REPORT TO THE GOVERNOR





New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board

June 1999

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New Jersey Low-Level Redioactive Waste Disposal Facility Siting Board

Mailing Address PO Box 415 Trenton, New Jersey 08625-0415

Street Address 25 Artic Parkway Ewing, New Jersey 08638

Telephone (609) 777-4247

Fax (609) 777-4252

Chairman Paul E. Wyszkowski, P.E.

Administration Jill Lipoti, Ph.D. The Honorable Christine Todd Whitman, Governor

In your June 26,1998 letter you requested the Board to "prepare a comprehensive plan and explore all options for the short and long term needs for the funds (Dedicated Radioactive Waste Fund) with sufficient input from affected parties..." In response to that request, a workgroup was formed of members of the Siting Board, Northeast Compact Commission and NJDEP staff to prepare this plan.

We are pleased to send you the *Disposal Options Report* of the New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board. The Board approved it on June 3, 1999.

The Northeast Compact Commission is New Jersey's primary mechanism for assuring our generators the right of access to facilities outside the region and has prepared most of the factual information for the document. Additional information was accumulated at workgroup meetings with disposal facility representatives and in staff phone calls to the facility's regulators.

Our findings:

1. No new low-level radioactive waste facilities have been sited in the United States under State/Compact direction. Social and political pressures as well as federal government inaction have thwarted all efforts in this area and appear to preclude any resolution in the near future. A few State/Compact entities are considering alternative low-level radioactive waste management concepts, which may facilitate physical siting; however, there is no assurance that this effort will be more successful.

2. Private corporations under government licenses in South Carolina, Utah, and the State of Washington operate the only current low-level radioactive waste disposal sites receiving commercial waste. The Washington location only accepts waste from its compact region and, by agreement, the Rocky Mountain Compact; the Utah site is restricted by State law to only receive certain low-level radioactive waste forms. The South Carolina facility accepts all low-level radioactive waste; however, the State is exploring effectively closing or limiting access to this site in the near future. It appears that this disposal site will continue to accept waste from New Jersey generators for at least two years, before action might be taken to limit out-of-state access.

- 3. There are efforts by private corporations to open new facilities in Texas, Utah, and Colorado but, if successful, these may not be accessible for commercial nationwide low-level radioactive waste disposal. As envisioned, either of the Texas facilities (WCS or Envirocare of Texas) would be restricted to its Compact members, although they may accept Department of Energy (DOE) waste. The proposed Colorado facility (Safety-Kleen's Deer Trail site) would be limited to federal DOE waste. The proposed Utah facility (Safety-Kleen's Grassy Mountain site) would only accept low-level radioactive waste similar in activity to Envirocare of Utah's facility.
- 4. The U.S. Senate Energy Committee has requested the Government Accounting Office (GAO) to prepare reports on the current status and effectiveness of the national Compact/State low-level programs. The GAO has also been asked to assess the federal Department of Energy's program in the management of their low-level radioactive waste. These reports are to be submitted to the Committee for action this year. It can not be predicted what this study will conclude or recommend.
- 5. The National Governor's Association reaffirmed their commitment to the Compact system at their annual meeting, however, they limited their resolution to one year, and expect to revisit the issue next year.
- 6. The economic studies undertaken by the New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board, the Connecticut Hazardous Waste Management Service and several other state entities have indicated that the operational cost of relatively small new disposal facilities designed in keeping with current regulations would be in excess of \$500 per cubic foot of waste. The current disposal cost at South Carolina and Utah is approximately \$300 and \$100 per cubic foot (CF) of waste respectively.

Summary of findings:

It is apparent that the disposal management of low-level radioactive waste throughout the nation is in a state of flux. However, the current private low-level radioactive waste disposal vendors believe that the situation will be stabilized within the next five years through their companies' efforts and/or by a change in the federal *Low Level Radioactive Waste Policy Act*. These firms also believe that the reduced volume of commercial low-level radioactive waste can be accommodated in existing and proposed privately operated disposal sites.

This evaluation of the status of national low-level radioactive waste disposal programs has confirmed the validity of New Jersey Siting Board's previous position and actions to suspend active siting of a low-level waste site in our State. It is also recognized that the problem has not been resolved at this time and that New Jersey may have to again consider the "in-state" siting issue at some future time. However, currently there are disposal facilities accessible to New Jersey generators of low-level radioactive waste and there appear to be several national developments in this waste management dilemma that are being pursued which may resolve the issue for New Jersey.

