

The Disposal of Hazardous Industrial Wastes

Canadian
Objectives
and
Guidelines

- The chemical industry is a key industry in the Canadian economy. Its products are crucial to virtually all manufacturing operations.
- Like all manufacturing industries, the chemical industry generates waste by-products, some of which, unless properly handled, may be hazardous.
- Individuals, industries, governments share benefits from the chemical industry and we all have a common interest in ensuring that chemical wastes are handled correctly. For its part, the Canadian chemical industry intends to demonstrate its commitment to responsible handling and control of its products, including hazardous wastes.

This brochure, prepared by the Canadian Chemical Producers' Association, explains what hazardous waste is, and outlines the roles and responsibilities of industry, government, and the public, in disposing of this waste safely, efficiently, economically, and in a manner which effectively safeguards both human health and the environment.

What Is Hazardous Waste?

Each of us, every day, creates waste; and ultimately, all waste is potentially hazardous.

Empty glass bottles in a garbage bag can break and form sharp and dangerous cutting edges; waste paper or discarded rags can start a fire; discarded plastic bags can be lethal in the hands of a child. Yet any of these objects, disposed of properly, is completely harmless – to people and to the environment.

Chemical wastes are really no different. The key element in all cases is proper handling.

Just what is a hazardous waste? The Environmental Protection Service (EPS) of Environment Canada uses the following definition for waste:

"A waste is any substance for which the owner or generator has no further use and which he discards."

Hazardous wastes are further defined as:

"Those wastes which, due to their nature and quantity, are potentially hazardous to human health and the environment and which require special disposal techniques to eliminate the hazards."

Couldn't this description, under the right circumstances, apply to the large amounts of waste paper we generate every day? Consider the terms: *Nature, Quantity, Potential, Special.*

Paper is, by nature, highly flammable. In large quantities, it has the potential to fuel a large and dangerous fire. "Special" disposal and handling techniques are required for paper to ensure it does not catch fire, or that if it does, it is not allowed to spread.

It may seem overly simple to compare a common waste product such as paper to highly-toxic chemical waste, but, in fact, it isn't.

Because we understand the nature of the potential problem, because we recognize the danger posed by waste paper, we deal with it calmly and logically, almost as a matter of routine. It is essential, in the case of chemical wastes, that we do the same: calmly and logically.

Our Position

People working in the Canadian chemical industry understand, perhaps better than anyone, the hazards which are posed by chemicals that are handled incorrectly.

The Canadian chemical industry has a reputation, and a tradition, of good corporate citizenship. An essential part of that good citizenship is making sure that the industry's operations do not create problems that others are forced to deal with.

However, there are some problems that we in the chemical industry cannot solve completely on our own. The question of disposing of potentially hazardous waste by-products is one such problem.

Various levels of government have assumed responsibilities in this area. One of those responsibilities is to establish standards for safe waste disposal with which industry must comply. Another is to identify and establish the facilities which make it *possible* for the industry to comply.

The simple truth is, at this time, Canada does not have adequate waste disposal facilities to deal with either the present or future volumes of hazardous industrial waste, and this situation must not be allowed to continue.

The creation of these facilities is a provincial government responsibility, and it is critically important that the provincial authorities act immediately, not only to enact legislation for the safe transportation of industrial waste to disposal sites, but to establish the sites themselves.

The chemical industry sees the question of safe disposal of waste as the highest of priorities and we believe that government — all levels of government — should share a sense of the importance of the issues involved and act accordingly.

What Should We Do?

Manufacturers do not intentionally generate wastes; they are unavoidable by-products of industrial processes. No manufacturer throws away by-products which might be economically re-cycled or re-used. As research progresses, more and more waste products are being re-used, safely and profitably, and this trend will undoubtedly continue. Meanwhile, we need to dispose of waste safely, and to do that, we need properly developed and managed disposal sites.

Government must make the establishment of these sites its highest priority. Until sufficient sites are in operation, regulations governing the control and handling of industrial wastes are pointless.

Individuals should seek to understand what is at issue, and learn how the problems can be solved. As with any significant public issue, the first step in finding a solution is understanding the problem.

The Solutions Are Available

The technology and techniques to deal effectively with hazardous wastes are already available. Some wastes can be destroyed through incineration at very high temperatures. Others can be rendered harmless by biological means. Chemical fixation, solidification, and neutralization are all possible alternatives.

To the maximum extent possible, the Canadian Chemical Producers' Association advocates using such means to destroy hazardous wastes. Those wastes which cannot be destroyed can be *safely* and *securely* contained in properly-engineered landfill sites.

The Canadian Chemical Producers' Association advocates preparation of a list of specific wastes that are recognized by technically competent authorities as potentially hazardous on the basis of information and data already available within the scientific community.

