____	_____
_____	_____

- 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 _____



STATE OF MINNESOTA

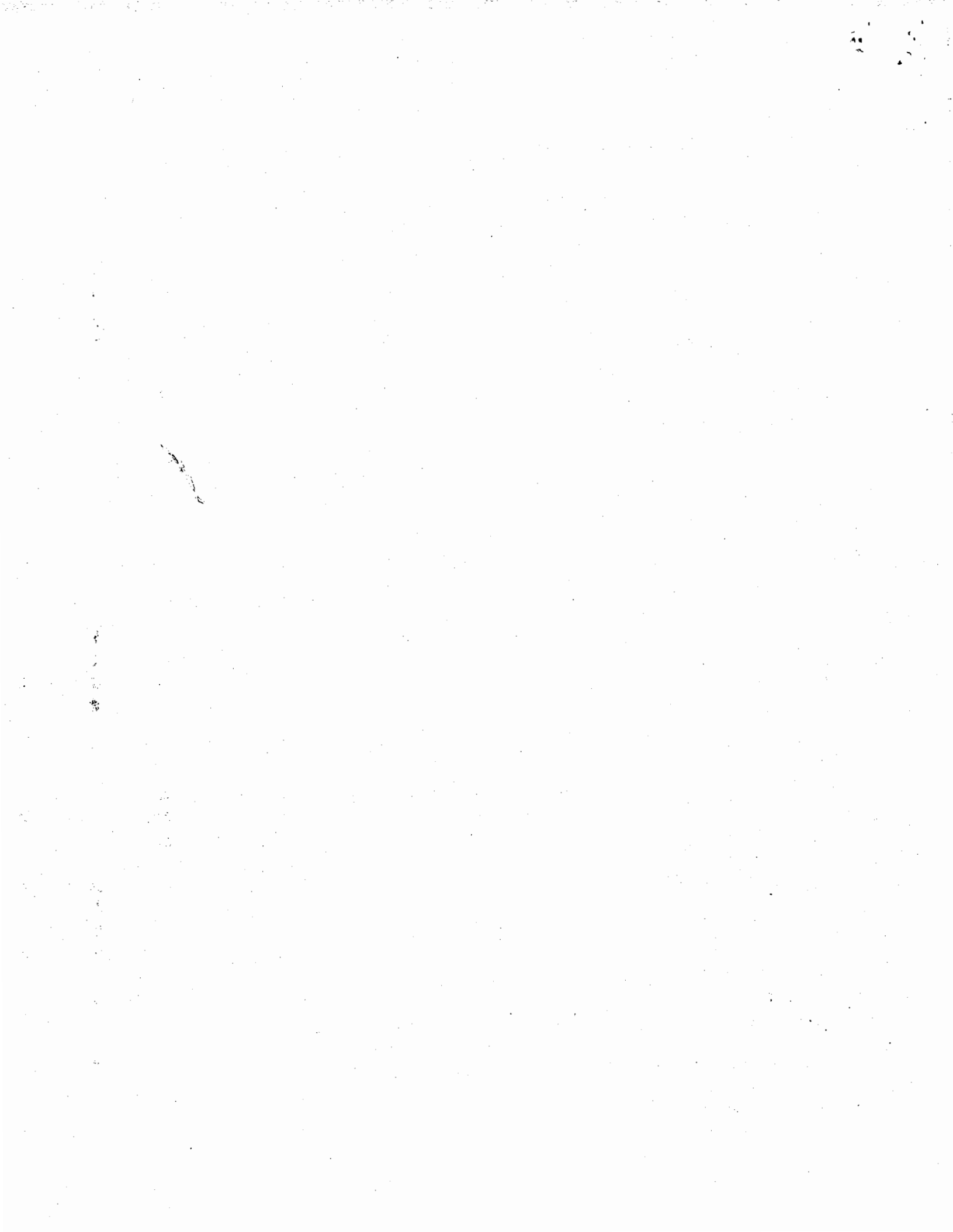
Department of
Administration



"Environmentally - Aware Purchasing Checklist"

Submitted to the Legislative
Commission on Waste Management
November, 1991

Materials Management Division



ENVIRONMENTALLY AWARE PURCHASING CHECKLIST

INTRODUCTION

"Environmentally aware" . . . being informed and knowledgeable about the need to change our practices to preserve our resources and the environment, and recognizing that the practices of large organizations such as government can significantly affect waste generation, resource usage and pollution.

