Canada: Medical Waste Treatment and Disposal Equipment

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Summary

The Canadian medical waste treatment and disposal equipment market is expected to grow significantly over the next five to ten years, as the Baby Boomer generation continues to age and the demand for medical care and attention continues to increase. As the national provider of health care services, the Government of Canada (GOC) is placing a strong emphasis on procurement of cost effective medical waste treatment and disposal equipment that will also reduce environmental contamination and pollution in the long term. Utilizing such technology and equipment is a high priority in Canada, as is evident by the increased use of hydroclaves and reusable sharps containers. Currently, U.S. manufactured autoclaves are among the most popular types of equipment used for medical waste treatment and disposal in Canada.

Canada's is committed to moving away from pollution causing medical waste treatment and disposal procedures, such as incinerators that have been used by hospitals and other medical facilities. This effort opens significant opportunities for other non-polluting technologies and equipment that will help reduce emissions and serve to advance higher environmental standards.

The Canadian Standards Association and Environment Canada set the standards and regulations for the disposal of hazardous and medical waste materials; and offer guidelines that will be of interest to U.S. suppliers interested in penetrating the Canadian marketplace.

Market Demand

Currently, Canada is home to approximately 3,000 hospitals, medical facilities and surgery centers that require medical waste treatment and disposal. The Ministry of Health is the largest provider of health care services in Canada's provinces and territories and is responsible for the procurement of medical waste products as well as setting disposal regulations.

According to the World Health Organization (WHO), high-income countries, such as Canada, can generate up to six kg (13.23 pounds) of hazardous waste, including medical waste, per person, per year. Statistics Canada reported that by 2004, Canada had produced 30 million tons of hazardous and medical waste. Although no new waste management statistics have been recorded since 2004, hazardous and medical waste tonnage is believed to have increased annually. In particular, there has been an increase in medical waste, as a result of the ageing Baby Boomer population requiring more medical attention.

The categories of biomedical waste in Canada are:

- anatomic (15%, with isolation waste included)
- microbiologic/laboratory (3% with pharmaceuticals and chemical)
- blood/body fluid and sharps (1% of total health care waste)

Sterilization and disposal methods for biomedical waste are: landfills, sanitary sewers, steam sterilization (autoclaving, hydroclaving), chemical decontamination (electron beam), microwave processing and incineration. A common belief by Canadian citizens is that medical waste poses a higher infection risk than household waste, despite evidence that household waste is 100 times more poisonous. In 1992 the Canadian Council of Ministers of the Environment prepared the Guidelines for the Management of Biomedical Waste in Canada, to promote uniform practices and set national standards for managing biomedical waste in Canada.

Environment Canada and the Canadian authorities prefer sterilization procedures that do not produce emissions and can reduce waste volume and weight. Hydroclaving and autoclaving are the preferred methods of sterilization, with landfills and sanitary sewers as the final disposal method. The safe and effective sterilization of pathogens (found in medical waste) is a top priority for the GOC as well as environmental groups around the world. Achieving a reduction in, and improved management of, hazardous medical waste are important goals for the medical and environmental sectors in Canada.

Therefore, the Canadian market for medical waste treatment and disposal equipment is moving toward reusable containers and their sterilization to reduce the amount of plastic containers polluting the environment. The reusable containers are also less likely to be pierced by sharps and they provide a way of keeping track of medical waste products and their final location when handled by waste management providers.

The medical waste management industry is expected to remain stable due to the solid grip on the market by Stericycle. The only forecasted increase in the industry will be as a result of the Baby Boomer generation reaching the age where medical care becomes a necessity, as well as their growing interest in gerontology for the prolonging of life.

Market Data

In 2007 Canada imported USD517.6 million worth of medical waste treatment and disposal equipment such as laboratory sterilizers, plastic containers, autoclaves and incinerators of medical waste disposal products. Medical waste treatment and disposal equipment manufactured in the United States is well received in the Canadian marketplace. U.S. equipment imported into Canada traditionally dominates the Canadian medical waste disposal market. In fact, since 2003, the United States has captured no less than 71 percent of Canada's import market. Industry experts believe U.S. products will continue to find good prospects in Canada. Some products, such as plastics, are imported from China and represent approximately 13 percent of Canada's total imports in this industry segment.

The close proximity of the U.S. to Canada allows for easy movement of goods and market integration. This coupled with similar consumer preferences have resulted in market domination for U.S. made products among other foreign competitors. Ontario is the top provincial destination for U.S. made medical waste equipment and represents 78.5 percent of the United States total exports to Canada in this product segment. The next top two provincial destinations are Quebec (6.9%) and British Columbia (5.7%).

