

# Novation's Guidelines for Implementing an Environmentally Preferred Purchasing Policy

## Purpose

Novation is committed to a more sustainable supply chain. We work to specify products and services that use best practice principles and evidence based approaches to “greening” the supply chain. We solicit input from our members, the vendor/manufacturing community, non-profit groups dedicated to improving the environmental performance of healthcare and /or supply chain.

Adopting an EPP policy is optional of course. There are not local or federal mandates that require such a policy, but where implemented, a policy can help point an organization's compass to help ensure successful implementation of purchasing processes that result in the procurement of sustainable products and services, particularly in an environment with multiple competing demands for resources of all kinds. Novation has provided this document to help our members better understand how to implement an EPP policy and why it's important. Furthermore, by working together in a consistent and thoughtful manner, Novation's members can better understand reasonable and achievable targets that are financial viable, environmentally sound, health improving and inspiring. Working collaboratively with the entire supply chain will ensure the work is implemented in ways that are efficient, lasting and meaningful.

## How to Use These Guidelines

Not all hospital policies are similar in content or layout, in fact, more likely the opposite. This document is divided into sections so that the user can pick and choose aspects of the policy that fit the needs of the organization.

- I. **Sample Policy Language** — intends to use short statements of policy. We have used “General Health System” to represent the healthcare facility.
- II. **Materials of Concern — sample list** — a compilation of toxic materials many facilities use to focus their efforts. Some facilities make this list an attachment — not part of the policy so that it can be edited more readily.
- III. **Environmental impact considerations criteria for procurement decisions** — the manufacture, use and end-of-life impacts on air, water and land are briefly summarized here. This section is included primarily as a reference for procurement considerations.
- IV. **Environmental RFI/RFP Questions** —questions submitted to vendors/manufacturers by Novation. While these are optional questions for members to ask, members are encouraged use similar language to minimize confusion in the market place. If however, you'd like to ask additional or edited questions, you are certainly welcome to do so, but we'd also like to hear your ideas
- V. **Sample Certification Programs** — specific and widely accepted product certification programs that help guide our decision making around identifiable product attributes.
- VI. **Definitions**

## I. SAMPLE POLICY LANGUAGE

*Environmentally preferred procurement* is the purchase of products and services whose environmental impacts have been considered and found to be less damaging to the environment and human health when compared to competing products and services.

### A. GOAL

General Health System is committed to the principles of Environmentally Preferred Procurement (EPP) in support of General Health System mission to improve the health of our patients, families, staff and communities we serve.

### B. EPP POLICY CONSIDERATION

1. Principles of Environmentally Preferred Procurement (EPP) will be applied to all major procurement decisions.
2. General Health System will evaluate the environmental and health impacts (e.g., waste, energy, water, toxicity) of products and services in an effort to select healthy, safe, environmentally preferable, and sustainable products and services.
3. In general, General Health System will seek scientific, evidence based criteria, mandates from state or federal authorities in developing specifications for product/service decisions.
4. General Health System staff involved with product selection will communicate to the marketplace that General Health System expects suppliers to continuously develop price competitive products that conform to our EPP principles. Certification Programs and guidelines.
5. EPP principles may not be the sole factor in determining product selection but will be weighed with other quality, service, and total cost components.
6. Consideration of total cost of ownership that in addition to unit cost, considers unit cost per use, maintenance costs, operating costs (purchasing, stocking, using, transporting, treatment), and waste costs.
7. Preference will be given when possible that are in support of these specific sustainability practices:
  - a. Products that reduce the use of materials and resources during manufacturing and use, are non-toxic, are durable, reusable and/or bio-based.
  - b. Products that have minimal packaging, reusable, non-toxic or bio-based.
  - c. Products and services preference to local or regional suppliers will be given when price, quality, and delivery factor are equal among competing suppliers.
  - d. Products that are recyclable and use recyclable content in products and packaging
  - e. Products are transported with minimal, reusable, and/or bio-based packaging.
  - f. Products are manufactured and distributed using the least amount of water and energy and generate less waste.
  - g. Products that are non- or less-toxic and that does not generate hazardous chemical waste.
  - h. Products that improve health impacts on patients, staff, visitors and both local and global communities through reducing exposure to *materials of concern*. (See Section III. A).
  - i. Products are delivered using reusable totes/containers