Environmentally aware purchasing . . . shopping for products which:

because they use less material or are long-lived, *reduce waste*;

because they are durable or repairable, can be *re-used*;

through their design, facilitate reuse and *reduce waste*;

are *recyclable*;

contain *recycled* material;

are *non-toxic* or less toxic than alternatives;

are *energy efficient*.

Public employees are often confronted with a confusing array of choices and dilemmas when they pursue environmentally responsible purchasing. Is a product which is recyclable better than one which has recycled content? At what point does durability compromise energy efficiency? And, just when you thought you were doing the right thing, a new development emerges which raises questions about what was previously thought to be environmentally correct.

The document is intended to provide public employees with a systematic method for incorporating environmentally aware thinking into their purchasing decision-making process. The document consists of a checklist of nine factors. The factors are intended to guide the public employee who must make a purchase through a series of considerations which, if applied knowledgeably, will lead to environmentally aware choices. The checklist should be used in conjunction with the waste management hierarchy which provides strong guidance and direction for resolving choices which the factors may present to the purchaser. The hierarchy prioritizes waste management practices as follows:

The first priority is **reduction**: reduce the quantity and toxicity of materials and packaging.

The second is **reuse**: purchase products which are durable, repairable, reusable or returnable.

The third is **recycling**: purchase for recyclability within *your* organization's recycling collection system.

**ENVIRONMENTALLY - AWARE PURCHASING
CHECKLIST**

Use this checklist during the specification development process as a convenient reminder to consider each factor as you evaluate product requirements and develop bid language. There are nine factors:

- 1. DURABILITY**
- 2. REPAIRABILITY / REUSABILITY**
- 3. RECYCLABILITY**
- 4. RECYCLED CONTENT**
- 5. SOLID WASTE AND TOXICITY PRODUCTION**
- 6. PACKAGING**
- 7. LABOR COSTS / ISSUES**
- 8. RESOURCE USE**
- 9. DISPOSAL / END-OF-LIFE ISSUES**

1. DURABILITY

√ What is the warranted life of the product? The readiness of a vendor to offer and/or extend a warranty at a competitive price is an indication of the durability of the equipment. Consider incorporating a call for an extended warranty or guaranteed buy-back (if appropriate) in the bid. The more durable the product, the more a company will likely pay to buy it back.

Examples: A request for proposal for an environmental liner awarded points for each year of warranty up to 20 years. A contract for wheelchairs includes extended one-year warranties on batteries (compared to the industry standard six months). A modular office furniture contract specified a ten year warranty rather than the three-to-five year warranty normally offered in the industry.

Bids for heavy equipment often request a guaranteed buy-back provision at a guaranteed price at the end of five years. The award is then based on total cost of the equipment minus the buy-back price.

√ What is the estimated true, expected life of the product? Obtain information from manufacturers, independent evaluators and users, especially maintenance staff.

Example: The tires currently purchased by the state for use on heavy equipment are wearing out at relative low mileage. Because the true life of a tire may well exceed its warranted life, staff are investigating the availability of accurate, objective data on this subject. If such data is obtained, they may construct a request for bid incorporating a life cycle cost assessment using cost per mile based on the true life of the tire.

√ Are there generally accepted national standards which outline quality and durability requirements?

ANSI (American National Standards Institute) and its member groups publish standards on a wide variety of products. ASTM (American Society for Testing and Materials) which is one of the member groups, has standards for testing methods, and design and performance specification standards for a wide variety of products including: paint, road and paving materials, paper, roofing, wood, packaging, rubber, soap, textiles, adhesives, plastics, leather, food service equipment, business imaging products, tires and food.

√ Consider the maintenance costs over the expected life of the product.

Example: All bids for copier machines are awarded using a life cycle cost approach for the length of the lease/rental or, on purchases, for three years. Included in the formula are unit price, maintenance and supplies (includes all normal operating supplies excluding paper, and all parts and labor) for a prescribed number of copies per year.

2. REPAIRABILITY / REUSABILITY

- ✓ Can the product be shared, borrowed or rented?
- ✓ Can a used or remanufactured product be substituted for the new product requested?
- ✓ Can the product be re-used or is it disposable?