Next, the Association supports the development of a totally reliable tracking system to follow the transportation of wastes right from the point at which they are ready to leave a factory or plant until they are destroyed or safely and permanently contained. This system, called a "closed loop", is possible *only* after provincial and municipal governments have designated environmentally acceptable sites.

The federal government, we believe, should accept a responsibility for the coordination of research, and the dissemination of information about new waste disposal and destruction methods. It should seek to further public understanding of the issues, develop guidelines for the establishment of waste disposal operations, and be responsible for setting safe standards for inter-provincial and international transportation of such wastes.

Provincial governments should develop legislation to deal effectively with waste disposal in order to protect the public health and the environment. Before such legislation can be implemented properly, each province must ensure that there are either facilities for disposal of hazardous waste within its own boundaries, or, cooperating with other provinces, should establish facilities on a regional basis.

Municipalities should also become involved in order to provide a supporting role in the selection and establishment of waste disposal sites.

Solutions Must Also Be Economically Feasible

It is important to be aware that the cost of waste disposal is eventually passed on to all of us as part of the cost of domestically manufactured consumer goods. The relative cost of these goods affects not only our standard of living, it also affects the competitiveness of Canadian made goods and therefore, Canadian jobs. We want our industries to produce goods at reasonable prices for Canadian consumers. As well, we want them to be able to compete effectively with foreign manufacturers in the international marketplace. Waste disposal should therefore be kept as economical as possible, consistent with protecting human health and the environment.

While many of the chemical industry's wastes are re-used or re-cycled within its own plants or other industrial facilities, some wastes still require sophisticated and costly treatment at disposal sites. In order to keep waste disposal costs to a minimum, we believe that central treatment facilities should be made available on a regional or provincial basis for optimum access by manufacturers.

Selecting Sites

The designation of waste disposal sites is the single most critical industrial need at this time. Steps must be taken to ensure that site designation takes place as quickly and efficiently as possible, while still respecting the democratic process.

Prospective developers and operators of industrial waste disposal sites are faced with substantial expenditures of time and money for engineering work, environmental impact assessments, and preparation for public hearings.

All too often, they find themselves involved in hearings that are allowed to drag on, with no real prospect that a firm decision, one way or the other, will be made. This is certainly not in the public interest.

We believe that such hearings could be expedited through a few simple changes:

- Encouraging all participants in public hearings on waste disposal site proposals to submit written briefs, in advance if possible, to all other parties involved;
- Allowing cross-examination of participants as an expeditious and effective method of giving a complete picture of the issue; and
- Establishing procedures which ensure that a final decision will be reached within a reasonable length of time.

The Canadian Chemical Producers' Association believes that public participation, involvement and input are vitally important in the site selection process. At the same time, the public good is served only if decisions are made and sites are designated. Those decisions must be made, in the final analysis, by the provinces in consultation with municipalities. For our part, we and our member companies are prepared to participate fully in all processes leading to the final selection of sites.

Once the Sites Are Chosen...

Site selection is a vital concern now, but once the sites are designated it will be equally important to manage them in a safe and secure manner.

Constant supervision will be required and the cost of that supervision must be built into the fees which are charged for the use of waste disposal facilities.

The Association strongly recommends that land title documents covering disposal site locations clearly specify that the land is being used for waste disposal. We want to ensure that such sites are not used for any incompatible purpose in the future.

The collection and transportation, and the safe, environmentally-sound disposal of potentially hazardous waste, can be carried out by properly-managed waste disposal companies. To ensure that these operations conform to the highest safety and environmental standards, they should be licenced by the government, with a list maintained that identifies licenced operators and indicates what *types* of waste each can handle safely.

This list should be made available to all prospective users.

Finally, the Association recommends that a "routing manifest", or "closed loop" system, be established to document the movement of hazardous wastes, with a provision for reliable documentation from the operator of the disposal site to the generator of the waste to show that the waste has been received and safely disposed of.

...and into the Future

The search for safe and permanent solutions to the problem of hazardous wastes affects the interests of everyone in Canada.

Every day, progress is made in the field; new uses for waste by-products, new methods of recycling, industrial processes which reduce waste generation – the chemical industry is constantly working to improve this aspect of its operations.

But much remains to be done, and further industrial research on waste disposal will be concentrated on these three areas:

1. Elimination or reduction of an industrial waste at its source;
2. Re-cycling waste, either by the generator or another qualified organization;
3. Conversion of hazardous waste into non-hazardous forms.

The chemical industry has long recognized the problem of hazardous industrial wastes and it has made substantial progress towards a variety of solutions within its own operations.

The next steps toward establishing a comprehensive and fully satisfactory hazardous waste disposal system are largely up to government, and we in the chemical industry remain ready to assist all levels of government in any way we can. If well engineered disposal sites and facilities are established, hazardous wastes will be safely and permanently dealt with.

Industrial chemicals – a key and responsible Canadian industry.

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