- j. Vendors, manufacturers and/or products that have “Take Back” provisions.
- k. Vendors, manufacturers and/or products that support device re-manufacturing
- l. Vendors and manufacturers who disclose all information regarding the chemical and material composition of products and reduce the use of materials of concern
- m. Vendors and manufacturers who invest in the use of alternative energy sources for manufacturing and distribution
- n. Vendors and manufacturers that support beneficial reuse and will work with us to find outlets for surplus equipment and supplies
- o. Vendors and manufactures who can show evidence towards the use of more sustainable and renewable raw materials

## **C. RESPONSIBILITIES**

Purchasing Department staff has the primary responsibility to manage and implement this policy. EPP policy content is influenced by accepted best practices in the industry, and other departmental considerations (Environmental Services — cleaning products; Laboratory — safer chemicals, etc.). Materials Management is responsible for the dissemination of this policy to inform the organization that said policy exists so that when/if other purchasing decisions are made, they are consistent with policy. All shall give preference to environmentally sound products when practicable.

## II. MATERIALS OF CONCERN LIST

General Health System will reduce the purchase of products containing materials of concern\*, including but not limited to the following:

1. Persistent bioaccumulative toxic compounds
2. Bisphenol- A
3. Carcinogens, mutagens, and reproductive toxic chemicals
4. Corrosives
5. Fragrances
6. Halogenated flame retardants
7. Latex
8. Mercury
9. Phthalates (e.g. plasticizer DEHP (di-2-ethylhexyl phthalate))
10. Polyvinyl chloride (PVC)
11. EPA RCRA-listed hazardous chemicals

See *Section VI. Definitions* for a description of each.

### III. ENVIRONMENTAL IMPACT CONSIDERATIONS CRITERIA FOR PROCUREMENT DECISIONS

	MANUFACTURING AND DISTRIBUTION	USE	END OF LIFE
Air	<p>Manufacturing of projects that minimizes toxic air emissions through energy reductions, alternative energy sources (low or no emission sources), chemical emissions eliminations strategies</p> <p>Transportation strategies that minimize related air pollution impacts</p>	<p>Pertains to Indoor air quality.</p> <p>Building products, materials that do not adversely impact indoor air quality.</p> <p>Building systems that minimize air emissions</p>	<p>Products that at the end of life (disposal) do not negatively impact air quality (e.g., require incineration; direct emissions to air (waste anesthetic gases); landfill gases</p>
Water	<p>Water use reduction and toxic effluent elimination in the manufacturing process</p>	<p>Preference from products that use less water (plumbing fixtures, cooling towers, etc)</p>	<p>Preference for projects that, when sewered or landfilled, does not contribute to toxic effluent emissions (laboratory chemicals, pharmaceuticals, toxic chemicals)</p>
Land (Resources and Waste)	<p>Manufacturing of projects that minimizes the use of raw material extraction, toxic chemicals, resources</p> <p>Transportation and distribution strategies that minimizes materials and use (reusable containers, take back of pallets, etc)</p>	<p>Durable, reusable equipment that minimizes waste</p>	<p>Recyclable</p> <p>Reusable</p> <p>Products when compared to alternatives, have a lesser impact at the end of life</p>

## IV. ENVIRONMENTAL RFI/RFP PROCESSES

A. Whenever possible, General Health System will work with our GPO, Novation, to consistently encourage vendors and manufacturers to promote manufacturing and transportation practices that are environmentally preferable. The following sample list of RFP questions are divided into two sections: general, and by product type/area. The questions can be used by both the Purchasing Department and Novation, and can be shared with all departments who are making purchasing decisions.

### B. RFP General Questions

1. Do you have/engage in programs or activities related to sustainable business practice and/or environmental stewardship?
  - a. If yes, what?
2. Does your company publish a “Sustainability” or “Environmental” report?
  - a. If yes, attach
3. Has your company taken efforts to reduce/eliminate hazardous chemicals from the manufacturing process?
  - a. If yes, explain
4. Has your company taken efforts to reduce/eliminate landfill waste from the manufacturing process?
  - a. If yes, explain
5. Has your company taken efforts to conserve energy in the manufacturing process?
  - a. If yes, explain
6. Has your company taken efforts to conserve water in the manufacturing process?
  - a. If yes, explain

### C. RFP Questions by Product/Area Type:

1. Medical/Surgical Products
2. Lab/Diagnostic Imaging
3. Hospital Furnishings
4. Facility Operations
5. Food and Food Service
6. Electronic Equipment