Examples: cloth diapers versus disposables, rechargeable batteries versus single-use.

A contract for wiping rags which are cut from recycled materials/clothing provides three grades of sanitized cloth available by the pound. These are used by agencies such as DOT. If these cloth wiping rags can be washed, they can be used repeatedly.

- ✓ Is the product or packaging returnable or refillable? Is it available in some other medium which is reusable, returnable or refillable?

Examples: The state's central stores recently added to its inventory a high quality, yet economically priced, refillable pen. This pen replaces a lower quality item and provides a solid alternative to a non-refillable stick pen which had, until now, been the staple offering.

The state's janitorial supplies contract offers refillable spray cleaner bottles. Staff are also investigating building into the next laundry supplies contract an option to reuse the 25 - 140 pound plastic-lined barrels in which laundry detergent and other products are currently packaged. Problems include: the vendor's fear that returned barrels will have been damaged or soiled by another material; since delivery is made by common carrier, the user would need to accumulate an entire truckload of empty barrels before they could be returned; the cost of returning the barrels to the vendor would have to be paid by the user.

- ✓ Can the product be reconditioned or remanufactured to extend its life?

Example: Olmsted County is extending the life of heavy equipment air filters by sending them to a company which cleans and dries filters clogged by dust and dirt. Each filter can then be re-used up to three times. This results in a 56% cost savings and a 75% reduction in that waste stream.

- ✓ Can the item be easily updated or upgraded by replacing or adding a part?

Examples: Include all computer software upgrades in the original purchase price; purchase computers which can be upgraded by the addition of chips, exchange of memory boards or hard drives. Make purchases of equipment within the same brand so that parts can be interchanged or salvaged from discarded equipment. (Long term contracts for products make this practice easier.)

✓ Can guaranteed availability of replacement parts be specified?

Example: Bids for telecommunications equipment require a letter from the manufacturer guaranteeing parts availability for ten years following installation. (Federal law currently requires seven years availability.)

With some products, e.g. fire fighting equipment, downtime of any length is simply not acceptable; for equipment purchases of this type, purchasing agents have used "Availability of Parts" as a heavily weighted factor in a request for proposal where the award is based on several factors which are weighted to reflect importance.

3. RECYCLABILITY

✓ Is the product recyclable within the organization's system?

Many products claim to be recyclable and indeed are, technically, recyclable. Plastics are recyclable; juice packs are recyclable ... but only at a few locations nationwide. The question which needs to be asked is: does the organization collect and/or separate this product or packaging for recycling? The state system collects writing and newspaper in most locations, cans in some and glass in a few. Plastics are not currently collected in any location.

There is a specific requirement in M.S. 16B.122 that public entities produce reports, etc., that are readily recyclable within the state resource recovery program. Only white or pastel paper is generally collected by this program. (See Appendix 1 for "do's and don'ts" of the current metropolitan area ledger paper collection program.) Conditions may change so it is always best to check with the Resource Recovery Office for clarification.

Some purchasing decisions involve consideration not only of a product, but of a process which may alter the form of a product. M.S. 16B also requires that public entities, whenever practicable, "use reusable binding materials or staples and bind documents by methods that do not use glue."

Example: The need to consider this requirement was raised by a requisition for a copier with a built-in binding feature. Two competing models were being evaluated; one used an insoluble glue binding and the other a tape, hot melt adhesive and foil process. The recycling collection vendor determined that neither was totally acceptable; both would result in the batch being downgraded from the highest quality, highest paying ledger category. One was more acceptable than the other. However, the preferred approach is to use a reusable (e.g., 3 ring, GBC, brads) binding or one which can be removed by the recycling system (e.g., staples, wire, sewn binding).

√ Is the product easily identifiable as recyclable? (are its contents identified on a label?) Further, what is the specific recycled content of the product? For instance, if the product is paper, is it ledger or newspaper? If the organization, like the state, separates high grade ledger from newspaper, is the product easily recognizable as one versus the other?

