

## THE PROCESS OF RESOURCE RECOVERY SITING

*by Peter Shapiro\**

The proper handling of hazardous and solid waste is at the top of any list of New Jersey's most pressing environmental problems. We need to reduce the amount of waste produced, and to re-use or recycle as much of it as possible. Even with maximum success in achieving these objectives, we will continue to generate prodigious amounts of waste materials which must be disposed of. We cannot continue dumping it into the ground without suffering the environmental consequences.

This resolve requires modern facilities at which we can safely dispose of hazardous and solid wastes. No other answer is available for the bulk of these wastes; they will not simply disappear. Fortunately, there is an increasing willingness to confront the problem by creating the necessary disposal facilities.

Sites must be found on which to locate such facilities. It is at this point that the consensus among reasonable people disappears. The reasons for this disagreement include, but are not limited to, the infamous "NIMBY" syndrome — "not in my back yard." Beyond this personal objection, it is extremely difficult to find an objectively appropriate site, and to convince people that it is the most appropriate site. Nevertheless, this difficulty does not mean that the task is impossible.

Hazardous waste has long been a State responsibility in New Jersey. However, the State government has not been successful in meeting that responsibility. The clean-up of existing sites has proceeded slowly, and as yet no modern hazardous waste disposal facilities have been sited. However, there are approaches which may yet lead to an acceptable solution. One such approach has been explored in Essex County.

In the late 1970's the legislature gave counties the lead in the management of solid waste — more commonly known as gar-

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bage. Some argued that counties were not the appropriate lead entities. Others maintained that little guidance has been forthcoming under prior law from the New Jersey Department of Environmental Protection (DEP). In fact, the results throughout New Jersey's counties have been mixed. In Essex County, however, we have been more successful, having enlisted the cooperation of the DEP, the Port Authority, and, most importantly, our own towns and cities. A Solid Waste Advisory Council with representatives from all municipalities has worked closely with county officials in addressing this problem. These efforts have resulted in the start of construction on a model resource recovery plant at a site approved by the host City of Newark and the DEP.

There are lessons in our experience which may be helpful to others dealing with these thorny problems. There are four decisions which are basic to the successful planning of a resource recovery program. The following paragraphs describe the choices made in the Essex County programs.

We decided to pursue an integrated program of recycling and resource recovery in order to reduce the size of our resource recovery facility with its attendant impact and cost. Second, we selected a "mass burn" technology which reduces the garbage to a much smaller volume of inert ash. This technology has been proven safe and reliable in some 400 plants around the world. We have reinforced this with expensive state-of-the-art air pollution control equipment to capture particulates and acid gases. Third, we have cooperated with the Port Authority to ensure that a qualified company will design, build, and operate the plant to the highest standards of performance.

These three decisions are crucial to an understanding of the siting decision. It is important to note that the recovery plants of today are not in any way similar to a noxious slaughterhouse or open dump which cannot operate in an environmentally safe manner under any conditions. A modern well-built and well-operated processing plant with full controls can operate safely and efficiently with proper siting criteria. While this is a distinction which is often obscured in the emotionalism of the subject matter, it is critical to a proper perspective.

In this context, let us look at the criteria which our technical consultants used for site selection. They divided the applicable criteria into five broad areas: Site Characteristics, Access, Com-

munity and Environmental Impacts, Availability of Markets, and Institutional Factors. Application of these criteria led to the selection of a twenty-five acre site in the Newark industrial meadows at Blanchard Street and the Passaic River. It will be valuable to discuss the meaning of these criteria and how they led to a suitable site selection.

The considerations involved in the first of the above criteria, site characteristics, include such basic matters as locating an available site of adequate acreage in a physical condition prepared for building or preparable at a reasonable cost. The site ultimately selected for Essex County is not virgin land and will require some work on the soil conditions, but this work is underway and will be completed at reasonable cost.

It is also important that there not be high structures nearby, or contours which would significantly impede the ability of the air emissions to disperse properly. Though our plant will be well within acceptable health standards, any plant has some emissions, so the site selected can not be one which will increase ground level concentrations of any pollutants. The selected site meets this condition.

No factor is more important than highway access, for large numbers of garbage trucks running through local residential streets would be a nuisance of real community impact. We are particularly fortunate in this respect, as the site is directly accessible from major highways, namely Routes 1 & 9 and Interchange 15E of the New Jersey Turnpike. The most economical routes for trucks from other towns will be on these major highways, and, in addition, we are requiring as a precondition to the issuance of a permit that these routes be used.

A number of additional considerations have been grouped under the heading of Community and Environmental Impacts. Key among these is the nature of the immediate surrounding area. The Blanchard Street site, for example, is in a zone of heavy industry more than one-quarter of a mile from the nearest residences. These factors, in combination with the highway access and the environmental soundness of the plant, assure that significant adverse impacts, feared by some, will not actually occur.

There are other considerations important to the economics

of a resource recovery plant. The primary resource recovered from such a plant is energy, and the ability to sell that energy is crucial in offsetting tipping fees which would otherwise be exorbitant. The availability of a market which can accept the energy produced is fundamental to the economic viability of the plant. The Blanchard Street site is adjacent to a former PSE&G power plant and is ideal for a simple, low-cost interconnection with the electricity grid. PSE&G has entered into an agreement to purchase the electricity produced by the plant at a good price. This contract has already been approved by the Board of Public Utilities.

Careful consideration was given to institutional factors which might prevent acquisition of a site. These included zoning, ability to acquire permits, and the absence of institutional constraints. The comprehensive evaluation described above was clearly based on the merits of the site, leading to the selection of the Blanchard Street site as the best in Essex County, perhaps the best site in northern New Jersey.

One might assume that with objective siting criteria and such a suitable site, there would be no objection. A more cynical view is that the acceptability of a site is not based on its objective merits, but rather on purely personal considerations. Based on our experience, the truth is somewhere between these two views.

The subject of waste disposal is one on which emotions run high. This is partly because the discredited practices of the past and present have led to some genuine health threats. It is also partly because many people do not distinguish carefully between hazardous wastes and ordinary garbage, and between old uncontrolled incinerators and carefully controlled combustion at a modern resource recovery facility. This natural tendency of many people is exacerbated by some groups which believe that anything done by government is automatically dangerous. The claims of these groups are based on simplistic analysis and sometimes outright fiction, in their attempt to discredit established institutions and to enhance their own organizations.

We have faced serious opposition to our project led by one such group within a particular section of Newark and supported by many well-meaning people within that community. Our extensive efforts to disseminate accurate information and education within that community have been frustrated by the manipulation

of the emotional atmosphere and by the skillful organizing and outright misinformation by the opponents. These results lend support to the cynical view referred to above.

However, there is equally important evidence that site selection on its merits is the only way to overcome the kind of opposition which I have just described and which exists to varying degrees wherever such a project is attempted. Despite the attempts to scuttle the project, our site has been approved not only by the Department of Environmental Protection but also, perhaps more surprisingly, by the Mayor and Council of the City of Newark. These approvals required a terrific struggle, culminating appropriately April 22, 1985, the fifteenth anniversary of Earth Day, with a 6-2 vote in favor of the project by the Newark Municipal Council. There were many reasons for this important success, including an extensive outreach program throughout the City and the courage of Mayor Gibson and the Council members who supported the project.

I am convinced that no factor was more critical than the objective criteria used to select the best site available. It was this selectiveness which enabled us to convince most people and civic leaders. More than anything else, it is this objectivity which has brought us so close to finally solving one of our most intractable problems.