



Environmental Information

April 1975

John R. Quarles, Jr., Deputy Administrator of the U.S. Environmental Protection Agency, recently pointed out that the average weight of food packages increased by 33.3 percent between 1963 and 1971 while the weight of the food inside those packages rose only 2.3 percent.

Quarles made this comparison to illustrate how both energy and material can be wasted through excess packaging, while at the same time creating more waste to throw away. Packaging, Quarles said, has gone far beyond its original purpose to protect and preserve a product. Now, he said, packaging is often used as a lure to attract the consumer or to provide consumer convenience.

Quarles made his remarks before an EPA-sponsored Conference on Waste Reduction, held in Washington, D. C. on April 2. A copy of his speech is attached for your information and use.

Office of Public Affairs

REMARKS BY JOHN R. QUARLES, Jr.
DEPUTY ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY
TO THE 1975 CONFERENCE ON WASTE REDUCTION
WEDNESDAY, APRIL 2, 1975
WASHINGTON, D. C.

WASTE REDUCTION - THE NEED FOR ACTION GROWS

It is a pleasure for me to participate in welcoming you to the 1975 Conference on Waste Reduction sponsored by the Environmental Protection Agency. Seldom in the wide range of environmental problems we face do we confront a problem that is more vexing or more important than waste reduction.

Environmental protection has come a long way in this country, and we can all be justifiably proud of our achievements. The very proof of our success is the fact that environmental agencies are under pressure everywhere. As a nation, we are no longer merely talking about the clean-up of our air, water, and land -- we're doing something about it -- and beginning to see the benefits as well. The costs are also becoming apparent, and a certain amount of disenchantment has been the result. But that is natural.

Environmental protection is a new activity. It is a departure from the past. It represents change. Change, when it is real, inevitably causes a certain amount of pain. We are experiencing some of that pain now, and that is a healthy sign.

National concern over solid waste is a more recent phenomenon than our concerns for air and water pollution. Control of solid wastes has long been the neglected stepchild of the environmental movement. Along with the control of toxic substances, it represents the "open end" of a full system of environmental protection. So long as we can continue to dump solid wastes and sludges on the land without adequate controls, so long as we can manufacture toxic chemicals

and introduce them into the environment without thorough evaluation of short and long-term effects, the national structure to provide a safe and clean environment for the people remains unfinished.

The generation of waste is the consequence of our day-to-day living. High levels of waste generation accompany societies with advanced technology. The problem of waste occurs throughout the world. Where technological societies exist, there we see a growth in the solid waste stream.

But the United States is unique among advanced societies in the amounts of wastes we create. Our rates of waste generation far exceed those of other similar societies. We have made a fetish of convenience, and we purchase convenience by the expenditure of materials and energy. In short, we are simply wasteful -- using more material, more land, and more energy than is justified against perspectives of future need.

Waste and pollution are tied together. Use of materials and energy usually creates pollution of air and water, while at the same time it also causes waste generation. Waste generation results in further environmental degradation through inadequate forms of disposal. In addition, waste generation and disposal together mean that valuable raw materials are thrown away rather than utilized. This means that we must mine or harvest more materials and energy, with pollution the necessary result. Throughout the cycle of production and consumption our current practices typically entail an unnecessary degree of both waste and pollution.

The problem is that our way of life creates patterns of waste that are seldom considered in the actual act of consumption. Few people think about fiber supplies when they tear off a sheet of paper toweling. Few people think about iron and tin ore imports when they

toss away a can. And, until recently, few thought about international energy balances when they bought a bigger car.

These general considerations bring me to the topic of this conference: Waste Reduction -- or source reduction, as we have called it in the past. The purpose of this conference is to emphasize that wastes must be reduced at the source, not merely managed at our incinerators, land disposal sites, and fledging resource recovery facilities.

By waste reduction we mean to include every change in our production and consumption practices that will result in less waste of raw materials or energy and will reduce disposal problems. Shifting back to the returnable bottle is one example and a good one, though unfortunately far too few people recognize that it is only one of literally hundreds of good opportunities to achieve waste reduction.

We should, for instance, take a close look at our appliances to make them more durable and to strip away unnecessary features. We should redesign our products so that they do the job with less material. The life of our tires could be lengthened, thus saving resources. Smaller cars, as we have repeatedly said, consume less gasoline -- and also use less material. We should favor remodeling and modernization in our buildings -- rather than demolition. We should favor multiple-use items as opposed to disposables.

Another major need is to challenge existing practices in "modern" product packaging. The major purpose of a package is to protect and preserve a product. But the trend in packaging is going beyond that. Packaging users have become increasingly aware of the market value of packaging -- the use of more elaborately designed packaging to attract the consumer. Consumer convenience has also brought about increased packaging as shown by the market growth for food products packaged in convenient individual servings.