Example: The state began purchasing paper tablets with a 100% recycled content. The paper looked very much like ledger; however, tests revealed that it contained a quantity of newspaper sufficient for the recycling vendor to categorize it as newspaper. Since it looked like ledger, customers would likely place it in the ledger collection bin where it would cause the batch to be downgraded to mixed paper. Because the market for mixed paper is relatively unstable, the decision was made to discontinue this paper and replace it with a ledger pad with no newsprint content.

√ Is the product one for which a ready recycling market exists?

Example: A state agency wishes to purchase computer printout paper (CPO) with newsprint content. Paper with news content is less expensive, but the market for newspaper is less stable than the ledger market. Also, as described in the first example, people may not recognize the CPO as newsprint and recycle it with ledger. On the other hand, in order to complete the recycling loop, customers need to purchase products with news content.

√ Does the durability/strength of a product match its intended use? Is the product to be kept only a short time or must it be durable enough to be retained for a long period of time?

Example: Paper with recycled newspaper content is a lower grade paper which is relatively inexpensive. It can be a good choice for message pads or computer printouts which may be discarded (recycled) almost immediately.

4. RECYCLED CONTENT

√ Is the product to be purchased one for which recycled content can be specified?

M.S. 16B.121 requires that the Administration Department:

“apply weighting factors to the recycled content and recyclability criteria in order to give a preferential treatment to those criteria.”

It also requires that:

"state agencies purchase recycled materials when specifications allow the practical use of the recycled materials and the price does not exceed the price of nonrecycled materials by more than ten percent (10%)."

√ What is the specific recycled content of the product or packaging? Is it pre-consumer or post-consumer recycled content?

Pre-consumer material includes manufacturer's waste, industrial scrap and other material generated which has not served its intended end use and has not passed through the hands of the consumer. *Post-consumer* material is a finished material which would normally be discarded as a solid waste, having completed its life cycle as a consumer item.

√ What are the prevailing standards in the industry?

Obtain information from vendors, professional journals and the resource recovery office on recycled product availability and content before establishing specification requirements or using the 10% preference provision.

Example: Nationwide, corrugated cardboard boxes contain, on average, 23% recycled content; however, further research indicated that some boxes contain almost 100% recycled content. By obtaining information on the full range of available products and their percentage of recycled content before a specification is developed, the purchasing professional will be better able to devise a rating scheme which will give appropriate credit for recycled content.

√ Consider requiring the vendor to put a label on the product declaring its recycled content.

Example: when ordering printed materials, e.g., forms, business cards, specify that they be printed on recycled paper with at least 10% post-consumer content and that the words: "Printed on Recycled Paper" be printed on the document.

The state contract for business cards provides a choice of two types of recycled paper which were identified and priced by the buyer before the invitation to bid was issued. The contract allows customers to add, at no extra cost, the "Printed on Recycled Paper" label to their card.

√ Consider where the recycled product fits in the recycling hierarchy. Is the content of the product the best use of that content?

Example: Consider the example of newsprint containing high grade ledger. Using high grade ledger in newsprint not only uses up the ledger which would otherwise be available for making recycled high grade paper, it displaces newsprint which may then end up in the landfill.

√ Is the product writing or printing paper? If so, M.S. 16B requires that, whenever practical be, it:

- Contain at least 10% post-consumer waste;
- Be uncoated, or if coated, contain 50% or more post-consumer waste;
- Be manufactured using little or no chlorine bleach (can be applied to tissue also);
- Be white or pastel rather than a dyed color (can be applied to tissue also).

√ Does an office machine which uses paper (laser printer, copier, fax) operate on the recycled paper which is generally available to the user?

Example: Laser printers which operate acceptably using the stock recycled paper currently receive a 5% preference in the bid process.

All bids for copiers contain a requirement that they operate on recycled copier paper available at central stores.

5. SOLID WASTE AND TOXICITY PRODUCTION

√ Does the product produce toxic waste during its life ?

√ What is the toxicity at the end of the product's life? Must the product be disposed of as hazardous waste?

