PRELIMINARY SUBMISSION OF POLLUTION PROBE TO THE ONTARIO TASK FORCE ON SOLID WASTE

The following preliminary submission summarizes the issues that we feel the Task Force on Solid Waste should be concerned with. First, we examine the problems which solid waste is presenting to our society. Then, we suggest various solutions to the solid waste problem. Our ideas are summarized under the following headings:

Problems

1. Growth Trends
2. Economics
3. Health and Social Effects
4. Energy and Resource Depletion
5. Waste Syndrome

Towards Solutions

1. Less Throughput
   A. Reduce Resource Consumption
      i) Less Packaging
      ii) Reduction in Consumption
      iii) Product Design
   B. Increase Reuse of Material
2. Recycling

PROBLEMS

1. Growth Trends

Ontario is responsible for creating more than 6,000,000 tons of municipal solid waste per year. James Auld has pointed out that the average person creates 5 pounds of garbage a day - twice as much as he did a decade ago.

In Metro Toronto, the amount of garbage has increased by 10% or more per year for the last three years. At this rate, Metro would be doubling its solid waste output every 7 years.

This garbage explosion is due to an increasing population, an increasing per capita rate of consumption and what may be considered as an increasing amount of 'garbage' on the market.

With these growth factors in mind, what is the future of the short-term solutions of burning and/or burying an ever-increasing amount of solid waste?

2. Economics

Garbage disposal in Ontario costs about $20 per ton.

In Metro Toronto, the figure will soon be about $25 per ton:

$ 5.50/ton - average operating costs for incineration and landfill now

$18.00/ton - collection costs

$23.50/ton

But the operating costs will soon be about $7.00 per ton. This does not include the capital costs involved.

These costs do not include the external cost of pollution caused by the 6,000 tons of particulate matter that Metro's 7 incinerators emit yearly. Figures extrapolated from a report commissioned by the Air Management Branch by Richard O. Zerbe suggest that each ton of garbage burned in Toronto cost the community $18 in hidden damages.

Metro is spending a lot of money on refuse disposal now but will be spending even more in the future. Some of their proposed projects include:

- $24,000,000 Kipling-Horner Incinerator
- $6,000,000 necessary to bring the Commissioner Street Incinerator up to Provincial standards.
- an undisclosed amount of money necessary to raise the remaining 6 incinerators to Air Management Branch air pollution emission standards or close them down by 1975
- $5,000,000 to purchase and expropriate 1,200 acres in Pickering to handle 22,000,000 tons over a span of 16 years
- paying C.P.R. $6.55/ton to train the garbage to an undisclosed location

Can Metro afford a recycling plant? Can they afford to wait until someone else has developed the perfect plant? Can Ontario wait much longer?

3. Health and Social Effects

Incinerators cause physical and health damage. Although more research may be called for in this area, some of the health hazards linked with incineration include:

- the synergistic effect of particulate matter and SO_2 which produce SO_3, a gas 100 times stronger than SO_2

- hydrochloric acid in the air may be produced by the burning of polyvinylchloride (a type of plastic)
- an increased amount of such heavy metals as Mercury, Cadium, Beryllium, Zinc, Chromium and Nickel in the air

Metro's 7 incinerators are responsible for 22% of Toronto's emissions of particulate matter. 75% by weight of the garbage burned in an incinerator goes up the smoke stack.

Landfill sites have been associated, historically, with air pollution (Hydrogen Sulfide, the rotten egg smell gas; Methane, a highly flammable gas; and smoke from on-site burning), water and soil pollution. Although methods do exist for reducing these effects, burying is not a long-term solution to the solid waste problem. Metro's present landfill sites will be filled by 1974 and it is becoming more difficult and expensive to find new sites every year.

Another health and social cost promoted by our disregard for the necessity of cutting down and recycling garbage is the cost that our environment pays for virgin resource extraction. This is a vital cost that is paid in many ways.

4. Energy and Resource Depletion

'Potential for Energy Conservation', a report from the Executive Office of the President of the United States of America, recommends increased reuse and recycling of materials and products as an important factor in cutting down energy consumption in the future. This comment is vital, bearing in mind the fact that under present trends, a world energy crisis is inevitable. Some experts feel that the United States has already reached an energy crisis.

One must also remember that extraction, transportation, processing and burning of energy (especially fossil fuels) is a major source of pollution. For example, in Toronto the R.L. Hearn and Lakeview power generating stations produce 78% of the SO_2, 51% of the NO_x and 12% of the particulate matter in Toronto's air.

The world reserves of some non-renewable resources are in grave danger. Despite increasing extraction technology and, sometimes, discovery of new deposits, present consumption demands have created a crisis situation for some resources. Some say reserves of fossil fuel and Uranium, Gold, Silver, Platinum, Lead, Zinc, Copper and Nickel will run out in 50 years, some say 100. It is, however, only a matter of time.

Renewable resources are available continually. But only in a limited supply. Although an optimal sustainable level for use exists; we are probably already exceeding this in some cases. The land is now being depleted of essential nutrients and humus. One valuable way of remedying this would be to compost food wastes and return it back to the land.

