REPORT OF THE

SOLID WASTE COMMISSION

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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RICHMOND
1986

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Mailing Address: P.O. Box 3-AG
Richmond, VA 23208

Location: General Assembly Building
Room 915
Richmond, VA

Telephone: (804)786-4169

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January 1986

The Solid Waste Commission was created by the 1973 General Assembly in Senate Bill No. 856 directing the Commission to advise the Governor and Legislature on all matters relating to solid wastes. As defined by the Commission, its objectives are:

-- To analyze the problems associated with the management of all types of solid wastes and report findings;

-- To develop recommendations and implement programs designed to improve waste management; and

-- To sponsor legislation to improve solid waste management.

As specified by legislation, the Commission is composed of six State legislators, seven citizens with technical expertise, and two citizens representing environmental interests. The legislators are assigned to the Commission by the Speaker of the House or the Senate Committee on Privileges and Elections. Citizen appointments are made by the Governor for four-year terms. A Chairman is elected biannually among the members of the Commission. The current Chairman, Dr. Robert F. Testin, is one of seven citizen-technical appointees.

The responsibilities of the Solid Waste Commission are met through the activities of working committees formed to address specific solid waste management issues. In addition, the member legislators form the Legislative

Committee, providing valuable support to the Commission in the General Assembly. Committees and their membership are as follows:

Hazardous Waste Committee

Timothy G. Hayes, Chairman
Mr. R.E. Dorer
Senator Joseph V. Gartlan, Jr.
Dr. Michael Markels, Jr.
Mr. Arthur Peregoff
Delegate James W. Robinson

Low-Level Radioactive Waste Committee

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Resource Recovery Committee

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Mr. Darwin E. Rogers
Dr. Robert F. Testin

Legislative Committee

Senator Stanley C. Walker, Chairman
Delegate C. Richard Cranwell
Senator Joseph V. Gartlan, Jr.
Delegate Frank D. Hargrove
Delegate R. Beasley Jones
Delegate James W. Robinson

The Commission office in the General Assembly Building houses the Commission's staff. The staff provides daily liaison with other State offices, such as the Governor's Office, the Health Department, and the Hazardous Waste Facility Siting Council, as well as the administration of the Commission's work program.

In recent years, waste management has become an increasingly sensitive issue. The special properties of many solid wastes have resulted in federal and state legislation requiring management practices that minimize

risks to public health and the environment. Disposal practices that once were legally acceptable have often proven inadequate and have left a legacy of expensive cleanup costs and environmental damage. One result of this is that the public often resists proposed solutions to waste management problems, fearing recurrence of earlier inappropriate disposal practices.

Wastes are an unavoidable by-product of twentieth-century living. The proper handling and disposal of wastes are essential to protection of public health, maintenance of a clean environment, and continued economic growth.

Understanding the distinctive characteristics of the different solid wastes is necessary to the comprehension of this report. The term "hazardous waste" generally refers to the solid, liquid or gaseous wastes that are either reactive, toxic, flammable or corrosive. Hazardous wastes in some form are generated by thousands of Virginia enterprises. Some hazardous wastes can be treated to reduce or eliminate their "hazardous" quality.

Radioactive wastes are significantly different from hazardous wastes in form and risk, and in approaches for appropriate management. Radioactivity is energy that results from the natural stabilization or "decay" of atoms through time; as atomic nuclear particles stabilize, radioactivity decreases. Depending on the particular element, stabilization may take from a fraction of a second to billions of years. Consequently, unlike hazardous waste which may be treated to reduce its hazard, radioactive wastes cannot be neutralized to change their radioactive quality. Treatment of radioactive wastes is practiced to reduce volume and improve its physical form for safe management.

Two types of radioactive wastes are discussed in the body of this report. Low-level radioactive wastes are slightly contaminated items that

are largely the result of housekeeping functions for nuclear-related activities. Compared to the amount of hazardous waste generated in Virginia, the low-level radioactive waste volume is small; nuclear power plants, hospitals, medical researchers and a few industries are low-level radioactive waste generators in Virginia. States are responsible for providing access to disposal for such wastes. Low-level radioactive waste requires careful management and disposal in facilities that will ensure its long-term isolation from humans and the environment.

High-level radioactive wastes are generated by nuclear power production and federal defense activities, and include spent fuel and fission products. Such wastes are characterized by high energy radiation and may be so active as to generate thermal energy. Through the Nuclear Waste Policy Act, the U.S. Department of Energy is responsible for providing disposal of high-level radioactive wastes in deep, geologic repositories.

In addition to these special wastes, the Solid Waste Commission is interested in enhancing public and private management of the more conventional household, industrial and commercial refuse that comprise, by far, the majority of solid waste generated in the Commonwealth. Such wastes are typically landfilled in publicly and privately operated facilities licensed in accordance with regulations established by the State Health Department. The Commission encourages the innovations undertaken by an increasing number of Virginia localities and companies to manage wastes and to recover materials and energy from them.

The body of this report summarizes the status of the Commission's major programs and concludes with a description of planned efforts for 1986.

HAZARDOUS WASTE

Compared to the year immediately preceding it, 1985 saw relatively little legislative activity in the hazardous waste area at either the State or federal level. However, major legislation enacted in 1984 had a significant impact on both regulatory agencies and industry as new and expanded programs got underway in 1985.