#### 1. Medical/Surgical Products

- 1.1 Have efforts been made to reduce packaging waste from the products?
  - If yes, identify
- 1.2 Does product or packaging contain post-consumer recycled content?
  - If yes, identify
- 1.3 Do you offer product take-back [29] programs?
  - If yes, list
- 1.4 Are items latex free?
  - If yes, list
- 1.5 Are items DEHP free?
  - If yes, list
- 1.6 Are items PVC free?
  - If yes, list
- 1.7 Are items BPA free?
  - If yes, list
- 1.8 Are products free halogenated organic flame retardants?
  - If yes, list

- 1.9 Are products sold as a multi-use (not single patient use)?
2. Lab/Diagnostic Imaging
  - 2.1 For products that normally contain chlorine, are there alternatives that are chlorine-free?
    - If yes, identify
  - 2.2 Are any reagent products mercury-free?
    - If yes, identify
  - 2.3 Have efforts been made to reduce packaging waste from the products?
    - If yes, identify
  - 2.4 Does product or packaging contain post-consumer recycled content?
    - If yes, identify
3. Hospital Furnishings
  - 3.1 Do you have products that do not contain halogenated flame retardants?
    - If yes, list and identify type of flame retardant for each
4. Facility Operations
  - 4.1 Are any cleaning products Green Seal or Eco Logo certified?
    - If yes, identify
  - 4.2 Do you offer products that are Energy Star-qualified or Federal Energy Management Program (FEMP) [CP5]-designated?
    - If yes, identify
  - 4.3 Do you offer pesticide alternatives that use physical and biological methods referred to as Integrated Pest Management (IPM) practices?
    - If yes, identify
  - 4.4 Do any of the janitorial paper products meet the minimum U.S. EPA's Comprehensive Procurement Guidelines for recycled content?
    - If yes, identify
  - 4.5 Are any paper or paper products made without the use of chlorine bleach?
    - If yes, identify
  - 4.6 For office supplies made with PVC, are alternatives available?
    - If yes, identify
5. Food and Food Service
  - 5.1 Identify products with following attributes
    - USDA organic
    - Animal welfare approved
    - Certified Humane raised and handled by Humane Farm and Animal Care
    - Raised without antibiotics claim by USDA
    - Food Alliance certified
  - 5.2 Does the company use reusable content packaging and/or shipping containers?
  - 5.3 Does the company use packaging made from recycled content?
6. Electronic Equipment
  - 6.1 Are any of the products ENERGY STAR—qualified?

- If yes, identify.
- 6.2 Are any of the computers, laptops or monitors EPEAT registered?
  - If yes, identify.
- 6.3 Are any products free of intentionally-added mercury in all components?
  - If yes, list
- 6.4 Are any of the products free of polyvinyl chloride (PVC) plastic?
  - If yes, please list.
- 6.5 Are any of the products free of intentionally-added Halogenated Flame Retardants (HFRs) in Housings & External Enclosures?
  - 6.5.1 If yes, please identify.
- 6.6 Does your company offer a Product take-back Program for electronics that uses recycler's qualified under the Electronic Recycler's Pledge of True Stewardship?
  - 6.6.1 If yes, describe
- 6.7 Does your company offer a Packaging take-back or Reusable Shipping Container Program for this product?
  - 6.7.1 If yes, describe

#### **D. Monitoring Plan**

1. Define approval and review process
2. How does this fit into value analysis and/or contracting process
3. How to track

## V. SAMPLE CERTIFICATION PROGRAMS AND EPP RESOURCES

Certification programs and guidelines — in general, we will seek science and evidence based criteria in making our purchasing decisions

### 1. EPP Certifications and Specifications Databases

- 1.1 **Scientific Certification Systems** — <http://www.scscertified.com/>  
Scientific Certification Systems is a third-party provider of certification, auditing and testing services, and standards. They provide a certified products database for a variety of products ranging from paint to textiles.
- 1.2 **Environmental Choice (EcoLogo)** — <http://www.ecologo.org/>  
The oldest North American environmental standard and meets the international ISO 14024 standard for environmental labels.
- 1.3 **Responsible Purchasing Network** — <http://www.responsiblepurchasing.org/>  
List of state and local EPP programs. RPN is an international network of buyers dedicated to socially responsible and environmentally sustainable purchasing.
- 1.4 **Green Products Compilation V7** — <http://www.fedcenter.gov/programs/buygreen/>  
Office of the Federal Environmental Executive's list of EPP tools