Garbage represents a cheap (at present we pay to get rid of it!) and plentiful source of renewable and non-renewable resources. The importance of garbage as a resource will become even more important as virgin supplies dwindle. Man may even find it economical to begin mining old landfill sites in the not too far distant future.

5. Waste Syndrome

Canadians treat Canada as if it had unlimited amounts of resources and space and an unlimited capacity to naturally dispose of anything and everything we discard. We are part of a "cowboy" economy which thrives on "throughput", neglecting the fact that we are on a finite spaceship.

Consumers are encouraged by manufacturers, through advertising, to consume products that they may not need, products that are "convenient" at the expense of all tax payers and the environment, products that are planned to be obsolete in a few years and products that are overpackaged so that they will sell better.

While some of the fault in our present Solid Waste problem can be blamed on the consumer, let's not forget that packaging represents 20%, by weight, of all garbage and that 75% of garbage (except food) was originally industrially processed.

TOWARDS SOLUTIONS

1. Less Throughput

The first priority of the Task Force should be to reduce throughput by:

A. reducing the amount of resources consumed by our society.

B. increasing the reuse of material without entry into the disposal system.

This is preferable to recycling because:

(1) it attacks directly the problem of the increasing amounts

of solid waste generated each year

(2) it attacks our society's waste syndrome

(3) it offers vital savings in energy and resources (The Presidential Report referred to earlier states that savings through reuse or through extending the life of a product are much greater than that from recycling.)

(4) it yields economic savings to the consumer

(5) it yields economic savings to the taxpayer

A. We suggest that the amount of resources consumed be reduced by focusing on three areas:

i) Less Packaging

- A Consumer Products Review Board could be set up to protect the consumer from overpackaging
- The government could provide incentives and disincentives for different packages depending on the necessity of the package to preserve the product, the availability of the resource material that the package is made from, the content of recycled material in the package, the recyclability of the package, and most important of all, the reuseability of the package

ii) Reduction in Consumption

- Consumer Education
- The Consumer Product Review Board could put a retroactive ban on products that should not be on the market and ensure that such products do not reappear on the market in the future.
- A variable disposal charge depending on weight, volume and degree of recyclability of garbage could be charged

iii) Product Design

- The Consumer Products Review Board could ensure that products on the market meet certain standards of durability, necessity, repairability, recyclability and reuse.

B. Increased reuse of material without entry into the disposal system could be promoted by:

- A ban on non-refillable containers, starting with an immediate ban on non-refillable pop containers because a workable alternative exists. This ban could then move on to as many containers as possible.
- A higher deposit on all returnable containers
- Standardization of containers to promote easier handling

- As immediate reuse of all containers is not possible (although it should be the desired goal of our Task Force and Government), we suggest in the meantime a 'convenience' tax which would force consumers to pay for some of the external costs which 'convenience' containers entail. In Ontario, the disposal cost alone is about 1¢ per pound of container (based on $20/ton disposal cost).

2. Recycling

The second priority of the Task Force should be to promote recycling as an alternative far superior to burning and/or burying. This is preferable to present disposal methods because:

- it provides considerable savings on the amount of energy and resources that we consume
- it is consistent with the principles of natural resource management
- it is probably now, and certainly will be in the future, a more economically feasible method of solid waste treatment
- it eliminates the problems inherent in incineration and landfill
- it will probably provide an unemployment-ridden country with a new labour-intensive industry

We feel that what is necessary now is the immediate construction of a recycling plant in Ontario. Guaranteed markets will only appear after the plant is operating. We must begin examining the results of a real project, not just a pilot project, as soon as possible. We strongly recommend prompt action before we are committed to our present short-term policy of burn and/or bury for the next decade or so. We cannot afford to wait for someone else to debug a recycling system - we must adopt one to our particular situation.

We suggest that the Task Force undertake research that will summarize the information currently available concerning collection, sorting, upgrading and marketing of recycled materials. This information, along with the experience of our own recycling plant, should be used to attain total recycling in the near future. We feel that recycling should be a stated long-term goal of this Task Force and our Government.

The Government could take a direct part in promoting the recyling industry by:

- A policy of preferential purchasing

- Imposing a recyclability tax, which would tax items not easily recycled
- A virgin process tax which would internalize the very real costs of ecological and environmental effects of extraction
- An immediate reversal of benefits now enjoyed by virgin resource extraction industries (reduced freight tariffs, tax concessions, depletion grants, development grants, tax holidays, etc.)
- Not putting a sales tax on recycling plants or equipment

We also feel that, as natural resource and energy depletion is an important matter in the solid waste problem, the Task Force should recommend the development of a Natural Resource and Energy Policy based on an inventory of what we have, where, how much, how accessible, and the implications of extraction (the environmental impact). Then a study should be made of what we will need in the future under present trends (which may lead to the conclusion that present trends in resource depletion must be changed), followed by a re-examination of our export policy.

As the ultimate goal, we would like to see Ontario advance along the path towards ZERO GARBAGE, obtained through the absolute minimizing of throughput combined with the recycling of all the rest of the waste.