All of these factors have been responsible for substantial

growth of the packaging industry. For example: Overall, the consumption of food in the United States increased by 2.3 percent by weight on a per capita basis between 1963 and 1971. In the same period, the tonnage of food packaging increased by an estimated 33.3 percent per capita, and the number of food packages increased by an estimated 38.8 percent per capita. Another example: Between 1958 and 1970, milk consumption decreased by 23.1 percent by weight on a per capita basis, but milk container consumption increased by 26.1 percent on a unit per capita basis. The trend toward increased use of convenience-sized containers provides another example. It has been estimated that elimination of all tomato juice cans smaller than 32 ounces in 1971 would have resulted in a reduction in steel use of 19.6 percent for this product. This one case illustrates how the use of larger sizes could produce significant benefits in resource consumption and solid waste generation.

Now let me turn to the basic policy issues raised by the rapidly emerging emphasis on waste reduction. Waste reduction is a radical concept. We might as well recognize that at the outset. It means basic change in our ways of approaching day-to-day activities. In this sense it is analogous to other environmental, safety, and other issues. Air and water pollution control, noise regulation, Federal supervision over foods and drugs, and transportation safety requirements -- these and many other departures from a simpler time all were equally radical once, but they are now well accepted requirements of our society. Waste reduction also is radical -- but no more so than the other activities that I have mentioned.

The traditional way of looking at products has been strictly from the economics of the marketplace. In our free enterprise

system the marketplace dictates which products should be produced, how they are designed, what durability they shall have, what levels of energy consumption they require, how much they cost, and how many shall be made.

Conspicuously absent from these considerations is a concern for external effects that products cause. Neither producers nor consumers need to worry about the disposal of products. Nor do people consider their behavior in waste processing facilities, their potential for recycling, their reusability, or their environmental, resource use, and energy effects.

It is precisely this lack of attention that has led to the dramatic increase in our waste generation and to the consequent problems of managing these wastes in the disposal phase. A new interest in reducing wastes at the source as a way to deal with these problems -- by preventing the waste, rather than letting it happen and then cleaning it up afterward -- is now forced upon us with urgency because in the past this aspect of the problem has been almost totally ignored.

In relationship to solid waste management, our patterns of production and consumption represent a classic case of unconscious exploitation. Let me illustrate that point.

Waste management has always been a public responsibility. Private industry participates in the activity, but the chief responsibility rests with the government as a result of public health concerns. Waste management systems have been established to deal with waste. Many of these systems, especially the large urban systems, are publicly funded -- from tax revenues -- whether publicly or privately operated. Significant increases in the volumes of waste which result from the myriad individual decisions

of producers and consumers are overloading most systems. The public manager is frequently unable to expand his capacity, to find disposal sites, and to raise the money necessary to deal with the increased burden. In a fiscal sense, he competes with other needs -- needs that often seem more pressing -- public safety, education or transportation. Of necessity, he reduces the services provided, tries to make do, and the result is dangerous to public health, both in the collection and disposal phases of operations.

The fact is that problems of handling municipal solid waste are reaching alarming proportions. The levels of waste generated per capita continue to mount ever skyward. This effect is aggravated in most metropolitan areas by continuing population growth. The historic city dump is overwhelmed and obsolete. Municipal incinerators consume valuable fuel and cause air pollution problems to boot. Pressures for development are squeezing out sites for land disposal. Moreover as tight controls are imposed on air and water pollution new quantities of municipal and industrial solid wastes are being created that must also be disposed of. Meanwhile the daily volumes of trash and garbage continue to grow. Easy relief is nowhere in sight.

Another aspect of the dilemma faced by the waste manager concerns resource recovery. Resource recovery has traditionally been practiced by making presegreated waste materials ready for the market. Elimination of contaminants has always played a major role. The municipal manager is faced with the same requirement. He must process the waste in such a manner that it can be sold. This creates both a need and a desire to influence that which is thrown away -- to eliminate contaminants at the source rather than being forced into high-cost adjustments in the separation or conversion process.

A production system which can and does dump anything and everything on the waste manager -- regardless of such considerations as recyclability -- is counterproductive to a resource recovery thrust. Hence pressures for product controls arise. These pressures will grow more intense as the problems become more serious.

In this connection, let me make one point. You have probably heard the argument that recycling rather than waste or source reduction is the answer. I disagree with that philosophy. We must do both. After all reasonable waste reduction steps have been taken, the remaining waste should be recycled. Thus a double benefit can be achieved.