### 2. Building products

- 2.1 Building products, materials and furnishings that are approved by National Facilities Services Planning and Standards

### 3. Cleaning Products

- 3.1 **Green Seal** — <http://www.greenseal.org/>  
Green Seal is a nonprofit, third-party certifier that prepares environmental standards in a transparent process with multiple stakeholders and certifies products to meet those standards. Products that meet their standards have reduced environmental and health effects and may be less expensive. Certified products have a Green Seal logo and are listed on Green Seal's website. Green Seal provides science-based environmental certification standards for hundreds of products and services. Green Seal also provides technical reports on products in a variety of categories at: <http://www.greenseal.org/resources/reports.cfm>

### 4. Chemicals

- 4.1 **GREENGUARD Environmental Institute** — <http://www.greenguard.org>  
Provides supply chain professionals with a resource for low-emitting products. Evaluate more than 75,000 chemicals, including volatile organic compounds (VOCs), carcinogens and reproductive toxins.
- 4.2 **Chlorine Free Products** — <http://chlorinefreeproducts.org/>  
While not a certifying organization, CFPA monitors products and coordinates a comprehensive list on this website.

### 5. Electronics

- 5.1 **Electronic Products Environmental Assessment Tool** — <http://www.epa.gov/epeat/>  
EPEAT is a voluntary, self-declaration program that spot checks manufacturers to ensure products meet some or all of the 23 environmental criteria. EPEAT registered products offer reduced cadmium, lead and mercury, are more energy efficient so reduce emissions, easier to upgrade and recycle and manufacturers must offer safe recycling options.
- 5.2 **Pledge** — [http://www.ban.org/pledge/electronics\\_recycler\\_pledge.pdf](http://www.ban.org/pledge/electronics_recycler_pledge.pdf)

## 6. Energy

### 6.1 **Federal Energy Management Program (FEMP)** —

[http://www1.eere.energy.gov/femp/technologies/procuring\\_eeproducts.html](http://www1.eere.energy.gov/femp/technologies/procuring_eeproducts.html)

### 6.2 **Energy Star** — <http://www.energystar.gov/>

An international standard for energy efficient products; devices carrying the Energy Star logo save on average 20 percent to 30 percent energy.

6.3 Energy Star is a program of the U.S. Environmental Protection Agency that sets energy efficiency standards and designates products that meet them. FEMP designates products which are among the highest 25 percent of equivalent products for energy efficiency. Products that use less energy save in energy costs and reduce greenhouse gas emissions. Energy Star or FEMP products are listed on Energy Star's and/or FEMP's website.

## 7. Indoor Air Quality — [www.scs-certified.com/gbc/indoor\\_air\\_quality.php](http://www.scs-certified.com/gbc/indoor_air_quality.php)

SCS has three air quality certification programs.

## 8. Latex-free products (American Latex Allergy Association) — [www.latexallergyresources.org](http://www.latexallergyresources.org)

## 9. Paper

### 9.1 **The Forest Stewardship Council** — <http://www.fsc.org/>

Products are independently certified to assure consumers that they come from forests that are managed to meet the social, economic and ecological needs of present and future generations.

### 9.2 **Chlorine Free Paper Products** — [www.chlorinefreeproducts.org](http://www.chlorinefreeproducts.org)

## VI. DEFINITIONS

**Biobased** — Designation for products that are composed, in whole or in significant part, of biological products, including renewable domestic agricultural materials and forestry materials.

**Biodegradable** — Designation for products that will degrade from the action of naturally occurring microorganisms such as bacteria, fungi and algae.

**Bisphenol-A (BPA)** — A plastic chemical, used in a variety of capacities. The National Institute of Health National Toxicology Program believes BPA is hazardous to human reproductive and developmental health.

**BPA-free** — Designation for products that are 100 percent free of Bisphenol-A.

**Brominated Flame Retardants (BFRs)** — See *Flame Retardants*.

**Carcinogens** — Chemicals that have been shown to cause cancer, a mutation of the genes, or damage to the development or function of reproductive systems. A chemical is considered a carcinogen if it meets one or more of the following criteria:

- It has been evaluated by the International Agency for Research on Cancer and found to be a carcinogen (Group 1) or probable carcinogen (Group 2A).
- It is listed as a known carcinogen or anticipated carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program.
- The Occupational Safety and Health Administration regulates it as a carcinogen.

Also known as mutagens and reproductive toxic chemicals.

