

**REPORT OF THE
SOLID WASTE COMMISSION
TO
THE GOVERNOR
AND
THE GENERAL ASSEMBLY OF VIRGINIA**



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MEMBERS OF THE COMMISSION

Dr. Robert F. Testin, Chairman, Richmond

William M. Beck, Jr., Norfolk

Callis H. Atkins, Ruckersville

R. E. Dorer, Virginia Beach

Ernest C. Edwards, Jr., Chase City

Joseph M. Guiffre, Alexandria

Delegate Joan S. Jones, Lynchburg

Jonathan Murdoch-Kitt, Richmond

Edward T. DiBerto, Virginia Beach

William T. Reed, Manakin-Sabot

Delegate Richard L. Saslaw, Annandale

Delegate George W. Grayson, Williamsburg

Delegate Bernard G. Barrow, Virginia Beach

Senator Joseph V. Gartlan, Jr., Fairfax

Senator Stanley C. Walker, Norfolk

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REPORT OF THE
SOLID WASTE COMMISSION
TO
THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA
RICHMOND, VIRGINIA

JANUARY, 1980

TO: Honorable John N. Dalton, Governor of Virginia
and
The General Assembly of Virginia

I. INTRODUCTION

The need to study the problems of solid waste management in Virginia with particular emphasis on the causes, collection, and disposal was acknowledged during the 1973 General Assembly by the passage of Senate Bill No. 856. This legislation, introduced by Senator Stanley C. Walker, created the Commission to study and advise upon the Disposal of Solid Wastes. During the 1976 Session of the General Assembly, the name of the Commission was changed to the Solid Waste Commission in Senate Bill No. 383.

The members of the Commission as of July 1, 1979, are: Dr. Robert F. Testin, Richmond; William M. Beck, Jr., Norfolk; Callis H. Atkins, Ruckersville; R. E. Dorer, Virginia Beach; Ernest C. Edwards, Jr., Chase City; Joseph M. Guiffre, Alexandria; Delegate Joan S. Jones, Lynchburg; Jonathan Murdoch-Kitt, Richmond; Edward T. DiBerto, Virginia Beach; William T. Reed, Manakin-Sabot; Delegate Richard L. Saslaw, Annandale; Delegate George W. Grayson, Williamsburg; Delegate Bernard G. Barrow, Virginia Beach; Senator Joseph V. Gartlan, Jr., Fairfax Co.; and Senator Stanley C. Walker, Norfolk. Mr. William M. Amrhein has been retained as counsel to the Commission. Mrs. Susan G. Dull of the Division of Legislative Services served as staff to the Commission.

II. DELIBERATIONS AND MEETINGS

The full Commission met a total of eight times during 1979 and held five public hearings. Hearings were held in Staunton, Lynchburg, Alexandria, Norfolk, and Richmond. In addition, permanent committees of the full Commission met numerous times during the year. Reports of these Committees are included in this report.

III. PUBLIC HEARINGS

The Virginia Solid Waste Commission held a series of public hearings during July and August, 1979. The stated purpose of these hearings was to solicit testimony from citizens throughout the Commonwealth on the subject of hazardous wastes and a variety of other solid waste management topics. As stated in the press release announcing the hearings:

"Citizens are encouraged to use this as an opportunity to cite any problems relating to the disposal of solid wastes which they might know of or suspect in a particular area."

Specifically, one of the major points made in the highly publicized ABC television documentary, "The Killing Ground," was that citizen questions or complaints had led to the discovery of a number of dangerous hazardous waste dumps in various parts of the country. (A video tape of this documentary was obtained for Commission viewing by Col. William F. Gilley of the Virginia Health Department.) The public hearings, therefore, were structured to solicit citizen testimony regarding possible hazardous waste dumps in Virginia.

Although numerous interesting items were brought to the attention of the Commission during these hearings, of most significance was the fact that no verified citizen complaints on hazardous waste disposal were brought forward.

Among the issues brought to the attention of the Commission during the hearings, the most prevalent was the need for one or more sites for hazardous waste disposal. Currently there is no approved site in Virginia for the disposal of hazardous wastes, and such materials generated within Virginia must be taken to licensed sites in neighboring states. Private industry, the U. S. Navy, county governments, and private citizens all testified for the need for one or more licensed hazardous waste disposal sites within Virginia. No testimony was heard in opposition to the concept, although some testimony was heard to the effect that, ultimately, the disposal responsibility should be borne by the generator.