Example: Nickel cadmium batteries are rechargeable which increases their lifespan (it is estimated that, on average, one ni-cad will replace 65 - 300 alkaline batteries) and because they reduce waste, would be the environmentally preferred choice over alkaline batteries. The following complicates the decision: Both battery types contain toxic elements (cadmium in ni-cads and mercury in alkaline). Effective August 1, 1991, ni-cads are banned from the municipal solid waste. Ni-cads are not currently recyclable anywhere in the U.S., although battery manufacturers are required to have a collection system in place in 1994. Although almost all alkalines sold in the state now are of the low mercury type, it is preferred they they not be disposed of in MSW either, especially when incinerated. Consequently, both need to be separated from the solid waste stream and disposed of in hazardous waste sites. However, until further information on the relative toxicity of cadmium versus mercury is available, the ni-cad is considered by many to be the preferred choice over alkaline. Others suggest that a better choice for would be to return to the carbon zinc battery at least until better collection systems are in place for ni-cads.

6. PACKAGING

√ Can packaging be reduced or eliminated? Is the product available in a concentrated form which will reduce volume and, consequently, packaging?

Example: the vendors of paper tablets and state telephone message forms were asked to pad the tablets 100 sheets per pad instead of 50 per pad, thus eliminating one-half of the cardboard backing now being discarded.

Brick packs of coffee represent an 85% source reduction (by weight) over steel cans. However, steel cans are recyclable in our system whereas brick packs aren't. On the other hand, brick packs represent such a large source reduction that given the current can recycling rate of 30% (national average), choosing brick packs will produce less waste to be incinerated or landfilled. Conclusion: if the user recycles steel cans, stay with cans; if not, consider brick packed.

√ Can the product be packaged in a larger container for large volume users?

Example: Antifreeze and lubricating oil on contract are both made available in 1 (oil in 1 quart), 30 and 55 gallon containers. Users sometimes need small containers so they can order and distribute from a central point without having to repackage the product or so they can dispatch a small container with each of many vehicles.

√ Are there alternatives to the polystyrene "peanuts" which are used to package many products?

Example: Popcorn packing material was used for a short time by the state's information systems vendor, Ameridata, to ship computer products. Ameridata no longer uses popcorn because it crushed too easily, attracted mice and was regarded by customers as too messy.

Some vendors are using a product made of corn starch as packing fill. This product can be reused, composted or, in some cases, washed down the drain.

√ Can packaging be altered to eliminate artwork or use of colored or white package lining?

Example: Oak Park Heights correctional facility sells office supplies to state agencies via Central Stores. One of the buyers noticed that envelopes were packaged in a pure white box made by applying a piece of white bond to a paperboard box. The vendor accepted the buyer's suggestion to "reduce" the packaging by eliminating the white paper coating.

√ Can packaging be returned to the vendor?

During the SCOPE hearings, manufacturers and retailers indicated an openness at the retail level to a "leave it behind" option where customers can remove packaging and leave it at the store. Following this lead, purchasing agents can insert a requirement in requests for bid or proposal that vendors accept return of used packaging for recycling or reuse.

√ Can recyclable packaging be substituted for non-recyclable?

Examples: See brick pack example described earlier in this section and laundry detergent example under factor #2 (Repairability/Reusability).

Some products such as floor wax which were previously packaged in non-refillable, non-recyclable pails, are now available in a bag-in-a box configuration; a double-walled bag is contained within a corrugated box with an exterior pouring spout. There may be some advantages: the corrugated is recyclable, the use of plastic is decreased and the overall packaging is reduced in volume and weight.

7. LABOR COSTS / ISSUES

√ When comparing two products, e.g., single-use versus reusable, will the cost of labor increase, will it decrease? Consider labor required for the full range of activities associated with the job including ordering, inventory control, maintenance and discarding.

8. RESOURCE USE

√ What is the relative cost of electricity, gas, or water used to support the product?

Examples: A bid for some computer equipment included, in addition to the purchase price and one year of maintenance, the cost of electricity/cooling for one year.

Bids for boilers and chillers include credit for a rebate available from the power and light company; the amount of the rebate increases as the efficiency of the unit increases and energy costs decrease.

An investment in a highly efficient appliance to replace an older, still functioning, but less efficient one, may pay off in energy costs.

9. DISPOSAL / END OF LIFE ISSUES

- ✓ Can the product be traded in at the end of its intended life for a newer version?
- ✓ Is it likely that the product can be "handed down" or transferred to another state agency or sold through a state sponsored auction, garage sale or through sealed bid?
- ✓ Can components of the product be salvaged for parts to repair or maintain like items?
- ✓ Is there any scrap value to the product or components of the product?