Waste reduction has yet another aspect -- one not connected directly with solid waste management. Extremely high materials and energy consumption practices are creating a debt against the future. The mortgage on that debt will be passed on to unborn generations. Production and consumption decisions are not made with a long-range view of materials and energy availability in the future. They are based on current prices and expectations. By squandering our resources today we are jeopardizing our well being for tomorrow.

The usual argument is that the future is uncertain. That technology will develop to allow us to obtain the energy and materials we shall need. That marketplace adjustments will take place as shortages occur. Hence, there is no need to worry today about energy and materials supplies in the future -- or at least no need to worry to the extent of interfering with free market forces at the present time to obtain uncertain future benefits.

The argument is sound enough so far as it goes. What it leaves unsaid is that the market mechanism is imperfect at best. Valuable materials which are dispersed into the environment in minute

quantities -- for example tin as it coats metal cans -- are irretrievably lost. Short-term dislocations have severe political consequences, both domestic and international. In this day and age I need not stress that point. The public has little patience with the market mechanism when it comes to waiting in line for gasoline. The national government is held responsible -- and rightly so, I think -- for failing to foresee and to make provisions for unpleasant contingencies. Just because the future is uncertain does not mean that we should not manage the present, especially if the costs are reasonable and the benefit predictable.

It is therefore sound national policy to work toward reasonable materials and energy practices, to reduce waste generation at the source, and to ensure that valuable resources are not needlessly lost.

Let me now discuss some problems of implementing waste reduction approaches.

Our economy is what it is -- a tremendous investment of capital and skill in a complex and highly interlocked production system. It cannot be changed overnight. Even minor adjustments can have major welfare impacts -- in unemployment and lost productive capacity.

Waste reduction approaches, especially legislatively mandated approaches, imply adversity for some sector of the economy. This is not an area where abrupt changes can be made without a good deal of reflection and planning. The benefits stipulated for waste reduction -- saving resources, avoiding waste and its environmental consequences, and ensuring a balanced pool of materials and energy for our grandchildren -- should be carefully balanced against the costs and impacts. Decisions cannot be made lightly.

The key to successful waste reduction is orderly transition. Assuming that some change in production is desirable -- how is that

goal to be achieved? How should the transition be managed -- knowing that no change can be made without paying some type of penalty.

This critical element of transition is the foundation for the Environmental Protection Agency's policy on beverage container legislation. A year ago in May, I testified on Capitol Hill in favor of the concept of a mandatory national beverage container deposit requirement. One aspect of that testimony has been largely overlooked. It was an insistence that any such legislation be phased in over time, in such a way that the adverse consequences of such legislation would be minimized or eliminated.

I said earlier that the concept of waste reduction is radical. Because it does require fundamental change it is highly controversial, and discussion of it often is dominated by extremists. Most of the debate over waste reduction has been polarized between those who want rapid change, now! and those who want no change, ever! This polarization skirts the central issue -- how can we effectively make changes as soon as possible and at the least cost in welfare.

Let me make clear the position of the Environmental Protection Agency. It is the middle ground position which all must come to in the end. We recognize that immediate transformation of established practices cannot be obtained. We recognize that existing capital investments must be counted, and that people's jobs must be counted even more. We recognize that no change should be commanded until all of the benefits and the costs have been calculated. We want to be reasonable and we will be careful. But we are insistent that certain changes can be made.

The objective of waste reduction is not to change the world overnight. The objective is to change the direction of current patterns. The objective is to make a beginning to reduce the practices of waste that have proliferated throughout our society.

Because we do desire to proceed with care it is especially important that progress be made through cooperation. Public education, industrial cooperation and improved practices must go hand in hand. Surely the most promising and least disruptive way to implement waste reduction in all areas would be by cooperative agreements between the various interests involved: labor, industry, the citizenry, and government.

I am well aware that voluntary programs have a limit. Nevertheless, voluntary approaches to waste reduction must be tried. Russell Train, the Administrator of EPA, is committed to this route along with other approaches. The success of voluntary efforts will in large part determine how much farther it is necessary to go.

Let me sum up my observations as follows:

Waste reduction is a necessary part of the total effort to bring our productive and consumptive functions into harmony with environmental preservation. It makes sense from a waste management and a resource conservation point of view, it eliminates pollution, and it facilitates resource recovery.

Under Congressional mandate, EPA is charged with the exploration of various waste reduction approaches. Our findings are submitted to Congress in annual reports.

Our chief concern is with the problems of implementation: How to bring about change at least cost. In that area, far too little thought and analysis have taken place, and I certainly hope you will address yourselves to that issue.

All of us, I believe, share a common concern for a better world -- one which is cleaner, safer, and more predictably stable than the world of today. As we work toward that goal, waste reduction is one of many tools we should use -- but wisely.

Thank you.