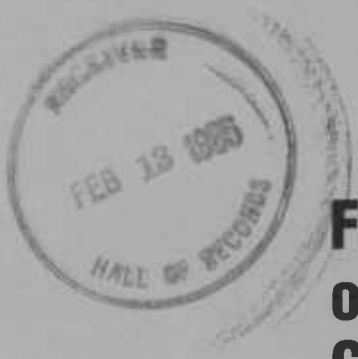

Final Report of the Governor's Task Force on Hazardous Waste Initiatives

October 1984

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Contents

Glossary of Terms

For the purposes of this report, the following terms have the assigned meaning:

1. **DHMH** - Department of Health and Mental Hygiene

2. **OEP** - Office of Environmental Programs (an office of DHMH)

3. **WAS** - Waste Management Administration (an office within OEP)

4. **MES** - Maryland Environmental Service

5. **HWFSB or Board** - Hazardous Waste Facilities Siting Board

6. **U.S. EPA** - United States Environmental Protection Agency

7. **RCRA** - Resource Conservation and Recovery Act passed by Congress in 1976. Provides the U.S. EPA with the authority and charge to regulate the generation, transportation, and management of hazardous wastes.

8. **Controlled Hazardous Substance or CHS** - Any hazardous substance that DHMH identifies as a Controlled Hazardous Substance or low-level nuclear waste. This Task Force did not deal with low-level nuclear waste. Instead, only hazardous substances and their chemical properties were considered.

9. **Disposal Facility** - A facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

10. **Generator** - Any individual or group, such as private businesses or governmental bodies, whose acts or processes produce hazardous waste.

11. **Hazardous Substance** - Any substance that: (1) conveys toxic, lethal, or injurious effects or which causes sublethal alterations to plant, animal, or aquatic life; (2) may be injurious to human beings; or (3) persists in the environment. A hazardous substance includes any matter identified as a "hazardous waste" by the U.S. EPA. For purposes of this report, "hazardous waste" is synonymous with those hazardous substances designated by DHMH as Controlled Hazardous Substances.

12. **Hazardous waste** - For the purposes of this report, hazardous wastes shall be synonymous with those hazardous substances designated by DHMH as Controlled Hazardous Substances.

13. **Landfill** - A disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

14. **Landfill Cell** - A discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

15. **Management or Hazardous Waste Management** - The systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.

16. **Manifest** - The shipping document originated and signed by the generator which describes and must accompany all wastes shipped off the generator's site to a treatment, storage, or disposal facility.

17. **Permitted Facility** - Any structure, system, or geographic area that has been designated by DHMH for the treatment, storage, or disposal of Controlled Hazardous Substances. This term is synonymous with "Controlled Hazardous Substances Facility".

18. **Storage** - The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

19. **Treatment** - Any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to:

    a. neutralize the waste;

    b. recover energy or material resources from the waste; or

    c. render the waste:

    - non-hazardous or less hazardous;
    - safer to transport, store, or dispose of; or
    - amenable for recovery, amenable for storage, or reduced in volume.

I. Introduction

A. Governor's Task Force on Hazardous Waste Initiatives

Although Maryland has had an active hazardous waste regulatory program for eight years, public concern over abandoned waste sites, limited public participation opportunities, and overall hazardous waste management policies in the State has been growing. In response to that concern, Governor Hughes appointed a Task Force to develop legislative and regulatory proposals to help improve hazardous waste management in Maryland.

Task Force Charge

The Governor's Task Force on Hazardous Waste Initiatives was appointed by Governor Hughes on July 1, 1983. A list of Task Force members is included as an Appendix. The Governor gave the Task Force a specific threefold charge:

1. To develop policies and programs to stimulate a systematic increase in the use of reduction, recycling, recovery, and treatment as alternatives to the land burial of hazardous wastes;

2. To assess the State's current regulatory and siting programs and develop needed improvements and innovations; and

3. To develop policies and programs designed to foster improved communication and mutual understanding among government, industry, and the public over the basic questions of hazardous waste generation and disposal in our society.

Task Force Structure

The first Task Force meeting, which convened on August 9, 1983, was primarily devoted to procedural matters. The second and third meetings focused on presentations from State hazardous waste agencies, the Office of Technology Assessment, the U.S. Environmental Protection Agency, the Hazardous Waste Treatment Council, state generators and facilities which handle Maryland hazardous waste. The various speakers provided the Task Force with an overview of trends, problems, and relevant activities at the State and federal levels which impact on the regulatory and industrial community.

The Task Force created three subcomittees to carry out its substantive work. These subcommittees are:

- Subcommittee on Innovative Measures to Recover or Treat Hazardous Waste

- Subcommittee on Regulatory and Siting Improvements

- Subcommittee on Improved Communication and Public Participation

The Subcommittees met over sixty times to deliberate and develop their reports. Testimony was heard from industry representatives, federal regulatory personnel, and other interested parties in addition to the expert opinions of the Task Force members. The many and varied perspectives of the Task Force members are reflected in the analyses and recommendations contained in this report. The Task Force, in making its analysis, relied mainly on experience and observations, since hard data were limited in the hazardous waste management field.

The Subcommittees presented draft interim reports to the Task Force at the November 1983 meeting and final reports in June and July 1984. The following sections reflect the concerns and resulting recommendations of the three standing Subcommittees as reviewed and approved by the full Task Force. The full text of the Subcommittee reports is available upon request.

B. Background Information

Legislative and Regulatory History

Hazardous waste management laws in the State date back to 1976, with the passage of the Safe Disposal of Designated Hazardous Substances Act (with amendments, now Health-Environmental Article 7-201 through 7-268). With the Act and subsequent regulations, Maryland became one of the first states to have an effective, operational hazardous waste regulatory program.

Concurrent with the passage of Maryland's Act was the passage by Congress of the Resource Conservation and Recovery Act of 1976 (RCRA). This Act, though originally containing many provisions for non-hazardous wastes, concentrated its greatest powers in the area of hazardous waste management. RCRA gave broad authority to the U.S. EPA to establish a national regulatory program for the control of hazardous waste generation, transportation, disposal, storage, treatment, and incineration.

The U.S. EPA developed federal hazardous waste regulations over the next several years. In 1980, the U.S. EPA promulgated federal hazardous waste regulations in roughly the format that exists today. Maryland made significant changes in its program in order to bring it in line with the federal program in 1980, and is now preparing to seek final authorization from U.S. EPA to operate the State program in lieu of the federal program.

The EPA regulates hazardous waste, while the State regulates Controlled Hazardous Substances or CHS, of which hazardous waste is but a subset. Also included as CHS are substances that are toxic, lethal or sublethal to plant, animal, or aquatic life; injurious to human beings; or persistent in the environment.

The U.S. EPA has the authority to regulate toxic substances such as PCBs under the Toxic Substances Control Act (TSCA) and to deal with ground water contamination problems through the Safe Drinking Water Act (SDWA). Each of these federal regulatory programs, RCRA, TSCA and SDWA, overlaps to some degree.