The second most popular item (in terms of frequency) was the need to promote the concept of resource recovery as a solution to the solid waste problem. State aid, innovative technology, commitment of local funds, and long-term views of the economics were cited as approaches to develop the concept more rapidly.

Other topics covered during the hearings included the need for increased funding to localities to deal with solid waste management problems, a desire to dispose of nuclear wastes outside the state, the need for a manifest system to control generation and hauling of solid

wastes, the need for a public information program to make the public aware of the danger of hazardous and toxic materials, and the need for an industrial waste exchange to encourage reuse of waste materials.

IV. REPORT OF THE STANDING COMMITTEES

A. Program Committee

The Program Committee was established to review the programs and projects before the Commission and to make appropriate recommendations on these items and possible new projects to the full Commission. The Program Committee includes Commission Members DiBerto (Chairman), Atkins, Murdoch-Kitt, Amrhein, and Testin.

After reviewing all of the Commission's projects, the Program Committee recommended the formation of "standing working committees" on designated projects. This recommendation was adopted by the full commission, and the reports of other study committees are included in this section of the report.

The Program Committee also studied and made recommendations in the areas of hazardous wastes, the converted waste exchange, resource recovery, and refuse truck weight limits. The first three topics became the principal activities of other standing committees during the year and are included with their reports.

In the area of truck weight limits, the Program Committee recommended that the full commission "continue to support the proposed increase in refuse truck weight limits..." However, the full commission did not endorse this recommendation but voted to defer any action to support increased refuse truck weight limits until such time as the Commission is provided with additional information from the affected industries demonstrating the need for increased weight limits for refuse trucks.

B. Hazardous Waste Committee

The Hazardous Waste Committee includes Commission Members Dorer (Chairman), Gartlan, and Reed, with Dr. Gulevich of the State Health Department serving in an ex-officio capacity. The report of this committee is as follows:

"Recent events have demonstrated the importance of identifying, transporting and disposing of hazardous waste. Such waste, if not properly handled, can cause sickness, death and long time degrading of the environment. This is not a problem which has all of a sudden come upon us. It has been present for many years. It has become more acute as society has become more affluent and chemically oriented. It will grow in magnitude and demands immediate aggressive action, not only to prevent future catastrophes, but to correct mistakes of the past.

"Public law 94-580, dated October 21, 1976, entitled 'Resource Conservation and Recovery Act of 1976' addresses hazardous waste. The State Health Department has been designated to carry out the provisions of the law in Virginia. Under the Act, the E.P.A. is

"directed to promulgate regulations to govern hazardous waste. To date the E.P.A. has not officially adopted such regulations, however, guidelines have been published in the Federal Register. Based on these guidelines the State Health Dept. has engaged a consultant to assist in preparing proposed State regulations, which it plans, after appropriate public hearings, etc., to present to the State Board of Health for adoption. If, after the federal regulations are finally adopted there are any drastic changes in those promulgated by the State, such appropriate changes will be made in the State regulations. Hence, the State considering the current importance of the problem is not waiting on the slow grinding of the Federal wheels.

"In the Federal guidelines hazardous waste is identified by categories from which a list will be developed. The State regulation will have to follow the same criteria. This may or may not be the best procedure; however, the State has no other alternative, unless it wishes to challenge Federal authority in this area.

"At the present time, there are no hazardous waste disposal sites in Virginia. It is the feeling of the Solid Waste Commission that one or more hazardous waste disposal sites should be developed in the state.

"The use of Federally owned or State owned land should be considered and may well be the only land available. Once a site or sites on public land has been approved, the disposal operation could be by private industry under strict State regulations.

"The Commission recommends that the Code of Virginia be amended to allow the State to procure or condemn land for the purpose of disposing of hazardous waste.

"The State Health Department plans, as personnel available will allow, to proceed in reviewing sites used in the past which may have received hazardous waste. As information becomes available, appropriate action will be taken.

"Emergency situations will be handled through the Pollution Response Program which is on going at the present time."

After receipt of this report, the full Commission voted to support the recommendations that the Code of Virginia be amended to allow the State to procure or condemn land for the purpose of disposing of hazardous waste.

C. Waste Exchange Committee

The Waste Exchange Committee is currently chaired by Mr. Guiffre.