Legislative activity was marked primarily by Congressional efforts to reauthorize and expand the federal Superfund, which expired in 1985. At the administrative agency level, both EPA and the responsible State agencies began gearing their programs to the major hazardous waste amendments enacted by Congress in the closing days of the 1984 Session. Numerous businesses attempted to cope with the regulatory changes brought about by the 1984 amendments to the Resource Conservation and Recovery Act (RCRA); because the threshold for compliance was reduced to one-tenth of the previous level, many small businesses found themselves regulated under the program for the first time. The new Virginia Hazardous Waste Facility Siting Council began promulgating its regulations and criteria, as required by the 1984 Hazardous Waste Facilities Siting Act. Several Virginia hazardous waste sites were added to the National Priority List for remedial action under Superfund. Finally, the availability of pollution liability insurance became a matter of concern for both business and local government as underwriters increasingly excluded this type of coverage.

Hazardous Waste Facility Siting

The Virginia Hazardous Waste Facility Siting Council, after a period of review and public discussion, proposed its regulations and criteria for hazardous waste facility site certification in August. A series of ten public hearings on the proposals was held around the State. The proposal

govern: (1) administrative procedures; (2) licensing fees; (3) use of the Technical Assistance fund; and (4) siting criteria. The criteria address five classes of waste management facilities and vary in stringency and applicability depending upon the risk to public health and environment. The criteria are divided into two basic classes: the restrictive criteria prohibit facilities in certain sensitive areas, while the performance criteria require that facilities meet certain protective standards. The proposed regulations and criteria are expected to take effect in early 1986.

During the year, confusion about the intended effect of the waiver of local government's participation in the siting process became apparent. Recommended amendments to the Siting Act are provided in Appendix A.

Congress enacted amendments to the Resource Conservation and Recovery Act (RCRA) in 1984, after the passage of the Siting Act, and imposed requirements that were not contemplated or reflected in the Siting Act when it was passed. In order to ease the impact of the 1984 RCRA amendments on waste management by small business, specialized facilities such as local waste collection and transfer stations have been suggested as discussed below. Amendment of the Hazardous Waste Facilities Siting Act may be necessary to address the need for small generator waste management facilities.

Hazardous Waste Regulation

a. State Program Authorization

Although the Commonwealth in late 1983 received final authorization to administer the Resource Conservation and Recovery Act hazardous waste regulatory program, passage of the 1984 amendments requires development of additional regulations and program elements if Virginia is to retain authorization. There does not appear to be a need for additional statutory

authorization at this time; regulatory changes are being developed by the State Department of Health in administrative rulemaking.

Under the federal Act, the first set of changes must be made by January 4, 1986. However, the State has requested a 6-month extension to complete development of its regulations. Thereafter, EPA will give the State 12 months, beginning in July of each year, to develop its annual "installment" of amendments. Prior to receiving authorization for the newly-enacted portion of the program, the State must administer certain functions, such as permitting and enforcement, in conjunction with EPA.

b. 1984 RCRA Amendments

The 1984 RCRA Amendments are phased to take effect over the next several years. Among the most significant amendments that took effect in 1984 were (1) the elimination of the small quantity generator exemption; (2) the requirement that after November 8, 1985 hazardous waste treatment, storage and disposal facilities meet stringent new standards governing performance, design, monitoring, corrective action and financial responsibility; and (3) the November 8, 1985 deadline for interim status facilities to submit final permit applications or close down. The small generator amendment will add about 25,000 new hazardous waste generators to the regulated community in Virginia alone. These generators must comply with certain record keeping and documentation requirements and dispose of their wastes in licensed hazardous waste facilities. At the same time, more stringent facility requirements are expected to result in less disposal capacity and higher costs for disposal.

Efforts to assist Virginia's small businesses have so far consisted largely of education and information about the new requirements. Alternatives to assist small businesses with waste management are under consideration in a number of states, including Virginia, although Virginia has no

official program for that purpose. One suggestion is to develop local or regional collection and transfer stations to allow small generators to dispose of their wastes safely and economically. In addition to an examination of the technical and economic feasibility of such approaches, a study of Virginia's regulatory requirements will also be necessary to determine whether they pose unnecessary obstacles to the safe management of small generator waste. The lack of licensed commercial hazardous waste facilities in Virginia is a matter that will warrant examination to determine its effect on the environment, public safety, economic development and the business community.

Superfund

a. Reauthorization

Efforts to reauthorize the federal Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA" or "Superfund") lasted throughout much of 1985, with no resolution. Superfund is the federal law governing the cleanup of problem hazardous waste sites and chemical spills. Proposals to enlarge the fund from its current $1.6 billion to amounts ranging from about $5 billion to $10 billion were often debated. Other issues that delayed reauthorization included mandatory cleanup schedules, cleanup standards, citizen suits to force cleanup, standards of liability, victim's compensation and funding mechanisms (i.e., continue the present tax on petroleum and chemical feedstocks or expand it to cover a wide range of manufactured products).

b. Virginia Sites

The number of Virginia hazardous waste sites on the Superfund National Priority List was expanded to 12 during 1985; several other sites are under review by EPA for possible inclusion. The sites on the list are in

varying stages of clean-up ranging from study to remedial action; one is near completion of the final remedial phase.