Recommendations for future action:

The New Jersey Siting Board therefore should continue in the suspension of active siting and work with the Northeast Compact Commission to maintain a national monitoring effort of low-level radioactive waste disposal developments. Liaisons with the National Governor's Association, the National Conference of State Legislators, the Low-Level Radioactive Waste Forum, the Conference of Radiation Control Program Directors and other state agencies and Compacts should be maintained. In addition, the Siting Board should continue its public education program on radioactive waste management and continue to

evaluate potential new technological opportunities that may be beneficial to New Jersey low-level radioactive waste generators.

Since the Siting Board has curtailed its activities, its financial requirements have been significantly reduced. Therefore, the Board should consider the return of funds to the contributing low-level radioactive waste generators that are in excess of a nominal 3-year operating budget. If there is need for additional operational funding to resume active siting in New Jersey or for an out-of-state cooperative option undertaking, such appropriate funding can be raised through generator assessments in accordance with N.J.A.C. 7:60.

We welcome your comments and suggestions and we are available to meet with you if you wish to discuss our recommendations.

PlEWryke.

Paul E. Wyszkowski, P.E. Chairman

cc. Senate President Speaker of the Assembly Members of the Senate Members of the Assembly

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1. INTRODUCTION

This Report presents the status of current disposal options for Low-Level Radioactive Waste (LLRW) generated in New Jersey and outlines the potential for continued or future access to these and other possible opportunities for out-of-region LLRW disposal.

In June 1998 the Governor requested the Board to "prepare a comprehensive plan and explore all options for the short and long term needs for the funds (Dedicated Radioactive Waste Fund) with sufficient input from affected parties..." In response to that request, a workgroup was formed of members of the Siting Board, Northeast Compact Commission and NJDEP staff to prepare this plan. See Appendix A.

The Northeast Compact Commission prepared major portions of the factual information presented in this document. Additional information was accumulated at workgroup meetings with disposal facility representatives and in staff phone calls to the facility's regulators. On December 3, 1998 the workgroup met with representatives of Envirocare and Waste Control Specialists. Another meeting was held on February 22, 1999 with a representative from Chem-Nuclear Services and conference calls with representatives from Safety-Kleen and U.S. Ecology. Subsequent telephone discussions were held with regulators of these sites.

2. A HISTORY OF NATIONAL LLRW MANAGEMENT

During the earliest years of the development of nuclear technologies, the disposal of radioactive waste by-products was provided by the Atomic Energy Commission (AEC). During the 1950's, several companies were also licensed to dispose of commercially generated LLRW at sea. With the growth of commercial applications of nuclear technologies, the AEC announced in 1960 that "regional" land disposal sites would be established by the private sector. These sites would be on state or federal land and would be licensed and regulated by government agencies.

Six facilities were licensed and operated:

- 1) Beatty, Nevada
- 2) Maxey Flats, Kentucky
- 3) West Valley, New York
- 4) Hanford, Washington
- 5) Sheffield, Illinois
- 6) Barnwell, South Carolina

These facilities were open to the nation's LLRW generators. By the late 1970's, operational problems led to the closure of the facilities at Maxey Flats, West Valley, and Sheffield. The Governors of Washington, South Carolina and Nevada wanted to demonstrate the need for more stringent enforcement of LLRW regulations and also began to signal dissatisfaction with their status as the "hosts" for the nation's disposal sites.

The concerns of these governors were a factor in several major developments. The first was the adoption of 10 CFR Part 61 in the early 1980's. These regulations established licensing requirements for the land disposal of radioactive waste that reflect the lessons learned from the closure of the three facilities. Waste management practices have changed as a result of these regulatory enhancements.

The second major development was the passage of the "*Low-Level Radioactive Waste Policy Act of 1980*", P. L. 96-573. This law, developed with the cooperation of the National Governors' Association (NGA) and the states, was designed to restore a regional approach to disposal and encouraged the formation of interstate compacts to set up a regional system. The *Act* declared that each state would be responsible for management of LLRW generated within its borders.

The *Act* gave compacts or host states the power to exclude from their regional facility any LLRW not generated within the borders of the compact. This "exclusionary" authority, an exception to the Interstate Commerce Clause¹, was an important incentive in the establishment of compacts. At the time the *Policy Act* was adopted, organizations such as the National Governors' Association (NGA) and the National Conference of State Legislatures believed that state participation in facility development would provide for better public oversight than the private sector or the federal government.

In the early 1980's, eleven states in the Northeast region (Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island, New Jersey, Pennsylvania, New York, Maryland, and Delaware) established a working group to consider the development of a Northeast Compact. Working with the Coalition of Northeastern Governors, this group drafted the *Northeast Compact Act*. In 1983, the *Act* was sent to the governors of the eleven states. The *Act* was approved by the legislatures in four states: New Jersey, Connecticut, Delaware and Maryland. Delaware and Maryland subsequently withdrew from the Northeast Compact to join the Appalachian Compact.