The concept of an industrial waste exchange was introduced in last year's report of the Solid Waste Commission. Basically, the concept involves the establishment of a listings service for waste products or discards. Subscribers to the listings service serve as a potential market for the waste products. Waste exchanges are in operation in a number of other states and range from simple listing services to some fairly sophisticated computerized exchanges for waste products.

During the year the Committee has met with officials of the U.S. EPA regarding waste exchanges.

In the opinion of those officials, waste exchanges are an idea whose time has come. As the disposal of wastes, especially chemical and hazardous wastes, becomes more expensive, waste exchanges will become more attractive economically.

EPA is eager for Virginia to explore waste exchanges for the Commonwealth as a method of disposing of wastes. EPA indicates it will be inclined to approve requests for grants to study the opportunities for waste exchanges in Virginia.

The following requests for grants will be made to EPA through the Virginia Health Department:

- 1) Reverse peer matching - a grant to provide travel and lodging expense to the Committee to investigate several existing waste exchanges. The objective would be to study private, public, and combination public-private waste exchanges to evaluate their applicability in Virginia.
- 2) A grant to provide consultants to the Commonwealth to undertake a feasibility and planning study for waste exchanges in Virginia. This grant would be under the technical assistance program of EPA.

It is projected that if sufficient reasons exist to create waste exchanges, the Commission would go to the private sector to seek its support in setting up a waste exchange.

The Committee feels that waste exchanges set up by the private sector have the best chance for success. This is due primarily to the proprietary interests of the manufacturers of the waste products.

D. Radioactive Waste Committee

The Radioactive Waste Committee currently consists of Commission members Grayson (Chairman), Testin, and DiBerto, with Mr. Gilley of the State Health Department as an ex-officio member.

The Committee was duly constituted after a vote at the 1979 September 21 meeting of the Solid Waste Commission to include the nuclear waste issue as a Commission program. Since that time the Committee has held meetings with nuclear waste generators to learn about the problem and develop a data base. The Committee is now working on a program that would assist the Health Department in its charge to obtain suitable in-State sitings for low level nuclear wastes and eventually hopes to be in a position to examine all aspects of this complex issue.

Shortly after the formation of this Committee, Virginia was faced with an acute problem with radioactive waste disposal when the three disposal sites available in the U. S. were temporarily shut down. These sites (in South Carolina, Washington, and Nevada) have since been reopened, but problems remain. The three states have put Virginia on notice that we cannot count on out-of-state disposal of our radioactive wastes, and our primary disposal site in South Carolina (Barnwell) is on a planned two year reduction to 50 percent reduction in the waste they will accept.

For the purpose of this report, nuclear waste will be divided into two types -- high level wastes (basically spent reactor fuel elements) and low level wastes. High level wastes are currently stored on-site in Virginia and may be a future problem if a Federal facility is not constructed. The current problem, however, centers around low-level wastes.

Virginia annually generates approximately 200,000 ft.³ of low-level nuclear wastes. About 85% of this is shipped to the South Carolina site, 10% to Washington State, and 5% to Nevada. Services include power generating facilities, industrial uses of radioactive materials, hospitals, universities, and research facilities.

At this time, Virginia's only practical alternatives appear to be to develop an in-state disposal site for low-level nuclear wastes or to participate in a regional complex with nearby states. While the Commission is in the early stages of its investigation of this problem, complete elimination of radioactive wastes from the state does not appear to be a practical alternative due to the central role that atomic energy plays in a wide segment of the state.

The primary responsibility for locating, acquiring, and obtaining permits for a site for disposal of low-level nuclear wastes lies with the Division of Solid and Hazardous Waste Management in the Health Department. However, the Commission intends to play a key

role in assisting in the solution to this problem. In a meeting with Governor Dalton and representatives from the Health Department, the Commission's role was defined as follows:

To set up town meeting type public hearings across the State to educate the public regarding type and amount of waste generated and current disposal practices.

To provide technical and legislative counsel to the State Health Department on the issue of low level nuclear wastes.

To provide liaison with appropriate legislative, executive, and advisory agencies in other states.

Upon presentation of this report to the full Commission, concern was expressed that all Commission members serve the State on a volunteer, part-time basis and that permanent staff assistance may be required to properly discharge Commission responsibilities in this area, as well as in growing commitments in the areas of resource recovery and solid waste.

After discussion of the issue, the Commission voted to endorse the need for a full time administrator for the Solid Waste Commission, together with appropriate secretarial assistance. The Commission directed the Chairman to prepare a budget supplement for submission to the General Assembly to satisfy this need.

