

# A Federal Perspective on Waste Minimization

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Hazardous waste is a costly and undesirable by-product of our economy. Congress, aware of the need to reduce hazardous waste, made waste minimization a national priority in the Hazardous and Solid Waste Amendments of 1984:

The Congress hereby declares it to be the national policy of the United States that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible.<sup>1</sup>

Waste minimization means two things: reducing waste at the source and recycling materials wherever possible when source reduction is not feasible. These are the dual emphases of the Environmental Protection Agency's (EPA or the Agency) waste minimization program. Since each industrial site is unique, no simple formula can describe how waste minimization should be conducted in every plant. Waste minimization, however, can involve simple management and engineering techniques that can save money, often substantial amounts, through more efficient use of resources, reduced waste treatment needs and avoidance of waste disposal costs. Moreover, since waste minimization reduces the amount of hazardous waste generated, the financial liabilities associated with hazardous waste disposal may be reduced.<sup>2</sup> The public's primary environmental concern is reducing toxic chemical risks. Thus, public awareness of a facility's waste minimization efforts will enable local residents to feel confident that industry is making every effort to handle its wastes responsibly.

The biggest incentive for reducing hazardous waste generation is the high cost of other forms of hazardous waste management. Land disposal, which once cost as little as \$10 per ton of waste,

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1. The Hazardous and Solid Waste Amendments of 1984 § 101(b), 42 U.S.C. § 6902(b) (Supp. III 1985).

2. U.S. EPA, PUB. NO. EPA/530-SW-86-033, REPORT TO CONGRESS: THE MINIMIZATION OF HAZARDOUS WASTE ix (1986).

now costs at least \$240 per ton.<sup>3</sup> With decreasing capacity at existing disposal sites and rising costs of construction for new sites, prices will continue to climb. More importantly, under the new land disposal restrictions program many wastes that used to go directly to landfills must first be treated. Historically, the costs of treatment have been many times higher than that of simple land disposal. These treatment and disposal costs are only part of the total cost of waste management because generators must also pay for administration and reporting, and sometimes insurance. In addition, companies face increasing liability for accidents and mismanagement of wastes.

Counterbalancing these strong incentives for pursuing source reduction and recycling techniques are a number of disincentives. First of all, many companies that wish to reduce their production of wastes do not have access to the information they need to make decisions as to which projects to address first. Secondly, finding waste minimization opportunities often demands specialized engineering expertise that many small or medium size companies do not have and may not be able to afford. Because reducing waste at the source may mean changing the way that products are made, companies are often reluctant to take the chance that the quality of established products might suffer. Without strong incentives to minimize their waste generation, the companies are less likely to attempt such changes.

Finally, since many waste generators are currently attempting to comply with new and revised hazardous waste regulations, individual companies may be forced to make long-term commitments quickly. Many managers simply do not have the time or ability to consider the alternative of waste minimization. Instead they rely on hazardous waste treatment to meet their regulatory requirements. This tendency is caused in part by the fact that there are few standard procedures to follow and innovation may be required in order to implement source reduction and recycling procedures. Once an investment in treatment has been made, the economics of waste minimization often becomes less attractive. Managers have to be made aware of how waste minimization can help them meet their regulatory obligations and pay dividends in

3. OFFICE OF SOLID WASTE, U.S. EPA, PUB. NO. EPA/530-SW-87-026, WASTE MINIMIZATION: ENVIRONMENTAL QUALITY WITH ECONOMIC BENEFITS 3 (1987).

terms of lower costs, reduced financial liability and better public relations.

Finding ways to reduce and recycle is inevitably plant specific, but a number of very basic procedures and approaches have been used successfully across the country.<sup>4</sup> The EPA and the states are developing information exchange programs to help industry establish viable waste minimization programs. Establishing an aggressive waste minimization program is not difficult in theory, but it does require a firm commitment by the company's top management.

3M Corporation's "Pollution Prevention Pays" program is one example of a corporate waste minimization program. Since its establishment in 1975, the program has reduced waste generation by more than 100,000 tons, saving the company an estimated \$250,000,000 in operating and waste management costs. Another example of a successful waste minimization program is that adopted by Crown Fiberglass of North Orville, Ohio. By utilizing an on-site solvent recovery process, Crown Fiberglass has reduced its waste volume by 90 percent and has also substantially decreased the purchase of virgin acetone.

In October 1986, the EPA addressed the issue of waste minimization in its "Report to Congress: Minimization of Hazardous Waste."<sup>5</sup> Among other things, this report described EPA's efforts to determine whether or not it might be desirable or feasible to create a mandatory waste minimization program.<sup>6</sup> The Agency concluded that a mandatory program would not be desirable or feasible at this time. Based on current information, a mandatory program would probably result in second-guessing industry's production decisions, quite possibly leading to counter-productive results, and would be immensely difficult and expensive to design and administer. Also, the Agency determined that the incentives generators already face, including those described previously, should provide more than adequate incentives to reduce their wastes.

4. The techniques, frequently called "better management practices" or "good house-keeping" include such practices as 1) inventory control, 2) segregation of waste streams, 3) employee training and reward programs, 4) spill/leak prevention and 5) scheduling improvements.

5. See U.S. EPA, *supra* note 2.

6. *Id.* at 81-115.

The EPA's Report to Congress stressed that in the short term the most constructive role of government would be to promote voluntary waste minimization by improving the dissemination of information and technology transfer to waste generators.<sup>7</sup> In particular, the report stated that the Agency will provide the states with waste minimization information that may be difficult or too expensive to develop at the state level. In addition, the EPA will establish a clearinghouse for information on waste minimization. This will include a waste minimization bibliography accessible through the EPA's library system. This bibliography is available to the public and will be updated annually.

Some of the Agency's other activities include development of a waste minimization policy and a handbook that will help companies identify legitimate source reduction and recycling techniques that can be incorporated into their written waste minimization plans. Several waste minimization technology transfer brochures are being developed. Included in this effort is a general brochure on waste minimization, a brochure on waste exchanges, several waste minimization fact sheets for small quantity generators and technical manuals on better operating practices and metal parts cleaning. The EPA's Office of Research and Development also is producing a manual of suggested procedures for identifying minimization opportunities. The brochures and manual will provide industry with technical information which can be used directly and will illustrate the positive effects and benefits of waste minimization.

The states also have a major role in waste minimization, since they deal firsthand with waste generators. Seven states have already instituted major waste minimization outreach programs; others are initiating or expanding their efforts. For example, the state of North Carolina uses the approach that reducing and preventing waste pays off economically and environmentally. Its "Pollution Prevention Pays" program encourages generators to find and promote ways to reduce, prevent, recycle or eliminate wastes before they become pollutants by funding research projects, providing on-site technical assistance for generators and acting as information disseminator for waste minimization.

The Agency believes that waste minimization is the key element of the nation's long-term strategy to manage its hazardous wastes.

7. *Id.* at 121-122, 129-132.

While the EPA still has much to learn about waste minimization, the Agency recognizes that it will require a major cooperative effort on the part of private and public waste generators and state and local governments to ensure that proper attention is given to source reduction and recycling as the best means of reducing the risks posed by hazardous wastes.