Finally, the 1980 passage of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) by Congress, often referred to as the federal Superfund Act, gave the U.S. EPA the authority to require cleanup of abandoned hazardous waste sites by responsible parties. A funding mechanism was established to provide resources to EPA to clean up sites where responsible parties could not be immediately found. EPA has developed a National Priority List of 538 sites, three of which are in Maryland. The money in the federal fund will not be sufficient to address all the sites on the federal list if responsible parties cannot be found.

Two major pieces of State legislation were enacted during the Task Force's deliberations. First, Senate Bill 570, sponsored by Senator Gerald Winegrad and developed with input from Task Force members, requires, among other things, the regulation of small quantity generators of hazardous wastes (those generating more than 100 kg/month but less than 1,000 kg/month) and the listing of all sites containing controlled hazardous substances in a registry by July 1, 1985. The Maryland master list, which includes the three sites on the federal list, is much more extensive. It contains all sites where the Department of Health and Mental Hygiene (DHMH) has been notified in the past or otherwise has reason to believe that controlled hazardous substances are present.

Second, Delegate Robert G. Kramer sponsored House Bill 1446 which requires generators of hazardous waste to consider the feasibility of recovering their waste and prove that the waste has been treated to the extent practicable to either reduce its hazard or volume before receiving permission to landfill the waste in Maryland. The issues addressed in these pieces of legislation were being debated by the Task Force during the legislative session and are reflected in the Task Force's recommendations.

Current Responsibilities of State Agencies

Regulation of hazardous waste generators and treatment, storage, and disposal facilities is the responsibility of the Department of Health and Mental Hygiene (DHMH). The Office of Environmental Programs (OEP) within DHMH handles programs dealing with air pollution, water pollution, community health management, and solid waste. It is the Waste Management Administration (WAS)[1], within OEP, that handles solid waste programs, including hazardous waste programs. The WAS's responsibilities in the hazardous waste area include enforcement of regulations for generators, transporters, and management facilities; permitting of facilities; data collection; and inventory and cleanup of abandoned hazardous waste sites.

The Science and Health Advisory Group (SHAG) provides technical and professional resources to OEP on many subjects including hazardous waste-related projects. SHAG lends its advice on matters pertaining to epidemiology, toxicology, and other health-related items.

Finally, the Controlled Hazardous Substance Advisory Council reviews regulatory proposals of WAS and gives advice on appropriate methods of implementation. In fact, many of the Task Force's proposals will be discussed by the Advisory Council in preparation for rule-making and/or implementation.

Two other agencies dealing with hazardous waste are located within the Department of Natural Resources (DNR). The Maryland Environmental Service (MES) operates as both a State agency and a non-profit utility enterprise. MES operates more than 100 water supply, wastewater treatment, and solid waste facilities for other agencies of the State, for local governments and regional agencies, and for businesses and industries throughout the State. The agency has been granted the authority to borrow money and issue bonds or notes for the purpose of paying all or any part of the cost of any one or more public projects. MES owns the Hawkins Point Hazardous Waste Disposal Facility site in the Curtis Bay industrial area.

The Hazardous Waste Facilities Siting Board (HWFSB) was formed in response to difficulties in siting needed hazardous waste management facilities. The Board has the authority to override local zoning requirements and other local regulations that restrict the siting of either privately or publicly-owned hazardous waste facilities. In addition, the Board will assess the types of facilities needed and solicit applications for those facilities. A site developer need not apply to the Board if there is no local impediment to facility development.

Current Hazardous Waste Management

Regulatory data as recent as June 1984 showed that there were 357 generators in Maryland that submitted annual reports indicating their actual waste generation for the past year. Preliminary data for 1983 show annual generation of 265,100 tons, only a three percent increase over the amount reported for the 1981-82 reporting period. Allied Corporation accounted for over forty percent of the total waste generated in 1983. Forty percent of the remainder is sent to management facilities outside of Maryland, primarily treatment or disposal facilities in Pennsylvania.

Most of the waste generated in Maryland is managed off site. A total of 71 treatment, storage, or disposal facilities are permitted in Maryland, though most of these are small on-site facilities handling small volumes of waste.

The Hawkins Point Hazardous Waste Disposal Facility has ceased accepting waste commercially due to lack of business. Many generators have chosen to send their wastes to landfills outside of Maryland. Currently, although the hazardous wastes that had been accepted commercially at Hawkins Point have been removed, MES is still responsible for collection and treatment of the leachate from the landfill, an expensive undertaking. MES is

[1] Included under OEP are both the Water Management Administration and the Waste Management Administration. For this reason, the designation "WAS" is used for the latter, while "WAT" is used to designate the former.

considering several options for dealing with Hawkins Point, including lease or sale of the existing capacity to private interests or maintenance of the facility for possible future use. The Task Force has considered the issue and has recommended that the MES assess the economic impact of holding Cell 40 of the landfill empty for five years. This option, the Task Force notes, could possibly be considered in the variety of future uses of the site.

The Waste Management Administration has released a list of 170 sites where hazardous wastes may require cleanup under the State Superfund Act. Preliminary investigations have begun on those sites and, by January 1, 1985, 32 of those sites will have those investigations completed. The development of this registry of sites is done in addition to the U.S. EPA's site inventory. Again, the federal priority list contains only three sites in Maryland at this time.

Conclusions

The recommendations that follow are based on careful consideration of the issues surrounding hazardous waste management by the Task Force members. During the course of developing these recommendations, however, the Task Force heard from many generators about the problem of managing industrial wastes other than hazardous wastes. It is clear that substantial quantities of non-hazardous industrial wastes are generated each year and that disposal options for those wastes are limited. The Task Force recognizes this as a significant issue and recommends that the State examine the dimensions of this problem in the near future.

II. Innovative Measures to Recover or Treat Hazardous Wastes

TOPIC: PROMOTION OF DESIRABLE WASTE MANAGEMENT PRACTICES

1. *Issues* - Maryland generators shipped, under manifest, significant quantities of waste to the Browning-Ferris Solley Road Landfill when it was operating and now send nearly as much to hazardous waste landfills in other states. Landfills pose greater long-term environmental risks than many other management techniques, but economic and institutional barriers prevent generators from using more desirable technologies.

2. *Analysis* - The Task Force has determined that the most desirable hazardous waste management practices in order of decreasing preference are:

   - Reduction at origin
   - Resource recovery through sale or reuse
   - Treatment or incineration to reduce volume or hazard
   - Burial

   However, the Symposium conducted by the Maryland Hazardous Waste Facilities Siting Board in October of 1983 on hazardous waste management in Maryland concluded that alternate resource recovery and treatment technologies are rarely broadly applicable across a wide variety of manufacturing processes and waste streams. This being the case, more information on industrial processes and more experimentation with innovative industrial techniques at the plant level are necessary to implement these more desirable waste management practices.

   The Task Force interviewed selected large and small generators, many of whom rely on landfills to manage the majority of their wastes. Firms knowledgeable of technology options are willing to explore the employment of alternate waste management technologies in their plants. However, the following obstacles to implementing more desirable waste management practices were often cited during the course of these interviews.