**Chlorinated Flame Retardants** — See *Flame Retardants*.

**Chlorine-free Paper Products** — Products that were not created by the bleaching of paper with chlorine or chlorine derivatives. This bleaching process generates dioxin, a highly toxic chemical that tends to accumulate in the food chain and can cause cancer in humans. Chlorine-free products are labeled "totally chlorine-free" (TCF) or "processed chlorine-free" (PCF). PCF paper contains recycled content produced without elemental chlorine.

**Compostable** — Description for products that will successfully degrade during industrial composting to yield carbon dioxide, water, inorganic compounds and biomass at a rate consistent with other known compostable materials and leave no visible, distinguishable or toxic residue.

**Corrosive** — Description for chemicals that destroy or damage living tissue by direct contact. Some acids, bases, dehydrating agents, oxidizing agents and organics are corrosives. Examples include acids, alkaline corrosives, chlorine and phenols.

**DEHP-free** — Designation for products that are 100 percent free of Di-2-ethylhexyl Phthalate.

**Di-2-ethylhexyl Phthalate (DEHP)** — A plasticizer (softener) used to increase the flexibility of polymers, such as polyvinyl chloride (PVC), which are used in many medical devices (ex., I.V. bags and tubing). DEHP can leach out of the flexible PVC medical devices into the solution or medication they contain and subsequently into the patient. Animal studies indicate that DEHP is a potential reproductive and development toxicant.

**Electronic Products Environmental Assessment Tool (EPEAT®)** — A global registry for greener electronics. A resource for purchasers, manufacturers, resellers and others wanting to find and promote environmentally preferable products.

**Electronics Recycler's Pledge of True Stewardship** — A pledge that requires recyclers to provide tracking of electronic waste (e-waste), as well as not to export e-waste to developing countries, not to use prison labor to

recycle the materials, and not to landfill or incinerate any of the materials. Some developing countries have become dumping grounds for e-waste, which is burned to collect metal, sending toxic chemicals into the air and water. This pledge helps ensure more environmentally and socially responsible recycling.

**Energy Conservation** — The concept of using products that use measurably less energy to perform their function than comparable products.

**Environmentally Preferred Purchasing** — The purchase of products and services whose environmental effects have been considered and found to be less damaging to the environment and to human health when compared to competing products and services.

**Environmental Stewardship** — Responsible use and protection of the natural environment through conservation and sustainable practices.

**Flame Retardants** — Chemicals used in thermoplastics, thermosets, textiles and coatings that inhibit or resist the spread of fire. Categories of retardants include:

- **Brominated Flame Retardants (BFRs)** — The designated name for a group of brominated organic substances that have an inhibitory effect on the ignition of combustible organic materials.
- **Chlorinated Flame Retardants** — Suspected to be carcinogens and reproductive toxicants and to accumulate in the liver and kidneys.
- **Halogenated Flame Retardants** — Shown through controlled studies in laboratory animals to disrupt thyroid function, which is critical for brain development early in life, and potentially suppress immune systems, cause cancer and disrupt normal endocrine function.
- **Halogenated Organic Chemicals** — These have a carbon-halogen bond (halogens include bromine, chlorine, and fluorine). Chemicals with a carbon-halogen bond tend to be toxic and persistent; thus, they are targeted as a group of chemicals for which manufacturers should be seeking alternatives. Alternatives such as phosphate-based flame retardants may not be nontoxic, but they are generally less environmentally problematic than halogenated organic flame retardants. Non-halogenated alternatives are readily available for housings and enclosures.

**Fragrances** — Refers to the pleasant odors that are sometimes infused into certain products. Fragrances may cause respiratory distress, reactions, and/or severe allergies to people, depending upon the type, amount and concentration of chemicals in them. Because fragrances are typically unnecessary and may cause harm to people, some hospitals are including purchasing criteria that consider the use of added fragrances.

**Green Building** — A concept that embodies a healthier and more resource-efficient model of design, construction, renovation, operation, maintenance and demolition. Elements of green building include designing and operating buildings to use energy efficiently and use renewable sources of energy. Elements include solar and wind power; efficient water use; using building materials that, compared to other brands, have a reduced effect on the environment throughout their life cycle (e.g., recycled content, low toxicity, energy efficiency, biodegradability, durability); waste reduction from construction, remodeling and demolition; and designing and operating buildings that are healthy for their occupants.