Under the present federal law, Virginia, like all other states, is required to contribute at least ten percent of the cost of remedial action at Superfund sites. While some states have established special funds for this purpose, that is not required and Virginia has not done so, preferring to allocate money from the General Fund as needed. In 1986, the Solid Waste Commission will consider whether this approach is the most appropriate to ensure timely remedial action.

Liability Insurance

The availability of insurance coverage for pollution liability is a matter of growing concern throughout the U.S. Because of the unpredictability of the size and scope of damage awards or pollution-related incidents such as hazardous waste contamination and site cleanups, all but a handful of insurance companies have stopped including such coverage in their policies. Where insurance is available, it is growing extremely expensive.

Although EPA is developing regulations allowing alternatives to insurance to enable hazardous waste disposal facility owners to meet statutory financial responsibility requirements, that does nothing to make insurance coverage available. Furthermore, the need for liability coverage extends beyond facility owners to businesses that generate waste for disposal elsewhere. Strict liability may attach to them long after waste has left their control.

Alternatives have been suggested; some would require federal action, some state action, and some would be accomplished by private industry. Suggested solutions include mechanisms to ensure availability of coverage and to assist with the cost of liability insurance, to impose ceilings on

liability and to restrict the items for which generators may be held liable. The Commission recommends that the situation be assessed as it affects the Commonwealth, and that alternative solutions be examined, if necessary.

LOW-LEVEL RADIOACTIVE WASTE

The Low-Level Radioactive Waste Policy Act of 1980 requires each state to provide for the disposal of low-level waste generated within its borders and allows interstate compacts to share responsibilities for waste management through regional compacts. The Act provides that after January 1, 1986, compacts approved by Congress may exclude wastes generated outside the compact regions.

After considering several groupings of states for compact formation and the possibility of pursuing LLW management as a single state, Virginia complied with the 1980 Act through joining the Southeast Compact by action of the 1983 General Assembly. The other member states are: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina and Tennessee.

One distinct advantage of membership in the Southeast Compact is the location of one of the three existing disposal sites in a member state. For more than a decade Virginia has relied primarily upon the low-level waste disposal facility at Barnwell, South Carolina, which will continue to serve as a regional facility until 1992.

The Southeast Compact is implemented by a commission comprised of two members from each party state. In Virginia, both members are gubernatorial appointees. Senator Joseph V. Gartlan, Jr. continues to serve as one of Virginia's members to the Southeast Compact Commission. In September, Mr. Timothy Sullivan resigned his position as Virginia's second member to the Southeast Compact Commission. Governor Robb appointed Mr. Richard Burton, Executive Director of the State Water Control Board, to serve the position vacated by Mr. Sullivan.

At its October 29 meeting, the Southeast Compact Commission adopted a regional management plan, as required by the Compact agreement to specif

the number and type(s) of facilities needed in the region. The plan, drafted by a Compact committee, states that one land-based disposal facility is needed to manage the region's LLW. Selection of a disposal technology and disposal facility site is left to the eventual host state. As required by the plan, the facility must be operational by July, 1991; it must have a capacity to accept 800,000 to 1,600,000 cubic feet of low-level radioactive waste per year; and should be capable of receiving a total of at least 32,000,000 cubic feet during its 20 years of operation. The plan also makes explicit the Compact Commission's position that reduction of waste volume should be pursued by each of the member states.

The Compact agreement requires the identification of the next host state by mid-1986 to allow sufficient time for facility siting, licensing and construction of a disposal facility.

To accomplish this, the Compact Commission has adopted a three-track process to identify the next host state with a participation procedure, a designation procedure and a volunteer procedure. The three tracks proceed simultaneously converging to the identification of a single state to host a regional facility. The compact agreement empowers the Compact Commission to designate a host state. Thus the designation track is being pursued with the assistance of data describing states' amount of land potentially suitable for a disposal site, type and volume of waste generated, and transportation distances from major generators.

The Compact agreement also states that designation cannot occur until member states have been provided the opportunity to volunteer. To date, no states have volunteered to host the next regional facility.

The third track of the host state identification process, the participation track, contemplates the difficulty of outright designation and

the unlikelihood of a state volunteering. The participation track seeks to encourage states to consider the costs and the benefits of hosting a facility by requiring each eligible state to submit a state proposal of terms and conditions for becoming a host state. (Because South Carolina is now host, it is not required to submit a proposal.) No state proposal will be acted on by the Southeast Compact Commission unless motion is made by the author state. A state's proposal of terms and conditions may be modified as host state identification progresses. Modification and motion for acceptance would most likely be made if outright designation appears probable, for a state's proposal of terms may not be honored once a state is designated.

Virginia's state proposal is being prepared by Mr. Burton in consultation with Senator Gartlan, as instructed by Governor Robb. Several state agencies, interested organizations, and individual citizens have recommended terms and conditions for inclusion in the proposal. The preparation schedule included opportunity for public review and comment. Once completed, the proposal will be submitted for the Governor's approval prior to submission to the Compact Commission on January 27, 1986.