   - **Information.** Not all firms know about alternate options for resource recovery and treatment. Smaller firms usually are concerned with business problems and often have little understanding of technical factors affecting their businesses. This leaves little opportunity for investigation of alternative waste management options.

   - **Technology Deployment.** Considerable information on industrial waste management is not always utilized by plants. Despite an information gap, many generators are aware of these techniques. Often facility managers utilize them only if economic and regulatory conditions are favorable.

   - **Economics.** Generators are likely to use alternative disposal mechanisms if they improve or do not penalize process economics.

   - **Regulations.** Current regulations deter further investigation into pilot and experimental practices at the plant and facility level.

3. *Policy Statement* - Promotion of innovation in waste management and encouragement of desirable management practices is in the best interests of the State.

4. *Recommendations* - The Task Force makes the following recommendations:

   - The State should continue to investigate instituting or utilizing existing engineering extension services to promote the transfer and deployment of technology into industrial plants.

     Maryland has already received from the University of Maryland a preliminary proposal outlining the type of assistance a Technology Extension Service could provide to generators. Cost-sharing options with industry should also be further explored. One emphasis of such a program could be assistance to small quantity generators as discussed on page 8.

- The State, through the Department of Economic and Community Development in conjunction with DHMH and MES, should develop its economic incentive program to foster the most preferred waste management practices.

  Any incentive package ought to have a stated cap and time limit for the program. Financial incentives for specialized pollution control equipment should not bias generators' choices from production-oriented or low-capital options. Again, special emphasis could be given to assisting small quantity generators as discussed on page 8.

- The regulatory restrictions on pilot or experimental recovery or treatment units should be liberalized to promote innovations.

  This would likely promote greater in-plant use of these units and improve the efficiency with which research needs are communicated from industry to the research community. If opportunities of this sort exist under federal law, they should be approached with caution in regard to potential abuse.

- The State should examine the development of an award program to recognize industries making marked strides in proper hazardous waste management and provide additional incentives to Maryland industries to manage their wastes responsibly within the confines of the law.

- The State should help support the Northeast Industrial Waste Exchange financially. Legislation should be prepared making a sixty-day listing of waste mandatory for waste generators within the State.

  This listing should occur on an annual basis for consistent waste streams. The legislation should also address differences between large and small generators, as well as allow for an exception process for confidential processes.

TOPIC: REGULATORY INFORMATION COLLECTION

1. *Issues* - Hazardous waste manifests are the principal means of collecting information on waste quantities and handling practices. Inaccurately completed manifests are often a result of generators misunderstanding both the instructions and the State's use of the information provided. These cause delays in the information's availability and complicate regulatory actions and policy analysis. Recent improvements in data collection may be threatened as the new uniform national manifest is implemented.

2. *Analysis* - Inaccurately completed manifests require review by DHMH personnel. A shortage of such personnel in the past created a time lag between when the information is received and when it is available for use among regulators and the regulated community. The current time lag has shortened to approximately six months.

   Further improvement in the availability and quantity of manifest data can be achieved if generators receive more extensive and comprehensible instructions on completing the manifests accurately as well as a better understanding of the role manifest data play in the State's developing overall regulatory policy. At the same time, DHMH must continue to improve the editing and computerizing of manifest data. Currently, DHMH simply does not have sufficient resources for this task.

3. *Policy Statement* - Up-to-date and accurate data on waste generation are an integral part of a successful hazardous waste management program.

4. *Recommendations* - The Task Force makes the following recommendations:

   - The State should provide further information to generators on manifest form completion.

     In conjunction with the uniform manifest provision that will take effect this year, Maryland should prepare a thorough and easy to understand set of instructions on completing manifest forms accurately. The instructions should be oriented toward alleviating the most frequent manifest inaccuracies. Generators should also be made aware of the way in which the State uses the manifest data.

   - Manifest data management procedures should be examined and modified as necessary to provide more timely information.

     Maryland should develop the generators' instruction package to reduce inaccuracies and thus the amount of editing required. Assuming manifest review and editing time is reduced, procedures for preparing data should be streamlined eventually to cut the current lag time to thirty days or less.

III. Regulatory and Siting Improvements

TOPIC: SMALL QUANTITY GENERATORS

1. *Issues* - Recent legislation directed the Department of Health and Mental Hygiene to regulate all generators of hazardous waste who generate over 100 kg per month. This action will bring a large number of businesses into the regulatory system for the first time. The Task Force reviewed this pending regulatory action and made several observations:

   a. The State has very little information on small quantity generators regarding their number and waste generation patterns.

   b. Small quantity generators often have little knowledge of regulatory requirements or methods of compliance.

   c. Small quantity generators often do not have the technical expertise necessary to identify options for source reduction or hazardous waste management.

   d. Small quantity generators may find it economically difficult to comply with regulations or implement innovative approaches to waste management.

2. *Analysis* - The Task Force considered several aspects of the issue within the context of the recent legislation requiring regulation of small quantity generators. Concern was expressed over when such generators should be brought into the system and what could be done to ease that process, such as providing information and financial assistance.

   Informational, technical, and financial assistance recommendations, however, are not limited to small quantity generators. The Department of Economic and Community Development, in conjunction with the DHMH and MES, should coordinate the provisions of these three forms of assistance to all generators needing such assistance.

3. *Policy Statement* - Small quantity generators of hazardous waste in Maryland may need technical and financial assistance to comply with State and federal hazardous waste laws and regulations in a timely and cost-effective manner.

4. *Recommendations* - The Task Force makes the following recommendations:

   - The State should obtain information on small quantity generators.

     The State needs to know how many small quantity generators there are, what hazardous wastes they are generating, and how they are currently handling their waste streams. This information is important for the DHMH in determining whether or not existing regulations should be modified for small quantity generators. It is also important for determining what assistance small quantity generators will need to attain compliance in a timely manner, as well as for the Department, in determining the impacts on monitoring and enforcement. The DHMH should begin surveying all facilities which may be small quantity generators as soon as possible and require them to respond by the end of the summer.

   - The State should examine the needs of small quantity generators to adhere to all of the regulations facing large quantity generators.

     Using the information obtained as a result of the first recommendation, and additional information as needed, the DHMH should examine thoroughly the need for small quantity generators to comply with all of the hazardous waste regulations faced by large quantity generators. An advisory group consisting of small quantity generators, environmental groups, and appropriate State and local representatives should be formed to provide significant input into this task. The existing Controlled Hazardous Substance Advisory

Council should be the basis for this endeavor, but it should be augmented for this task with non-Council members so that all appropriate groups are represented. The analysis of the regulations and the decision as to which ones should be modified or eliminated for small quantity generators should be completed by January 1, 1985, and the modifications should be formally adopted as soon as possible thereafter.

- The State should provide technical assistance to small quantity generators so that they can attain compliance as effectively as possible.

  The State should work with industry groups, individual firms, and other government agencies in finding "least cost" ways for firms to attain compliance. The regulations should be made comprehensible to the small quantity generators so that interpretations of what constitutes compliance can be kept uniform.