**Green Cleaning** — The concept of using cleaning products that contain no harmful chemicals.

**Green Seal** — Green Seal is a nonprofit, third-party certifier that prepares environmental standards in a transparent process with multiple stakeholders and certifies products to meet those standards. Products that meet Green Seal standards have reduced environmental and health effects and may be less expensive. Certified products have a Green Seal logo and are listed on Green Seal's website.

**Halogenated Flame Retardants** — See *Flame Retardants*.

**Halogenated Organic Chemicals** — See *Flame Retardants*.

**Halogenated Organic Flame Retardants** — These chemical compounds are typically present in products such as cushioned furniture, mattresses, pillows, mattress pads, egg crate cushions, cushioned wheelchairs, cushioned exam tables, draperies, carpets, bedspreads and wall treatments. Halogenated organic chemicals have a carbon-halogen bond. Halogens include bromine, chlorine and fluorine. Chemicals with a carbon-halogen bond tend to be toxic and persistent; thus, they are targeted as a group of chemicals for which manufacturers should be seeking alternatives. Alternatives such as phosphate-based flame retardants may not be nontoxic but are generally less environmentally problematic than halogenated organic flame retardants.

**Integrated Pest Management** — A pest control strategy that uses an array of complementary methods: mechanical, physical, genetic, biological, legal, cultural and chemical. These methods are done in three stages: prevention, observation and intervention. It is an ecological approach with a main goal of significantly reducing or eliminating the use of pesticides, which harm the environment and can be toxic to humans.

**Latex** — Natural rubber latex, commonly referred to as latex, is a common component of many medical supplies. Extensive use of this material can cause allergic reactions in health care personnel and patients.

**Latex-free** — Designation for products and packaging that are 100 percent free of natural rubber latex.

**Life Cycle** — The general reference to all phases of a product's existence, from raw material extraction, to production, manufacture, distribution, use and disposal. Life cycle also includes all intervening transportation.

**Mercury** — A metal that is a potent neurotoxin and can affect the brain, spinal cord, kidneys and liver.

**Mercury-free** — Designation for products that are 100 percent free of mercury.

**Persistent Bioaccumulative and Toxic Compounds (PBTs)** — Compounds that are toxic, persist in the environment, build up in the food chain, and can pose risks to public health by causing adverse effects to biological systems. The U.S. Environmental Protection Agency defines PBTs under its Persistent Bioaccumulative and Toxic Chemical Program.

**Phthalates** — See *Di-2-ethylhexyl Phthalate*.

**Polyvinyl Chloride (PVC)** — A chlorinated plastic resin. The chlorine, when heated to specific ranges during production and incineration, releases dioxin, a highly toxic chemical. PVC is not easily recycled.

**PVC-free** — Designation for products and packaging that are 100 percent free of polyvinyl chloride.

**Recycled Content** — Products and packaging that contain at least 30 percent pre-consumer or post-consumer recycled material. The U.S. Environmental Protection Agency was authorized by Congress to recommend recycled content guidelines for a variety of products to promote the use of materials recovered from solid waste. Look for the highest amount of post-consumer recycled content to support recycling programs.

**Reproductive Toxin** — Substances that affect reproductive capability and include four general categories based on target affect: mutagens, teratogens, sterility/infertility and lactation. Reproductive toxins include physical agents (e.g., radiation), biological agents (e.g., viruses) and chemical agents. Reproductive toxins are those chemicals identified as reproductive toxins by the Office of Environmental Health Hazard Assessment of the California Environmental Protection Agency and published under the authority of The Safe Drinking Water and Toxic Enforcement Act of 1986 (also known as Proposition 65).

**Resource Conservation and Recovery Act (RCRA)** — A comprehensive U.S. law that protects the environment by regulating hazardous and nonhazardous solid wastes, particularly chemicals. RCRA is managed by the U.S. Environmental Protection Agency and has many promulgated standards that affect health care facilities.

**Reusable** — Designation for products designed for more than one use.

**Take Back Provisions** — Provisions that encompass the ability to return items for credit, reuse and disposal, such as the return of mercury sphygmomanometers, fluorescent lights, shipping containers, packaging, etc.

**Toxicity** — A relative property of a chemical agent and refers to a harmful effect on some biological mechanism and the condition under which this effect occurs.

**Volatile Organic Compounds and Semi-volatile Organic Compounds** — As defined by the U.S. Environmental Protection Agency: "Any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions" (with a few exclusions).