Congressional Consent

Full implementation of the interstate compacts formed pursuant to the Low-Level Radioactive Waste Policy Act requires the approval of Congress. Legislation seeking compact approval was introduced in 1984 and 1985. However, Congress was slow to act because approval would allow the three compacts with operating disposal facilities to exclude waste from "unsited" regions.

To resolve the impasse, Congress has enacted amendments to the 1980 Act. The amendment package provides a 7-year transition period that allows unsited regions continued access to existing disposal facilities if regions

without sites meet prescribed milestones for establishing their own disposal capacity. The amendments represent a delicate compromise between the many effected parties. The Solid Waste Commission has worked with the Virginia Congressional delegation to ensure that the amendments best reflect Virginia's interests and membership in the Southeast Compact.

Public Participation Program

The Commission continued its public participation efforts under the U.S. Department of Energy (DOE) grant originally awarded in 1982. While the grant had been scheduled to expire in December 1984, the Commission believes that public involvement is crucial during the host state selection phase. Accordingly, the Commission sought and received an extension of the DOE grant that facilitated public discussion of the regional management plan and host identification.

In 1985 the Solid Waste Commission continued to distribute a LLW newsletter to roughly 1,000 interested persons.

In February, the Southeast Compact Commission held its meeting in Richmond. This meeting had the largest attendance of any Southeast Compact Commission meeting to date, due largely to meeting announcements made through the newsletter.

In March, 1985 the Solid Waste Commission established a Citizen's Advisory Committee composed of (15 members and their alternates) Virginia citizens who have been active in Virginia's LLW issues and several members who have expertise in the area. The committee was established to provide a forum for dialogue among the diverse interested parties that could enhance the State's pursuit of regional waste management. The committee is funded by the DOE grant and the meetings are facilitated by the University of Virginia's Institute of Environmental Negotiation.

In June, Citizens Advisory Committee members toured the disposal facility at Barnwell, South Carolina. The group also met with local government officials from the Barnwell area, a South Carolina environmentalist, and a South Carolina regulatory agency director. This provided an opportunity for candid exchange about disposal facility operations and community acceptance.

After the members were acquainted with the requirements and time-tables governing Virginia's LLW issues, the Citizen's Committee reviewed a draft regional management plan submitted to the Southeast Compact Commission by its contractor. The Committee pointed out several areas they felt may adversely affect Virginia. These comments along with the Solid Waste Commission's July 15, 1985 public hearing record and comments of the Commission's Low-Level Waste Committee were forwarded to Virginia's Southeast Compact Commission members. The contractor's proposed regional management plan was not adopted by the Southeast Compact Commission, but rather accepte as a reference document.

The Committee then began recommendations for inclusion in Virginia's state proposal. (Each member state is required by the Southeast Compact Commission to submit their state proposal 90 days after adoption of the regional management plan.) These recommendations were forwarded to Virginia's Compact Commission members and considered during preparation of the state proposal.

The public participation program activities will continue through June 1986 under the terms of the DOE grant.

HIGH-LEVEL RADIOACTIVE WASTE

In 1983, crystalline rock bodies in Virginia and 16 other states were identified for consideration in the siting of a high-level radioactive waste repository. The identification was made by the U. S. Department of Energy (DOE) in its implementation of the Nuclear Waste Policy Act.

The Nuclear Waste Policy Act was enacted by Congress in 1982 to prepare for the 10,000-year isolation of high-level radioactive waste (HLW). Nearly 800,000 cubic feet of HLW, primarily spent fuel, has been generated over the past four decades. There were no plans for its permanent disposal until passage of the Act. Through the Act, the U.S. Department of Energy (DOE) is authorized to implement a research, development and demonstration program for HLW management, and to proceed with the siting of two repositories for permanent HLW disposal.

DOE's selection of a first repository site is expected in 1990 from among sites under investigation in Washington, Nevada and Texas. The first repository is scheduled to begin operation in 1998. The Act requires that a second repository be operational by the time the first repository has received 70,000 metric tons of waste.

The second repository site is to be chosen by 1998. Sites considered but not selected for the first repository as well as locations in crystalline rock will be evaluated. DOE plans the second repository to be operational by 2006.

Attempting to accommodate state participation in the repository siting process, DOE has provided opportunities for states to comment on procedures and, to a degree, effect the implementation of the program. In Virginia, the State Health Department's Division of Solid and Hazardous Waste Management has coordinated executive branch agencies' participation, and the

Solid Waste Commission's Executive Director has served as a liaison to DOE (as assigned by a joint resolution of the 1984 General Assembly). In addition, Senator Joseph V. Gartlan, Jr. and Delegate A. Victor Thomas serve as members of the National Conference of State Legislatures' High-Level Radioactive Waste Working Group.

The Department of Energy is currently concluding its "region-to-area" screening of the 17 crystalline rock states to identify 15 to 20 potentially acceptable areas with the highest likelihood of containing suitable sites for a second HLW repository. This is being accomplished by eliminating portions of the broad geographic regions containing crystalline rock based on siting criteria that prescribe desirable repository sites. Two sets of criteria are being applied in the screening process.

The first criteria identify geologic, environmental and demographic features, measurable at a regional scale, that are considered incompatible with the location of a high-level waste repository. The presence of one of such features will disqualify the site and eliminate the underlying portion of a rock body from further consideration.