  In addition, an information packet should be developed for the small quantity generator, containing information on the required notification forms, the necessary forms themselves, educational material, the applicable regulations, and explanations of them. This information should be given to firms so that they have sufficient lead time to reach compliance by the specified date.

- The State and local jurisdictions should provide financial assistance to small quantity generators.

  The State, through the Department of Economic and Community Development (DECD) and the local jurisdictions, should provide financial assistance to small quantity generators for the purchase of new equipment, storage space, and/or changes in their production processes. This assistance should be geared toward otherwise credit-worthy firms who will have high compliance costs relative to their ability to borrow to meet the requirements of the regulations. The State, through DHMH and DECD, should work actively to make firms aware of available financial assistance. A financial assistance program should include "low-cost" loans and loan guarantees and should be run by the DECD. Not all of the desired assistance may be possible to supply because of limitations imposed by existing laws. To overcome this potential problem and to emphasize the importance of providing this assistance, legislation should be introduced in the 1985 session of the General Assembly to explicitly authorize this assistance.

- All aspects of regulating small quantity generators should go into effect on the same date, and that date should be July 1, 1985.

  Current legislation brings the small quantity generators into the regulatory system on July 1, 1984, except that they are not subject to manifesting their shipments or reporting their generation of hazardous wastes until July 1, 1985. Implementation of those regulations should be delayed until July 1, 1985 so that small quantity generators have sufficient opportunity to become informed about the regulations, determine an optimal strategy for complying with the regulations, and implement that strategy. The DHMH should be prepared to grant extensions to the compliance date to firms which, through no fault of their own, cannot implement an optimal compliance strategy by July 1, 1985.

- The ninety-day limit on storage should be reviewed with regard to allowing accumulation of waste to more manageable lot sizes.

  State regulations should be modified as permitted by the federal framework, and this position should be communicated to the United States Environmental Protection Agency. This could help small quantity generators avoid the relatively high costs of shipping partial loads to off-site facilities. The Task Force emphasizes that care should be taken in implementing this recommendation, if it is allowed, to avoid potential abuse and to assure that wastes are stored safely and adequately.

TOPIC: SITING CRITERIA

1. *Issues* - Because hazardous waste facilities are necessary and will have to be sited, siting criteria should ensure that facilities are located in a way that minimizes risks to human health and the environment and negative socioeconomic impacts on the host community.

2. *Analysis* - Siting criteria can be set up in two ways, either specifying the attributes proposed sites must have or specifying attributes which would exclude sites from consideration. The Task Force analyzed both types of criteria and concluded that exclusionary criteria would address the problems of difficult facility siting because they:

   - promote certainty in the permitting process;
   - promote efficiency by reserving administrative and public resources for sites that do not have fundamental problems; and
   - bolster public credibility in the siting process by reducing the influence of the political or economic strength of the opponents or proponents of a site.

3. *Policy Statement* - There are certain areas in Maryland that should never be considered for siting of land emplacement facilities.

4. *Recommendations* - The Task Force recommends that the following areas, which are easily mappable, be excluded from any consideration in the siting of land emplacement facilities:

   - coastal wetlands;
   - subsurface coal mining areas;
   - critical recharge areas;
   - designated natural lands;
   - sole source aquifers;
   - watersheds for reservoirs;
   - 500-year floodplains, riverine and coastal; and
   - areas of geologic fault

   Other areas, such as archaeological sites, strategic mineral deposits, and historical sites, might also be excluded.

TOPIC: HOST COMMUNITY COMPENSATION

1. *Issues* - The siting of a hazardous waste facility in a community is bound to have adverse effects on the community. Hazardous waste facilities provide broad societal benefits, but the adverse effects fall most heavily on the community in which it is located.

2. *Analysis* - Many of the adverse impacts of a hazardous waste facility on a community can be mitigated by undertaking specific steps to eliminate or reduce those adverse effects. When adverse effects cannot be fully avoided or mitigated, compensation to the host community may be appropriate. Adverse impacts, such as physical, economic, or social impacts, could result from any number of industrial activities. Two factors should distinguish facilities for which compensation is appropriate – those with a permanent impact on the land (i.e., landfills) and those whose siting requires negotiations with local government officials. Ideally, the community and the facility developer should determine the amount and type of compensation. Further study of this issue is necessary to answer a number of difficult questions, for example:

   - How large is the community for purposes of compensation?
   - Who should decide what compensation is appropriate?
   - What procedures should be followed?
   - How should disputes be resolved?
   - What is the State's role in strictly local disputes?

3. *Policy Statement* - Communities in which new hazardous waste facilities are located should be compensated for the adverse impacts caused by the siting of the facility.

4. *Recommendations* - The Task Force makes the following recommendations:

   - Compensation to the host community should be accorded for any new hazardous waste landfill or hazardous waste management facility requiring the approval of the Hazardous Waste Facilities Siting Board.

     The Board is empowered to override the decisions of local government. This fact – the loss of local control over its land – distinguishes these hazardous waste facilities from other industrial activities that carry risks or impose costs and makes compensation appropriate in such cases.

   - A negotiation/arbitration system should be established that encourages the community and the permit applicant to determine the amount and type of compensation which is appropriate to offset the anticipated harm.

     Technical and financial assistance must be made available to the community to enable it to participate on an equal basis with the applicant through direct grants from the State, recouped from the applicant through application fees. A method to resolve impasses must also be developed.

TOPIC: CLEANUP OF INACTIVE HAZARDOUS WASTE SITES

1. *Issues* - The Federal Comprehensive Environmental Response, Compensation and Liability Act, otherwise known as the federal Superfund Act, created a mechanism for assessing and cleaning up abandoned hazardous waste sites posing environmental hazards. The federal Superfund Act, however, is limited in scope and funding and is unable to deal with all sites requiring remedial action in Maryland.

2. *Analysis* - During Task Force deliberations on this subject, legislation was developed for consideration by the Maryland legislature, with input from Task Force members, requiring DHMH to create a registry of hazardous waste sites requiring state action. Senate Bill 570, discussed earlier, was enacted. The most significant change in the original legislation endorsed by the Task Force was the deletion of the taxing mechanism that was to provide the funds for the costs associated with identifying, assessing and, if necessary, remedying those sites that may contain hazardous waste. Governor Hughes endorsed the legislation in this form, stating that:

> Senate Bill 570 requires the Secretary of Health and Mental Hygiene to identify and prioritize sites requiring State remedial action. While it is premature to indicate a specific dollar amount, if Senate Bill 570 is enacted, and after consultation with Secretaries Adele Wilzack (Department of Health and Mental Hygiene) and Constance Lieder (Department of State Planning), I intend to propose as part of the Administration's capital program for FY 86 funding for the purposes authorized in the legislation.

3. *Policy Statement* - Cleanup of inactive hazardous waste sites should proceed rapidly and receive adequate State funding.