E. Resource Recovery Committee

The Resource Recovery Committee currently consists of Commission members: Edwards (Chairman), Jones, Atkins, and Murdoch-Kitt. The Committee report is as follows:

"During 1978 the Commission concentrated on a study of resource recovery facilities in large metropolitan areas in the Eastern United States. These facilities were designed and built to handle volumes in the range of 500 to 1500 tons per day. Most facilities contained provisions for the recovery of several fractions from the waste stream.

Our current fuel crisis makes the recovery of heat from refuse a primary consideration. The Commission felt that a report on projects in Virginia, either planned or in operation, would be appropriate because they are all primarily heat recovery systems. It was further felt that systems suitable to smaller cities and towns should be investigated. The following is a summary of three projects that were investigated:

1. Southeastern Public Service Authority of Virginia
 - (a) Location - Portsmouth, Va.
 - (b) Size - 1500 tons/day
 - (c) Product - Steam to Norfolk Navy Yard
Metals to scrap market
 - (d) Status - Plant design is progressing but not to the final stages as of this time

2. Langley Research Center
 - (a) Location - Hampton, Va.
 - (b) Size - 275 tons/day
 - (c) Product - Steam to N.A.S.A.
 - (d) Status - Under construction--scheduled for mid-1980 operation
3. City of Salem, Va.
 - (a) Location - Salem, Va.
 - (b) Size - 80 tons/day
 - (c) Product - Steam to Mohawk Rubber Co.
 - (d) Status - In operation

V. CONCLUSIONS

1. Small steam plants, 100 tons/day or less, are becoming economically attractive as fuel prices increase.
2. Small plants can be built to meet environmental standards.
3. In some cases, incineration to produce energy may be the only acceptable political or environmental solution to a problem.
4. It is in the national interest to utilize all domestic energy sources available.
5. A survey of the political subdivisions of the state indicates that very few have the necessary operating and cost data to make accurate feasibility studies of a resource recovery system.

VI. RECOMMENDATIONS:

1. Each solid waste disposal system accumulate data on their operation including at least:
 - (a) Tons per day
 - (b) Ton miles of the pickup service
 - (c) Cost per ton of transportation
 - (d) Cost per ton of landfill or other existing method of disposal
 - (e) Cost should be on an accrual type of bookkeeping
 - (f) Cost per ton of administration
2. Each political subdivision make a survey of public and private facilities to see what the heat requirements may be in their area.
3. Where an existing or potential customer for steam or hot water is present, make the necessary studies to determine feasibility, giving adequate emphasis to existing and potential fuel cost, environmental, and political considerations.

Upon acceptance of this report, the full Commission voted to prepare a report on these steam/energy systems. The report would be distributed to local officials around the state and would include detailed data sheets on the above three projects.

RECOMMENDATIONS (Cont'd)

As discussed in the previous section, the Commission has agreed upon the following recommendations to the Governor and the General Assembly:

The Commission recommends that any action to increase weight limits for refuse trucks be deferred.

The Commission recommends that the Code of Virginia be amended to allow the State to procure or condemn land for the purpose of disposing of hazardous waste.

The Commission recommends that it employ a full time administrator and secretary to carry out its mandate in the area of radioactive waste disposal.

In addition to the above, the Commission voted not to support additional aid to localities under the provisions of Senate Bill 497, enacted during the 1979 session of the General Assembly, due to the eligibility for funding of towns without Health Department approved disposal facilities. When the commission originally endorsed this legislation, funding was made available only for counties and cities with State Department of Health approved facilities for solid waste management. The purpose of the legislation was twofold: to assist these localities in complying with state requirements for solid waste management and to encourage a more regionalized approach to the handling of solid wastes.

VII. PLANS FOR 1980

During 1980 the Commission will concentrate its efforts on the problem of generation and disposal of low level nuclear wastes within the Commonwealth. The Commission intends to devote major efforts to public hearings on this issue, to advising the Health Department on the question of temporary and permanent storage facilities for these wastes, and to working with neighboring states in developing an equitable solution to the problem.

In addition, the Commission intends to prepare and issue a detailed report of its investigations of small scale refuse-to-energy systems. This report will be made available to local officials around the state and will be the first in a projected series of reports on various aspects of resource recovery.

Finally, through its standing committees, the Commission will continue to pursue the concept of an industrial waste exchange for Virginia and problems attendant to the generation, transport and disposal of hazardous wastes.