Legislative and executive branch agency staff have reviewed the data collected by DOE to ascertain that disqualifying features are accurately recorded. In comparison with the vast masses of crystalline rock bodies found in 57 Virginia counties, the land area eliminated by the disqualifying criteria is relatively small.

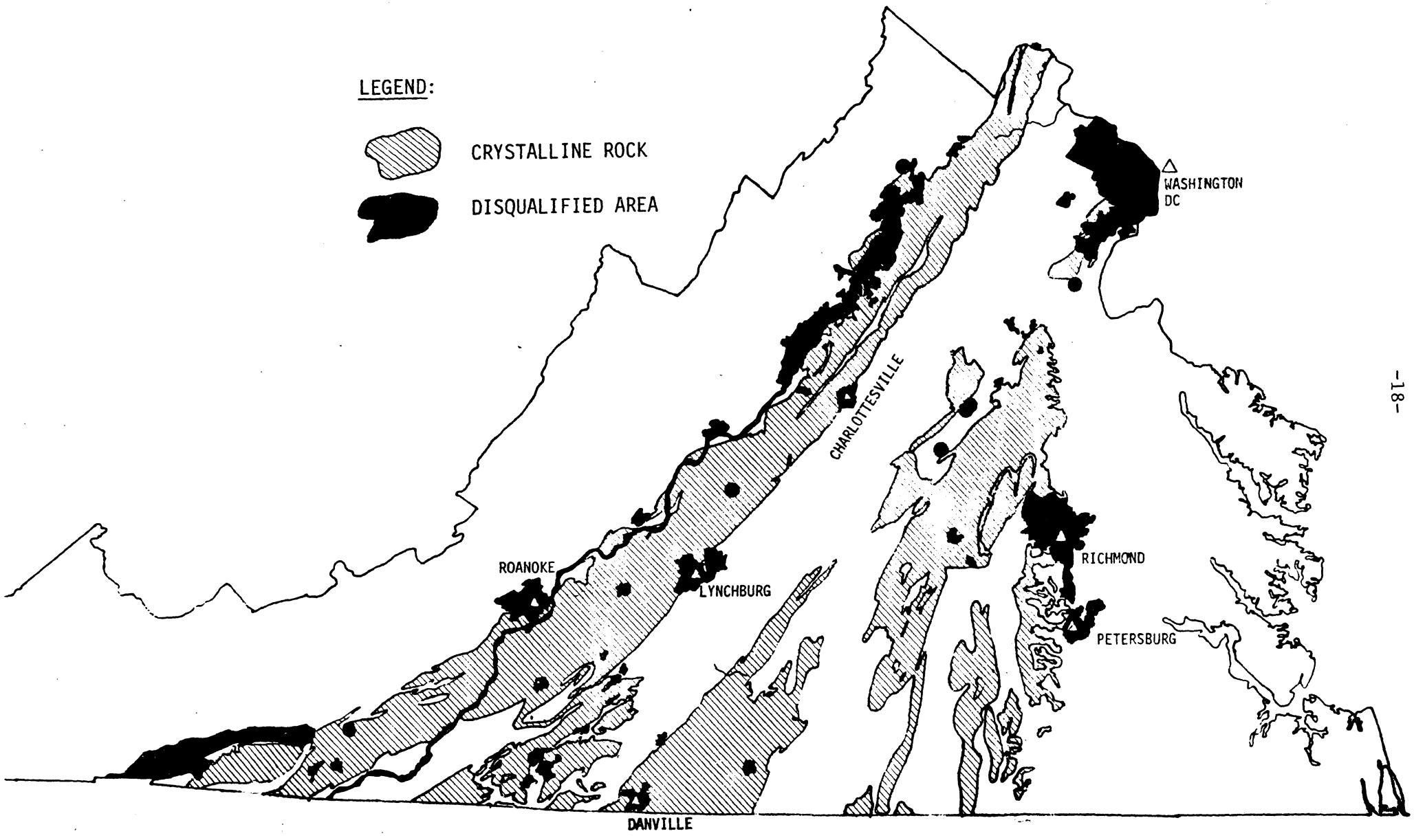

FIGURE 2: VIRGINIA'S CRYSTALLINE ROCK BODIES

The second set of siting criteria identifies conditions, potentially adverse or favorable, for evaluation of the rock bodies remaining after application of the disqualifying criteria. The presence of a single potentially adverse conditional factor may not eliminate sites, but in combination with others may assist in screening out less suitable areas. Under the conditional criteria, additional portions of the state's rock bodies will be eliminated in the region-to-area screening process. However, the likelihood of some parts of Virginia being identified in January 1986 as areas remaining under consideration is certain.

Still, the selection of rock bodies in any areas of the state does not mean that such areas are indeed suitable for HLW disposal or are likely nominations for a repository site. DOE's use of only published data applicable to regional analysis at this phase of the screening process does not incorporate information on characteristics of specific rock bodies. Also, some candidate areas may be identified simply because little or no research has been completed to describe the rock as either suitable or unsuitable.

After DOE releases its draft report in January, the State will have 90 days to submit comments. Information is already being gathered in an effort to develop technical evidence for the State's response to DOE's selection of Virginia rock bodies, should that occur.