4. *Recommendations* - The Task Force makes the following recommendations:

- Preliminary site assessments should be undertaken as rapidly as possible within the framework established by Senate Bill 570.

- Funds must be provided for site cleanups. At the same time, the State should aggressively pursue responsible parties to pay the costs to clean up sites to which they have contributed wastes in the past.

- The State should coordinate its efforts carefully with the federal Superfund cleanup program to maximize the use of federal funding in Maryland.

- The MES should consider keeping the Hawkins Point Hazardous Waste Disposal Facility available for the disposal of site cleanup waste.

TOPIC: ALTERNATIVES TO LANDFILL

1. *Issues* - In 1984, the only State-owned hazardous waste landfill facility, at Hawkins Point, terminated acceptance of general hazardous waste. The reduction by industry in the amount of waste generated and competitive user rates at out-of-state landfills are contributing factors to the closure.

   The Task Force recognizes that the future will bring renewed demand for landfill capacity. If new waste-producing industries locate in Maryland or previously unregulated wastes become classified as hazardous, the in-state demand for landfills will increase. Also, the scheduled inclusion of small generators in the hazardous waste regulatory program will result in an increased disposal demand. As other states which presently accept Maryland's waste apply more stringent regulations, increase facility user fees or close their landfills, as may occur in Pennsylvania, Maryland generators will seek economically feasible alternatives. Site cleanups will also contribute to the demand for landfills. The foregoing events could require future in-state landfill capacity; the State's planned termination of acceptance of general hazardous wastes at the Hawkins Point Hazardous Waste Disposal Facility will not end the demand for disposal capacity for wastes generated in Maryland. Given that private landfills will continue to be subject to State regulation, the Task Force has determined that its recommendations on promoting alternatives to landfills are timely and appropriate for the Governor's consideration.

2. *Analysis* - During the one-year period from August 1981 through July 1982, the total amount of hazardous waste landfilled in Maryland was 218,300 tons.

   On the basis of preliminary manifest data for 1983, the State projects that the total amount of hazardous waste generated and disposed in Maryland was substantially less than that for the prior one-year period. The factors contributing to this substantial reduction include the closure of several hazardous waste landfills and facilities, the increased export of wastes to out-of-state facilities, the delisting by the federal government of certain wastes formerly classified as hazardous, and the increased efficiency achieved by industry in reducing the volume of its wastes. To a lesser extent, the economic recession in 1983 contributed to a decrease in market production generally.

   Federal restrictions on the landfilling of certain wastes are as follows:

   1. No ignitable or reactive wastes unless:

      a. treated, rendered, or mixed so no longer meets definition; or

      b. (for ignitable) containerized and protected from conditions that might cause ignition.

   2. No incompatible wastes.

   3. No bulk free liquids without adequate liner system.

   4. No containerized free liquids unless:

      a. free-standing liquids have been drained;

      b. container is small;

      c. container is designed to hold liquids; or

      d. container is lab-pack.

5. Liquid PCBs must be incinerated and no landfilling liquids with PCB concentration greater than 500 ppm (40 CFR 264, 265, 761).

In addition to these federal restrictions, Maryland restrictions include two more stringent requirements:

1. Bulk liquids must be treated or stabilized, chemically or physically, so that free liquids are no longer present.

2. No lab-pack exemption under containerized liquids [COMAR 10.51.05.14 (E-G)].

Unlike regulatory programs in other states, Maryland does not prohibit specific waste components or impose concentration limitations on wastes to be landfilled. Maryland has, however, legislatively adopted the Acceptance Policy of the Hazardous Waste Facilities Siting Board dated August 11, 1983, in the form of House Bill 1446 to be effective July 1, 1984.

After July 1, 1984, generators must satisfy the following two-part test before a controlled hazardous substance may be disposed of in Maryland:

1. recovery possibilities have been considered; and

2. the controlled hazardous substance cannot be reasonably treated further to reduce the volume of or the hazard that the controlled hazardous substance poses to the environment.

The burden is on the generator to demonstrate to the satisfaction of the Maryland Department of Health and Mental Hygiene (the "Department") that the above test has been satisfied. The statute lacks standards as to how generators may meet this burden, and regulations have not yet been promulgated.

In considering appropriate guidelines for the implementation of House Bill 1446, the Task Force identified those factors that contribute to a generator's disposal decisions and has developed guidelines based on those factors. Several factors considered and omitted were: (i) the proximity of a particular treatment alternative to the generator; (ii) the reliability of treatment alternatives; and (iii) the reliability of a hazardous waste treatment facility. The Task Force has further restricted its recommendations to the land disposal of wastes, although House Bill 1446 addresses all methods of disposal.

The Task Force also reviewed the U.S. Environmental Protection Agency's advanced notice of proposed rule-making for the purpose of delineating a process to determine at the national level what further restrictions are appropriate on land disposal of hazardous waste (49 FR 5854; February 15, 1984). The approach is designed to systematically screen and rank those hazardous wastes which must be treated, recycled, stored or reduced, and those for which no alternative to landfilling exists.

3. *Policy Statement* - It is in the best interests of the State to ensure that landfdills are reserved for those wastes for which no other reasonable disposal alternative exists.

4. *Recommendations* - The Task Force makes the following recommendations:

- In implementing House Bill 1446 the State should use the following guidelines:

  Before any controlled hazardous substance is disposed of in a Maryland landfill, the Department of Health and Mental Hygiene should certify that the waste containing such substance: (i) has been considered for recovery; and (ii) cannot reasonably be treated further.

  - **Recovery:** To satisfy the first test with respect to recovery, the generator should, at a minimum, provide the Department with one or both of the following:

a. evidence of listing of the subject waste on a recognized waste exchange for a period not less than sixty days; or

b. certificate from commercial waste broker certifying that the subject waste is unusable.

- **Treatment:** To satisfy the second test with respect to treatment, the generator should provide the Department with evidence sufficient to prove that the subject waste cannot reasonably be treated further to reduce either the volume of or the hazard that the subject waste poses to the environment.

  In evaluating the evidence submitted by a generator, the Department should apply the following guidelines in its determination to certify a waste:

  a. Reasonable treatment alternatives should be based on technological feasibility.

  b. A technology may be considered reasonable and feasible if it is consistent with the principles of sound engineering, and the technology is commercially available.

  c. Economics are only a significant factor if the treatment alternative would cause the generator to suffer severe economic hardship.

  d. Technology need not be used if the technology would result in more significant environmental harm than would result from the use of land disposal.

  If an applicant for certification fails to meet its burden in showing that its waste is not recoverable or if a reasonable treatment alternative is determined by the Department to exist in accordance with the foregoing guidelines, the Department should be obligated to deny the application and the subject waste would not be allowed, until a certificate is issued, to be disposed of in a Maryland landfill.

- The Department of Health and Mental Hygiene should be required to monitor the U.S. EPA rule-making regarding further restrictions on land disposal and utilize data on products generated by EPA to develop restrictions applicable to Maryland. The process should be expected to generate the following products:

  1. Screening criteria: To be applied in determining which wastes to restrict from landfills.

  2. Ranking of wastes.

  3. Alternatives: The treatment, recycling, waste reduction, and long-term storage technologies that are feasible for the highest ranked wastes.