Import, export and local production figures are based on estimates provided by industry sources and statistics published by Industry Canada and Statistics Canada. The following products, identified with their Harmonized System (H.S. Codes), are included in this analysis:

HS Code	Description
HS 392329	Sacks and bags (including cones) of other plastics NES
HS 392390	Articles for conveyance or packing of goods NES
HS 841780	Non-electrical furnaces and ovens- other industrial or laboratory NES (including incinerators)
HS 841920	medical, surgical or laboratory sterilizers

Statistical Data

	2005 in millions $	2006 in millions $	2007 in millions $	2008-2009 Estimated
Total Imports	340.2	346.4	517.6	533.1
Exports	469.4	487.0	585.5	603.1
U.S. Imports	254.2	255.0	369.1	381.2
U.S. Market Share	74.7	73.6	71.3	71.5
Exchange Rate	0.847	.08470	1.100	1.100
Inflation Rate	2.0%	2.0%	2.0%	2.0%

2007 Import Market Shares:

United States	71.3%
China	13.1%
Mexico	3.1%
Other	12.5%

Best Prospects

As in the United States, autoclaves have been the more popular method of hospital waste disposal in Canada. However, the recently developed hydroclave is becoming increasingly popular. The hydroclave consists of a barrel-shaped pressure vessel to decontaminate infectious waste, and in contrast to an autoclave, the hydroclave uses the moisture content of the waste to create the necessary steam used in the decontamination process. The Ottawa Hospital, the third largest hospital in Canada and the third largest producer of biomedical waste, has replaced its incinerators with two hydroclaves.

The Dentistry sector is one of the contributors to the level of mercury polluting the Canadian wastewater stream. Since 2003 the GOC has been working to reduce the amount of dentistry medical waste entering the wastewater stream. As a result, an increased numbers of dentists are using ISO separators for repair or replacement of amalgam fillings that contain mercury, reducing the amount of mercury in the wastewater stream by 57 percent.

In Canadian health facilities it is mandatory to use disposable or reusable plastic containers and bags to collect, label, designate, and prepare for transport the various different forms of medical waste. All containers and autoclave red bags must carry the biohazard symbol and are required to be sealed to avoid leakage. All the bags must fit into a box (length-24", width-13", height-18") provided by the waste disposal supplier. Each bag must not weigh more than 10 kg (approx. 22 pounds).

Software programs that track medical supplies purchased and used in hospitals and health care facilities, as well as the types of waste generated, will help waste management companies to provide the proper equipment, procedures and safety required to handle such hazardous wastes. This type of tracking system would be beneficial in an outbreak or epidemic scenario in order to pinpoint the amounts and whereabouts of particular types of waste.

Provincial legislators and health care facilities have been searching for and testing various methods of biomedical waste treatment and disposal as there is a strong demand for cost-effective, non-incineration alternatives that are safe and environmentally responsible. Current practices are moving towards the best use technology that reduces the amount of hazardous medical waste produced.

Key Suppliers

Stericycle, based in the U.S., is the leading medical waste management company in Canada. Stericycle requires that clients purchase and use the plastic containers that they manufacture in the U.S.

Stericycle provides national service with 105 collection and transfer sites and 45 processing facilities. They also provide disposable containers for health care facilities as well as for transport of waste. They are major medical waste management providers in British Columbia, Manitoba, Ontario, Quebec and the Maritime provinces.

Prospective Buyers

Local governments or private sector businesses enter into contracts with private hazardous and medical waste management firms to provide waste management services. Each province, territory, and municipality may have different specifications on how hazardous and medical waste is handled.

The following is a list of major waste management equipment buyers in Canada:

Hospital Sterilization Services (Iotron)
Canadian company providing services for three major health regions encompassing 36 health facilities in British Columbia; able to process 6000 kg of waste material per day.

GM Pearson: (no website)
Canadian company providing waste management services to parts of British Columbia, Alberta and Saskatchewan with a main processing plant in Wainwright, Alberta. This is one of the oldest and still surviving Canadian waste management companies.

Biomed Recovery and Disposal Inc.
A Canadian company serving Saskatchewan, Alberta and Regina (MB). They also provide sharps containers and reusable containers for transporting material.

Newalta Island Waste Management
Responsible for the disposal of medical waste in Newfoundland, Labrador and Prince Edward Island.

Bioservices Group, Inc.
A Canadian company that manufactures and exports a low cost Medical Waste Reduction system known as External Steam Agitation (ESA).

The GOC and many of the provinces list their medical waste procurement opportunities on the Government Electronic Tendering system MERX.

Market Entry

Although Canada is becoming well known for the development of hydroclaves, the U.S. remains as the main supplier of autoclaves for Canada and other parts of the world. A list of distributors/manufacturers of hydroclaves and autoclaves for North American is available on the Powersourcing website.