Once finalized in mid-1986, DOE's selection of candidate areas will be followed by several years of on-site investigation. This field work is presently scheduled to commence in September 1986. Deep shafts will be drilled for determining the suitability of rock in candidate areas and the likelihood of locating a potential site. Considerable effort and commitment will be required of the State to assess DOE's interpretation of data

collected, determine and mitigate impacts of a repository site investigations, and represent the public's interests.

The evaluation of candidate areas will result in DOE's nomination and recommendation of specific sites for detailed site characterization. Of 5 sites to be nominated for the second repository, 2 may be chosen from among the repository candidates not selected for the first repository.

By October 1991, DOE will recommend to the President 3 sites for characterization -- extensive field work and testing through exploratory shafts. After characterization, DOE will recommend a repository site to the President, who will forward the recommendation to Congress for approval. The determination of a second repository site is expected to be completed by 1998.

The Repository

The repository will require both surface and underground construction. At the surface, 400 central acres will contain buildings that house operations preparatory for waste disposal. Likely structures include security and administration offices, water and sewage treatment plants, shipment receiving and unloading warehouses, and cask storage facilities.

Below ground, at a depth of 2,000 to 4,000 feet, the repository will consist of a network of tunnels covering approximately 2,000 acres. The tunnels will be accessed by shafts. Canisters of solidified waste will be lowered through shafts into the tunnels and mechanically placed in lined holes drilled in the tunnel floor. The holes will be capped to allow the waste to be retrieved for an interim period. The repository will remain operational for 30 to 40 years. When all repository tunnel holes are filled, the shafts will be backfilled and permanently sealed.

DOE will obtain fee simple title to a surface and subsurface area of the entire repository dimension plus a surrounding minimum buffer zone of 800 feet. An area of at least 1¼ miles beyond the DOE-owned land will be restricted from subsurface use for a total restricted area of approximately 10,000 acres.

Radiological effects from accidental releases of radioactivity, such as flooding, rock fracturing, or human intrusion, are being estimated for area residents. DOE estimates that the expected risk from faulting or flooding is to be 0.00003 premature cancer deaths and serious genetic disorders per million years. However, many uncertainties are associated with ensuring waste containment over the 10,000 years during which the material remains radioactive. Careful review of the site's capability to isolate the waste and the procedures for waste transport, handling and disposal will be necessary to achieve assurances of protecting public health from direct radiological exposure and indirect contamination through environmental pathways.

At this point, DOE's discussion of socioeconomic impacts of a repository has been generally limited to estimates of the temporary repository-induced growth to the area's economy and population. Repository construction will employ 4,200 workers for four years, and operation will employ about 1,100 workers for 30 years. Auxiliary services and local purchases are expected to stimulate an additional 1,800 jobs.

Monitored Retrievable Storage

In April 1985, the Department of Energy announced its intent to pursue Congressional approval for construction of a Monitored Retrievable Storage (MRS) facility in Tennessee. If approved, the facility would become

an integral part of the national system for management of commercial high-level radioactive wastes, authorized under the Nuclear Waste Policy Act.

The Act requires the federal government to take title to HLW in 1998, but cannot guarantee that a repository will be operational by that date. Recognizing the difficulties this could pose, Congress directed DOE (through the Act) to study the feasibility of one or more temporary storage facilities. DOE has completed its study and recommends the construction and operation of an MRS facility no sooner than construction authorization is granted for the first HLW repository.

As proposed, the MRS would not be simply a storage facility. Rather, it would serve as a centralized processing and packaging operation to prepare waste for ultimate disposal. The MRS would have capacity to hold up to 15,000 metric tons of waste temporarily until a disposal site is operational. DOE states that the incremental costs associated with the MRS are small relative to the benefits it can provide to the national waste management system. The recently released preliminary Environmental Assessment claims that the MRS would reduce cross-country shipments of spent fuel by 95 percent and decrease the average number of waste shipments in progress at any one time by more than 50 percent.

In determining potential sites, DOE considered high-level waste generators and locations already examined for licensing nuclear operations. After an evaluation of 37 sites, three candidate sites in Tennessee were selected. The preferred location is at the cancelled Clinch River Breeder Reactor project site in Oak Ridge. The two alternatives are the DOE Oak Ridge federal reservation in Roane County, and the Tennessee Valley Authority's cancelled Hartsville nuclear power station site northeast of Nashville.

Should Congress approve the MRS, construction will begin in 1991. The first waste shipments will arrive in 1996, two years prior to the scheduled completion date for the first repository. As many as 5 shipments per day would arrive at the MRS by rail or truck.

The concern for Virginia is the potential impact from transport of waste through the state. With one-third of the nation's nuclear power plants located in the northeast, many shipments are likely to traverse Virginia highways and railroads to arrive at either of the three candidate sites.

State authority to regulate waste shipments enroute to a DOE facility is limited by the Interstate Commerce Clause and DOE's taking ownership of the waste at reactor sites. State responsibilities can include driver credential and vehicle inspection, assistance with highway routing decisions, state and local security, emergency response and communication with enforcement officers.