  4. Identification of restricted wastes.

  5. Effective dates for restriction.

  6. Specified pretreatment standards: Prescribed treatment for certain wastes before landfilling.

  7. Regulatory impact analysis.

  8. Fast-track prohibitions: Immediate prohibitions on substances such as dioxins and solvents recommended.

TOPIC: PERMITTING, MONITORING, AND ENFORCEMENT

1. *Issues* - Because of the integral part they play in proper waste management in Maryland, the nature and effectiveness of Maryland's permitting, monitoring, and enforcement programs are extremely important issues.

2. *Analysis* - The Task Force consulted with members of the Permit and Enforcement Sections of the Office of Environmental Programs (OEP), members of the Attorney General's Office engaged in civil and criminal hazardous waste enforcement, and industry representatives. The Task Force has identified a number of concerns about the effectiveness of these important programs and their credibility with industry and the public.

   - **Attracting and retaining qualified technical personnel.** Uncompetitive starting salaries and the rigidity of the State Personnel Classification System often seem to result in the hiring of relatively inexperienced technical personnel and to encourage experienced staff to seek higher-paying positions in private industry or with the federal government.

   - **Training.** Inadequate training budgets and a lack of systematic training programs appear to hamper technical staff in developing the knowledge and skills essential for them to deal both with the complex issues and regulations affecting large companies and with small operators trying to wend their way through the regulatory maze.

   - **Staffing and Resources.** Numerous witnesses testified that a lack of resources and staff make it difficult to keep up with the volume of permit work and to comply with the requirements of Section 7-245 of the Health-Environmental Article requiring frequent monitoring of controlled hazardous substance facilities. Also, lack of staff precludes virtually any inspection of federal facilities in Maryland.

   - **Laboratory Services.** Although considerable improvements have been realized since its transfer from the Department of Natural Resources to the Department of Health and Mental Hygiene (DHMH), the laboratory is subject to the conflicting demands and priorities of DHMH's numerous programs. Its diverse responsibilities frequently cause long delays in returning test results, and, at times, result in problems in establishing the requisite chain-of-custody for test samples in criminal cases. Again, low salaries appear to contribute to an unacceptable rate of staff turnover.

   - **Expert Witnesses.** Both civil and criminal cases are sometimes impaired by the lack of in-house experts to advise on cases from their inception and to testify in court. Where in-house experts are available, their participation in enforcement actions often causes them to fall behind with their normal work loads.

   - **Hearing Officers.** Because hearing officers are randomly assigned cases dealing with all Health Department programs, they often are not able to develop extensive technological expertise with respect to environmental cases. Such expertise might well be a factor in reducing the length of hearings and the time required to produce an opinion in any given case. In addition, when decisions on environmental cases are rendered by hearing examiners, they must be approved by OEP prior to implementation. This step can also add significant amounts of time to the entire process.

   - **Length of Negotiation and Litigation.** Public credibility in OEP's enforcement efforts is frequently undermined by the months, and sometimes years, that enforcement matters or cases seem to drag on.

   - **Coordination with Local Health Departments.** Greater coordination between OEP and local health departments appear essential both to keep citizens better informed and to avoid prejudicing enforcement actions.

3. *Policy Statement* - Effective hazardous waste permitting, monitoring, and enforcement programs are essential for protection of the environment and public health in Maryland.

4. *Recommendations* - The Task Force makes the following recommendations:

- Although it is obvious that State salaries cannot be fully competitive with those in private industry, DHMH and the Department of Personnel should promptly review the salary and personnel classifications of OEP's technical staff and DHMH's laboratory personnel to ensure that they are adequate to attract and retain the experienced personnel who are essential to an effective hazardous waste program.

- OEP should expand training programs for its technical staff to enable them to obtain the state-of-the-art knowledge they must have to deal effectively with industry, both large and small.

- An in-depth non-governmental review should be made to determine whether OEP is presently carrying out its responsibilities in the most efficient and effective manner, and whether additional staff and/or resources are required to enable OEP to fulfill those responsibilities.

  Such a review should include consideration as to whether the hazardous waste facility inspection schedule mandated by Section 7-245 is excessive, or is reasonably necessary to protect public health and safety. If it is excessive, DHMH should recommend a change in the statute during the next legislative session. If it is essential, the State should provide adequate resources to enable the mandated frequency of State inspections. Leaving such a statute on the books, while ignoring it in practice, seriously undermines public confidence in law enforcement.

- OEP should determine whether additional resources are necessary to adequately inspect federal facilities in the State.

- Consideration should be given to fully staffing and equipping the Hazardous Waste Section of the Division of Environmental Chemistry, and of having it report to the Office of Environmental Programs, or doing only the work of WAS in order to ensure the requisite priority for hazardous waste enforcement efforts.

- DHMH and OEP should assure the availability of adequate funding to hire outside experts to consult on and/or testify in hazardous waste enforcement matters, or cases, when required.

  OEP should also review its staffing to determine whether it would be more or less cost-effective to add such experts to its regular staff.

- The State should review the salary structure and consider assigning two or three hearing officers to hear only environmental cases, and recommend legislation which would make the decisions of such officers final in the Department.

  This could eliminate some of the delay in handling administrative cases, and would eliminate the requirement that OEP must approve of such decisions prior to their implementation. OEP would still have the right to appeal just as any other participant.

- Greater effort should be made by the Assistant Secretary of OEP to review the status of negotiations and to pursue enforcement methods as soon as it is clear that an industry is no longer negotiating with the State in good faith.

- OEP should enhance its efforts to keep local health departments advised of important developments and to ensure that they do not give industry inconsistent advice that could undermine OEP's enforcement efforts.

TOPIC: COVERAGE OF THE HAZARDOUS WASTE SYSTEM

1. *Issues* - Information provided to the Task Force indicates that significant quantities of wastes that may pose threats to human health and the environment are not currently regulated as hazardous waste.

2. *Analysis* - The Task Force reviewed the coverage of the hazardous waste regulatory program and met with representatives of the U.S. Environmental Protection Agency, the State of Maryland, and industry. The Office of Technology Assessment estimated in 1983 that the federal regulatory system covered only 40 million tons out of a total of 255 to 275 million tons recognized as hazardous by state programs. The Task Force did not receive information on the quantities of "industrial" wastes generated in Maryland that are not subject to the State regulatory system. Because the Maryland system in its coverage parallels, with certain exceptions, the federal system, however, the Task Force is concerned with the scope of the State's hazardous waste program.

   The Task Force felt that the EP toxicity test, limited to only a handful of inorganic materials, did not encompass the universe of toxic wastes deserving regulation. The U.S. EPA is currently taking steps to broaden the tests for toxicity in different ways.

   The Task Force briefly considered the federal and State procedures for "delisting" hazardous wastes. Two concerns surface: first, the accuracy of delisting submissions, and second, with small generators coming into the system, the ability of persons with limited financial resources to determine properly whether their wastes should be considered hazardous.