Most plastic containers that hospitals and health facilities purchase, whether disposable or reusable are imported from the U.S. Several U.S. companies design and distribute various types of plastic containers and bags that have been the standard throughout Canada. These U.S. companies continue to be the main source of supply for the Canadian market.

Each province in Canada establishes its own procurement bidding procedures for waste management providers. Therefore, a Canadian agent/distributor that is well aware of the procedures should be used in order to enter the market and respond to procurement opportunities. The agent would also be a valuable source of market information and would assist in identifying potential opportunities, difficulties and other market trends.

Market Issues and Obstacles

There are four accredited standards development organizations (SDOs) in Canada:

1) The Canadian Standards Association (CSA),
2) Underwriters' Laboratories of Canada (ULC),
3) The Canadian General Standards Board (CGSB), and
4) The Bureau de Normalisation du Québec (BNQ).

Each of these organizations develops standards through committees representing various interests. SDOs may submit standards to the Standards Council of Canada (SCC) to be recognized as National Standards of Canada. SDOs can also develop standards-related documents such as codes and guidelines (non-mandatory guidance and information documents).

The Canadian Standards Association specifies requirements for segregation, packaging, collection, movement, storage, and on the treatment of waste materials within healthcare facilities and veterinary health care facilities. Provincial and municipal governments regulate transportation and care of these materials. Explanations of regulations and further information on Canada's management of toxic waste can be found on the Environment Canada website.

Thanks to the North American Free Trade Agreement (NAFTA), American made products enter Canada almost entirely duty free. NAFTA came into force on January 1, 1994 and replaced the U.S.-Canada Free Trade Agreement that was implemented in 1989. The phase-out of tariffs between Canada and the United States was completed on January 1, 1998, except for tariff-rate quotas (TRQ) that Canada retains on certain supply managed agricultural products. Canada still maintains some non-tariff barriers of concern at both the federal and provincial levels, impeding access to the Canadian market for U.S. goods and services. However, recent studies show that 99 percent of all trade passes across the border without incident or without controversial trade restrictions. Many Canadian standards are harmonized with U.S. standards.

Doing business in Canada is not, however, exactly the same as in the United States, and U.S. companies should beware of the discrepancies. While customs documentation, bilingual labeling and packaging requirements and Canadian federal and provincial sales tax accounting may seem onerous at first compared to domestic shipments, most exporters find that with a little experience, they can master the requirements. There are also many international trade professionals such as customs brokers, freight forwarders and consultants that can, for a fee, handle much of the research and paperwork for smaller exporters without international sales departments.

The key to achieving market penetration for export sales to Canada is making the transaction resemble as much as possible a Canadian domestic transaction for the Canadian customer. One good way to do that is for the U.S. exporter to become a non-resident importer and take the entire importing burden off the shoulders of the Canadian importer.

The official languages in Canada are English and French, while English is the main business language used in most provinces other than Quebec. Since the predominant language in the province of Quebec is the Quebec dialect of French (analogous to the relationship of American English to British English), promotion and packaging need to reflect local needs as well as Quebec's French language requirements.

Unlike the U.S. Canada uses the metric system for trade, however both variations are acceptable.

Trade Events

A potentially rewarding method of sales promotion in Canada is participation in specialized trade shows pertaining to the Medical Waste industry. These events provide networking and equipment display and are a good tool for marketing products or services to Canadian agencies or distributorships.

The following trade shows present a good opportunity for new-to-market U.S. companies:

Americana: Pan-American Environmental Technology Trade Show and Conference in Montreal, Quebec, March 17-19, 2009.

Canadian Waste and Recycling Expo: Canadian Waste and Recycling Exhibition in Toronto, Ontario, November 6 –7, 2008

GLOBE: Biannual conference exploring common goals of corporate sustainability, business growth, energy solutions, responsible investment and urban development in Vancouver, British Columbia, March 24-26, 2010

Resources & Contacts

Canadian Standards Association

Environment Canada
World Health Organization (WHO)
Statistics Canada
Canadian Council of Ministers of the Environment
Guidelines for the Management of Biomedical Waste in Canada
Ottawa Hospital
Hospital Sterilization Services (Iotron)
Biomed Recovery and Disposal Inc.
Newalta Island Waste Management
Bioservices Group, Inc.
Government Electronic Tendering
List of distributors/manufacturers
Powersourcing
Underwriters' Laboratories of Canada (ULC),
The Canadian General Standards Board (CGSB), and
The Bureau de Normalisation du Québec (BNQ).
Standards Council of Canada (SCC)
MERX

For More Information

The U.S. Commercial Service in Vancouver, Canada can be contacted via e-mail at: Cheryl.Schell@mail.doc.gov; Phone: 604-685-3382; Fax: 604-687-6095 or visit our website: www.buyusa.gov/your_office.

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