Recognizing the reason for concern among "corridor" states, DOE held briefings in each state adjacent to Tennessee. At the Virginia briefing, held in July, DOE officials described possible routing along Interstates 81 and 64 and major railways for transport of 2 to 5 HLW shipments a week once the MRS is approved and constructed.

RESOURCE RECOVERY: SJR 105

By Resolution of the 1985 General Assembly, the Solid Waste Commission was requested to study the impacts of certain "contaminants" on the processing and recovery of scrap steel. The Resolution acknowledged the value of reclaiming steel from discarded items, both for the recovery of metals and for the considerable reduction of the waste volume otherwise destined for disposal by municipalities. The Resolution also noted that many steel products contain heavy metals and chemicals that may jeopardize recovery of the steel.

The Solid Waste Commission first addressed the study by meeting with scrap steel industry representatives and touring a scrap steel facility. A 7-member special subcommittee was established (as provided by the Resolution) with members representing local government, the scrap steel industry and the Commission.

The Subcommittee members included the following:

Mr. Frank H. Miller, Jr., Chairman, City of Hampton
Mr. Patrick J. Brady, Henrico County
Mr. Dayton L. Cook, City of Alexandria
Mr. R.E. Dorer, Solid Waste Commission
Mr. Arthur Peregoff, Solid Waste Commission
Mr. Frank W. Webber, Jr., Chesterfield Auto Parts
Mr. Charles Williams, Jr., Institute of Scrap Iron & Steel

Through the special subcommittee's discussions, local government and scrap steel processors were found to have similar problems with the disposal of many consumer products. Manufacturers of most automobiles and many household appliances introduce certain additives, such as alloys, to improve the quality of the product. These additives usually pose no risk during the useful life of the product. However, in sufficient quantity, such additives

may require regulatory oversight as hazardous waste when items are disposed or processed for recovery of steel components.

Examples of these additives are cadmium on automobile frame bolts and in paint of household appliances, and lead in batteries and fuel tanks. Available information, although limited, indicates that the actual quantities are small. A 1980 industry-wide study of ferrous scrap processors concluded that the waste from processing plants can seldom be considered "hazardous" as evaluated against federal toxicity standards for compliance with hazardous waste regulations. However, the threshold for compliance with such regulations were reduced in 1984, increasing the discomfort of scrap processors as well as local government officials with current practices for management of these trace additives.

The actual extent of the problem is, at present, unknown. An estimated 17.8 million tons of scrap steel is generated annually in Virginia, but not all is recovered for processing. The amount not recovered and recycled is assumed to be part of the waste stream disposed in municipal and industrial landfills. Local government officials have acknowledged scrap processing of bulky items as an important alternative to landfilling.

The subcommittee distributed a survey in an effort to estimate the amount of scrap steel being discarded rather than recovered and to measure the degree of local government's reliance on scrap processors. A copy of the survey with tabulated results is included as Appendix B.

Numerous approaches to resolving the problem were considered by the Subcommittee during its deliberations. In its final report to the Solid Waste Commission, the SJR 105 Subcommittee made the following recommendations:

1. Virginia encourage development of hazardous waste disposal capacity within the State;

2. manufacturers should address the impairments to recyclability of valuable metals by the use of substances which potentially require disposal as hazardous waste;

3. Virginia discourage the use of hazardous substances in manufacturing;

4. manufacturers share responsibilities for the disposal of hazardous waste resulting from their processes and products;

5. the Solid Waste Commission request the Environmental Protection Agency to address manufactured products as a source of hazardous waste;

6. the General Assembly be requested to seek resolution to the prohibitive cost and lack of availability of liability insurance;

7. Virginia advise the general public, particularly local and state decision-makers, of the need for disposal access, the value of private metals recycling to municipal solid waste management, and the importance of available affordable disposal to continued economic development and maintenance of public health and the environment; and

8. Virginia encourage the cooperation of the U.S. Department of Defense and other federal agencies with operations in Virginia to prevent contamination of metal scrap offered for sale to the private sector with hazardous substances.

During 1986, the Commission will consider the Subcommittee's recommendations and, as appropriate, how they could be implemented. The Commission will report its conclusions in the next annual report.

PLANS FOR 1986

Programs for improved management of solid wastes are presently evolving largely to comply with recent changes in federal law and to respond to public demands for safe, economical waste disposal. During 1986, the Solid Waste Commission will continue its leadership in the State's efforts to provide Virginia's citizens and businesses with innovative approaches to waste management.

The Solid Waste Commission has agreed that its 1986 program will include the following activities, in addition to any requests made by the General Assembly.

Hazardous Waste

- Monitor implementation of the Hazardous Waste Facilities Siting Act.
- Assist small quantity generators' compliance with RCRA and determine sources of financial aid to small businesses.
- Study the availability and affordability of liability insurance for hazardous waste generators, transporters and disposers.
- Consider the appropriateness of the State's mechanism for funding its contribution for cleanup of Superfund sites.
- Consider the need for providing local collection of household chemical wastes.

Low-Level Radioactive Waste

- Advise the Governor regarding Virginia's membership in the Southeast Compact, particularly throughout the host state identification process.
- Technically support Virginia's Southeast Compact Commission members.
- Complete the DOE contract on the public participation program and submit the final report in September.
- Participate in the review of the Health Department's proposed regulations pursuing agreement state status.
- Promote compliance with the Compact language requiring waste volume reduction.