3. *Policy Statement* - The State should take all steps necessary to determine that the wastes generated and disposed of in Maryland do not present threats to the citizens or environment of the State.

4. *Recommendations* - The Task Force makes the following recommendations:

   - The State should encourage EPA to press forward in efforts to broaden the tests for toxicity.
   - The State should have the resources and analytical capabilities to determine whether specific wastes generated and disposed of in Maryland pose hazards and warrant inclusion in Maryland's regulatory program.
   - The government entity responsible for considering delisting petitions, whether State or federal, should have the resources to do spot checks of the waste in question to verify the accuracy of the submission.

TOPIC: MANAGEMENT OF HOUSEHOLD HAZARDOUS WASTES

1. *Issues* - Hazardous wastes generated in households are exempt from state or federal regulation. These wastes consist of spent or unused portions of a wide variety of products. Paints, paint thinner, pesticides, drain cleaners, laundry bleach, and anti-freeze are only a few of the products containing hazardous chemicals that are commonly found in households. Sooner or later, most households pour the spent or unused portions of these products down the drain or dump them in the trash. Those practices may cause severe environmental problems.

2. *Analysis* - The Task Force has reviewed the experience of other states and localities in providing proper handling and management of hazardous wastes generated in households. The Task Force recommends that Maryland develop a program to encourage householders to take their wastes to centralized collection points and to ensure that the collected wastes are properly disposed of.

   This program will be expensive. Florida has budgeted $400,000 per year for its "amnesty" program. Each household generates a moderate amount of hazardous waste; if these wastes are disposed of improperly, then this money would be a modest investment in protecting Maryland's environment.

3. *Policy Statement* - Management of household hazardous waste would further advance the protection of Maryland's environment.

4. *Recommendations* - The Task Force recommends that a program to manage household hazardous waste be developed and include the following components:

   - Intensive public education. The experience in other states demonstrates the importance of public education. The State should work with various civic and environmental groups to spread the word.

   - Two collection days should be sponsored in each county in the first year of operation. These should be preceded by intensive advertising and education efforts.

   - The State should provide technical services at the collection points and assume all responsibility for the wastes delivered to it.

IV. Improved Communication and Public Participation

TOPIC: REGULATORY INFORMATION ACCESSIBILITY

1. *Issues* - The Department of Health and Mental Hygiene regulates a large number of hazardous waste generators, transporters, and treatment, storage, disposal facilities (TSDF) and accumulates extensive information on regulation. It is sometimes difficult for citizens to obtain easy access to this information and to understand easily the form of presentation. The Task Force examined the Department of Health and Mental Hygiene's Information System and made several observations.

   a. The files of the Office of Environmental Programs' (OEP) Waste Management Administration (WAS) comprise the key data source of the State's hazardous waste program.

   b. The Waste Management Administration's filing system, which is comprised of six basic hazardous waste files, is generally in good working order.

   c. Citizen requests for information are directed to a variety of people within the OEP, but there is currently no Public Participation Coordinator within the WAS.

   d. There is no standard informational packet or publication on OEP's filing system available for the general public.

   e. Consistency and coordination within the various filing systems and within the various branches of the OEP is not good and not easily understood by citizens.

   f. There are few comprehensive, long-term information storage systems and most records are not a part of those systems.

   g. There are relatively few logged-in citizen requests for information from the files of the WAS.

   h. OEP's credibility is frequently undermined because citizens experience considerable difficulty in getting information about public hearings, responses to their comments or permit applications, decisions in administrative cases, and the like.

2. *Analysis* - The Task Force reviewed the files of the Office of Environmental Programs to assess the system and determine the number of citizen information requests. The filing system of four other states" waste management branches were examined for their organization and citizen access. It was determined that there is no one "best" filing system. Each state developed a system based on its own needs – the number of permitted facilities and the previous system's organization.

3. *Policy Statement* - Easy and immediate access to regulatory information on hazardous waste management and regulation is important for full citizen participation in a hazardous waste management system.

4. *Recommendations* - The Task Force makes the following recommendations:

   - The position of Public Participation Coordinator for the Waste Management Administration should be created and filled by a person with technical understanding of hazardous waste management but also one having the ability to communicate well with the public.

     A major responsibility would include assisting citizens in obtaining information from the WAS files. The Coordinator must be prepared to explain the State's permitting and enforcement processes to citizens frustrated by what they perceive to be OEP's "inaction" on a particular incident or company.

- A publication entitled "Understanding OEP's Files" should be prepared and made available to the general public.

  The Coordinator should assist in the preparation of "Understanding OEP's Files." The publication should clearly and simply present the nature and organization of the various files and the available information. Important administrative points should be covered such as:

  - the importance of making an appointment to review OEP's files;
  - an explanation of enforcement procedures;
  - a discussion of why certain items may be missing with respect to planned enforcement actions and pending litigation; and
  - the role of OEP Inspectors, Project Managers, and Project Engineers in understanding a facility's situation.

  This would be a companion to existing and forthcoming OEP public affairs documents, such as:

  - "Numbers to Know"
  - "Permits to Protect Air, Land, Water, and Community Health"
  - "What is OEP?"

- A formal log-in procedure should be used for all information requests from the WAS files.

  Requests for information by both outsiders and OEP staff should be made through and recorded by the WAS Public Participation Coordinator, ensuring that the location of a file is always known.

- The utilization of existing in-house personnel for improving intrafile access and coordination should be considered.

  The position descriptions of presently employed file clerks in the WAS should be reviewed and modified to incorporate file access control, indexing, coding, and cross-referencing duties. This review should take place in conjunction with the development of the Public Participation Coordinator.

- A toll-free telephone number should be installed and publicized.

  Citizens from all over the State should have access to the WAS Public Participation Coordinator.

- Efforts to improve the information management system at OEP should build upon existing systems and plans.

  It is important that OEP coordinate any computer expansion among the various administrations to ensure that systems will be compatible. The expected increased data load on the WAS accentuates the need for upgrading the present filing system. The staff of OEP should gradually revise all forms used to collect information on facilities in order to promote simple, clear data collection that is less open to subjective interpretation than that now accumulated.

- OEP should make greater efforts to publicize public hearings through newspapers of general circulation, libraries, etc. It should write to individuals who have expressed an interest in a particular matter when it renders a decision and should respond to those citizens who trouble themselves to comment on permit applications.

TOPIC: INDUSTRY-COMMUNITY COMMUNICATIONS

1. *Issues* - There is no direct communication, in the form of a citizen committee or an industry appointee for public participation, between a host community and a specific facility. Substantive dialogue between these two parties is critical to fostering a better understanding of key community concerns and problems.

2. *Analysis* - The Task Force examined the existing approaches to establishing industry-community committees and made several observations:

   a. There is no clear guidance as to when a formal communication committee should be established.

   b. There is no established public participation program for an industry seeking an environmental permit to follow.

   c. There are no guidelines as to the ideal committee formation, size, composition, and leadership.

   d. The question of using a neutral third party to facilitate discussions must be addressed.

   e. There is no clear guidance on the functions a committee should serve.

   f. There is no clear guidance on the ground rules by which a committee will operate.

   g. There is no guidance on the involvement of the State in the programs.