High-Level Radioactive Waste

- Continue liaison for the legislature with the Department of Energy.
- Advise the Governor and the General Assembly on repository siting activities and the MRS proposal.
- Consult with the Virginia delegation during Congressional reauthorization of the Price-Anderson Act.
- Review existing state transportation law and its adequacy to address interstate shipments of high-level radioactive waste.

Municipal Solid Waste and Resource Recovery

- Survey solid waste management practices in Virginia.
- Consider the need and availability of funding for innovative technologies.
- Consider recommendations of the SJR 105 Subcommittee.

APPENDIX A

PROPOSED AMENDMENTS TO HAZARDOUS WASTE FACILITIES SITING ACT

The Hazardous Waste Facilities Siting Act, adopted by the 1984 General Assembly, establishes a process for the certification of proposed hazardous waste management facilities. The procedure provides for significant public involvement, including that of the affected local government. The Act allows the local governing body to waive participation, presumably when the locality does not object to the facility proposal.

The recommended amendments below clarify the Solid Waste Commission's original intent for the effect of the waiver option on the site certification process.

§10-186.9.E. Notwithstanding the foregoing provisions of this chapter, the governing body of a host community may notify the Council, within forty-five days after receiving a notice of intent pursuant to §10-186.C.1., that it has elected to waive further participation under the provisions of this Chapter. After receiving such notification from a host community, the Council may issue certification of site approval without further participation by that host community under the provisions of Sections 10-186.9 and 10-186.13 of this Chapter. Nothing herein shall prevent a host community from submitting comments on the application or participating in any public hearing or meeting held pursuant to this Chapter, nor shall the host community be precluded from enforcing its regulations and ordinances as provided by §10-186.19.B.

§10-186.10.D. This Section shall not apply when the host community has elected to waive participation under §10-186.9.E.

§10-186.11.G. This Section shall not apply when the host community has elected to waive participation under §10-186.9.E.

§10-186.12.A. At any time within six months after submission of the final impact analysis, or as otherwise provided herein, the applicant may submit to the Council an application for certification of site approval.

§10-186.12.D. If the host community has waived participation under the provisions of §10-186.9.E., the Council shall, at the time that notice of the application is made, request that the governing body submit, within thirty days of receiving notice, a report meeting the requirements of §10-186.12.E.2.

§10-186.12.H. Notwithstanding any other provision of this Chapter, if the host community has notified the Council, pursuant to §10-186.9.E., that it has elected to waive further participation hereunder, the Council shall so notify the applicant within fifteen days of receipt of notice from the host community, and shall advise the applicant of the time for submitting its application for certification of site approval. The applicant shall submit its application within the time prescribed by the Council, which time shall be not less than ninety days unless the applicant agrees to a shorter time.

§10-186.14.A. 1. Within thirty days after receipt of the governing body's report or as otherwise provided in 10-186.12.F., the Council shall issue or deny draft certification of site approval.

§10-186.14.A. 2. When application is made pursuant to §10.186.12.H., the Council shall issue or deny draft certification of site approval within ninety days after receipt of the completed application.

§10-186.16.B. 3. [add at end of subsection]: This requirement shall not apply when the host community has waived participation pursuant to §10-186.9.E.

APPENDIX B

SURVEY RE MUNICIPAL MANAGEMENT OF DISCARDED SCRAP STEEL (SJR 105)

1. The county/city of _____ operates a municipal landfill.

2. AUTOMOBILES

Automobiles 4 are/ 36 are not accepted for disposal at our landfill(s).

If yes:

Batteries are required to be removed: 2 Yes 2 No

Approximate number of automobiles accepted in 1984: ____

The county/city arranges for pickup of discarded automobiles from:

individuals 7 Yes 4 No

commercial operators 1 Yes 5 No

The county/city arranges for pickup of discarded automobiles at some collection point (such as the landfill). 3 Yes 5 No

The annual cost to the jurisdiction for management of discarded automobiles is _____. (Note whether actual or estimate.)

3. APPLIANCES (e.g., refrigerators, stove, washers, dryers).

Appliances 39 are/ 1 are not accepted for disposal at our landfill(s).

If yes:

Approximate number of appliances accepted in 1984: ____

The county/city arranges for pickup of discarded appliances from:

individuals 8 Yes 8 No

commercial operators 2 Yes 8 No

The county/city arranges for pickup of discarded appliances at some collection point (such as the landfill). 13 Yes 2 No

The annual cost to the jurisdiction for management of discarded appliances is _____. (Note whether actual or estimate.)

4. INDUSTRIAL SCRAP METAL (resulting from a manufacturing process).

Industrial scrap metals 17 are/ 18 are not accepted for disposal at our landfill(s).

If yes:

Approximate amount (tons or volume) of industrial scrap metals accepted in 1984: _____

The county/city arranges for pickup of discarded industrial scrap metals from:

individuals	1 Yes	4 No
commercial operators	____ Yes	4 No

The county/city arranges for pickup of discarded industrial scrap metals at some collection point (such as the landfill). 3 Yes 3 No

The annual cost to the jurisdiction for management of discarded industrial scrap metals is _____. (Note whether actual or estimate.)