   The communication committee was seen by the Task Force as a valuable tool in education and in working out problems between industry and the community, but concern was expressed about establishing a formal committee for every facility.

3. *Policy Statement* - Direct communication between the citizens and industries of a community involving environmental permits within that community is in the best interests of the community.

4. *Recommendations* - The Task Force makes the following recommendations:

   - A flexible approach should be taken in establishing communication committees.

     It is not necessary for every facility to have a formal committee.

   - The industry seeking any permit from OEP should appoint a Public Participation Coordinator during the life of the facility.

     The Coordinator would be responsible for maintaining contact with the community, periodically meeting with them, explaining company policies to them, answering their questions, and preparing an annual report of all such activities to be kept on file by the firm and then sent to OEP in connection with the next permit renewal.

   - If a breakdown in communication between the Public Participation Coordinator and the committee ensues, a formal citizen committee should be established.

     The committee should have an odd number of members and be no larger than fifteen (15). The chief elected official of the community would be in the best position to form such a committee. His/her leadership would give the committee political legitimacy in the community. A neutral third party could be appointed to

facilitate discussions. The committee should be sure to include representatives of those citizens most concerned about a hazardous waste facility. There should be representatives from the community's various socioeconomic levels, ethnic groups, and geographical areas.

A well-organized and productive committee could:

- help avoid and/or resolve conflicts between a facility operator and nearby residents;
- help explain complex technical issues and discuss alternatives;
- serve as a communication link with other groups and organizations;
- review and make recommendations to decision-making organizations such as the OEP; and
- assist in educating the general public about the operation of a facility.

The committee should establish ground rules for operation, including procedures pertinent to:

- how to handle sensitive business information;
- how to handle committee members' access to the facility;
- how to respond to information requests by the committee;
- how to deal with the press;
- how the committee will reach decisions; and
- what basic protocols will be established.

TOPIC: PUBLIC EDUCATION ON HAZARDOUS WASTE ISSUES

1. *Issues* - Citizens often feel helpless in dealing with hazardous waste issues. The reasons for this include the difficulty in obtaining relevant information, the citizens' perception that public officials do not really care about their concerns, and the lack of information outreach and public education programs in the State. The Task Force examined the various approaches for providing public education on hazardous waste issues and made several observations:

   a. There is no central information service in Maryland for citizen access to information on all aspects of the management and disposal of hazardous waste.

   b. There is no reference directory available to the general public that lists individuals, organizations, and general information on the various aspects of hazardous waste management in Maryland.

   c. There is a dearth of education programs and curriculum development on hazardous waste issues in the Maryland school system.

   d. The utilization of mass media in educating and informing the general public has not been pursued.

   e. There is little communication between State agencies and the University of Maryland on public and small quantity generator education needs.

   f. Small quantity generators have a limited understanding of their place in the hazardous waste system and the applicable regulations.

2. *Analysis* - The Task Force heard from a variety of experts in the public education field on the topics of curriculum development and training and engineering development. These meetings resulted in a raised awareness among public educators of the array of problems related to hazardous waste management and the need for educating both the general public and the hazardous waste generators. Several approaches for information outreach and public education were examined by the Task Force, and information packets, exhibits, seminars, audio-visual presentations, and computer simulation activities were seen as valuable media of communication and education.

3. *Policy Statement* - The general public's understanding of hazardous waste issues is necessary for the improvement and facilitation of overall hazardous waste management.

4. *Recommendations* - The Task Force makes the following recommendations:

   - A Central Information Service for citizen access to information on hazardous waste management and disposal in Maryland should be established.

     Specific information on hazardous wastes and on the Department of Health and Mental Hygiene's policies and interpretations of the regulations needs to be readily available to any interested party in a central location. A permanent Public Participation Coordinator in the Waste Management Administration should be available to assist and answer all citizen requests for information. There should be a widely publicized toll-free telephone number to the Public Participation Coordinator.

   - There should be a Directory containing information and contacts for various aspects of hazardous waste management in Maryland.

A Speakers Bureau Directory containing information from individuals and organizations thought to be knowledgeable about various aspects of hazardous waste management will soon be finished and distributed to those parties included, members of the Task Force, and selected public officials. This Directory should also be made available to the general public and the school system. It should be organized to indicate local experts by county or municipality.

- Hazardous waste management education material needs to be developed and infused into the State's school system curricula.

The addition of hazardous waste management curriculum material in the school system should be done by infusing it into the existing structure, particularly areas such as chemistry, earth science, home economics, biology, and social studies. The curriculum packet should include good audio-visual items and a well-prepared discussion guide as well as:

- activity sheets - which could include (a) plant tours, such as Industrial Museum, World Trade Center, Maryland Science Center, Poison Control Center, and (b) science fair projects;
- vocabulary - glossary of terms;
- reference lists;
- student projects - which could include (a) crossword puzzles, (b) household chemical search with the use of "Mr. Yuk" stickers, (c) writing up for parents proper storage and handling procedures, and (d) product flow diagram of parent's or relative's work place;
- flow sheet diagrams - raw material to final product and wastes for typical local industries; and
- use of a Hazardous Waste/Environmental Simulator as a project.

The curriculum should become a permanent part of the system with a continuing source of funding for teachers and materials.

- The development of a Hazardous Waste/Environmental computer simulator, based on a U.S. Department of Energy model, that illustrates a cause and effect relationship between hazardous wastes and the environment should be included in the Maryland hazardous waste curriculum development.

The simulator is used in a group educational environment and has proven to be effective with all age groups as an educational tool. The simulator could be used throughout the Maryland school system as an aid in educating Maryland's future policy makers about the issues surrounding hazardous wastes.

- Information packets aimed at the general audience should be prepared and widely distributed.

Information packets which are currently being prepared will be sent to all of the county public school systems, to some private schools in Maryland, and to a selection of environmental and community groups. If the packets are well received, a mechanism that ensures continual distribution of popular publications to the above organizations and other interested groups should be established.

- An audio-visual presentation composed of three or four specific hazardous waste topics should be developed and given statewide exposure.

By utilizing a combination of several thirty-second Public Service Announcements and a traveling exhibit for displays at malls and fairs, a very large portion of the Maryland public could be reached and become better informed about these issues. Some good topics for this presentation would be:

- the degree of hazard of various chemicals;
- general information on current regulations and a number to call (Hot Line) for alleged violations;
- hazardous waste materials in the home; and
- some good examples of properly handled waste.

This information should be developed with the homeowner and small quantity generator as the prime target audiences.

- An Industrial Waste Handlers Exhibit should be developed for the Baltimore Industrial Show held each November.

  Seminars should be held concurrently with emphasis on answering questions pertinent to small quantity generators. Upon approval of the Governor, the show/seminar should become an established series.

Appendix

Governor's Task Force on Hazardous Waste Initiatives

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