Several years after the 1980 *Policy Act* was adopted, the states had not made adequate progress toward the development of new LLRW disposal facilities. A network of compacts would not be established by 1986, the date the three operating facilities in the "sited states" could close as provided in the *Policy Act*, thereby leaving the unsited states unable to safely dispose of LLRW.

A compromise was devised to assure the goal of compact development by states in unsited compact regions. In the *"Low-Level Radioactive Waste Policy Amendments Act of 1985"*, P. L. 99-240, the three operating facilities agreed to remain open until 1992², but states had to demonstrate progress toward assuming responsibility for their own LLRW disposal by meeting a series of milestones that were set out in the *Act*. The *Act* included penalties if the milestones were not accomplished. The *Act* also ratified seven interstate compacts, including the *Northeast Interstate Low-Level Radioactive Waste Management Compact Act, P.L.* 99-240, *SEC.* 227. ³ Attached as APPENDIX B.

¹Traditionally, LLRW had been treated as a commodity subject to all the provisions of free trade and commerce of the U.S. Constitution. Without the waste exclusion provision in the Policy Act, LLRW would have continued to be an article of interstate commerce, and all LLRW facilities would have been required to be open to use by out-of-state LLRW generators.

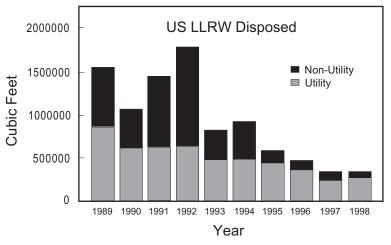
²In December 1992, the Beatty facility closed permanently. The Richland facility remained open to generators in the Northwest Compact and, by contract, to those in the Rocky Mountain Compact. The Barnwell facility closed to all generators except those in the Southeast Compact on June 30, 1994; legislation adopted in June, 1995 reopened that facility on July 1, 1995 to all generators except those in North Carolina.

³The six other compacts were: the *Central Interstate LLRW Compact*; the *Central Midwest Interstate LLRW Compact*; the *Midwest Interstate LLRW Management Compact*; the *Northwest Interstate Compact on LLRW Management*; the *Rocky Mountain LLRW Compact*; the *Southeast Interstate LLRW Management Compact*. The *Appalachian States LLRW Compact* and the *Southwestern LLRW Compact* were approved in 1988; the *Texas LLRW Compact* was approved in 1998. See Compact Map, *attached as APPENDIX C.*

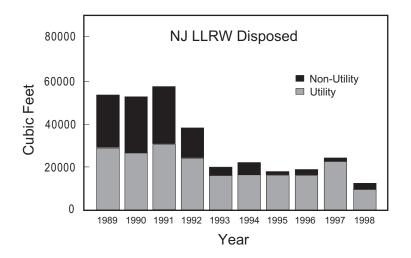
2.1 WASTE VOLUME

By 1989, only three of the original six facilities were available for disposal: Beatty, Hanford and Barnwell. Since then, Barnwell's cost per cubic foot has gone from under \$60 to over \$335, Beatty has closed, and Hanford, which accepts all LLRW categories from only the Northwest and Rocky Mountain Compacts, remains at approximately \$90.

Due to the increased disposal costs at these locations, pressures to decrease volume, and disposal alternatives for low-activity/high-volume waste (see section 5.2), disposal volume at Barnwell and Hanford has decreased dramatically. The following chart shows the volume for national disposal to be over 1.5 million cubic feet in 1989 and less than 400,000 cubic feet in 1998.



New Jersey's volume of LLRW for disposal decreased similarly, as follows:



Note that this data does not include waste volume sent to a low-activity/high volume facility such as Envirocare of Utah. Both nationally and in New Jersey during the last ten years, non-utility and utility generators have decreased their volumes considerably. The data for these charts were obtained from the Idaho National Engineering & Environmental Laboratory's Manifest Information Management System of the National Low-Level Waste Management Program.

3. THE NORTHEAST COMPACT COMMISSION AND OUT-OF-REGION DISPOSAL

The *Northeast Compact Act* created the Commission and gave it a wide array of powers, duties and responsibilities. One of the primary responsibilities of the Commission arises from its authority to enter into agreements "for the importation of [low-level radioactive] waste into the region <u>and for the right of access to facilities outside the region for [low-level radioactive] waste generated within the region</u>." P. L. 99-240, Sec. 227, ART. IV(i)(11) (EMPHASIS ADDED).

The Commission serves as the lead contact for its member states in the exploration of the availability of out-of-region LLRW management options, particularly disposal. Although the member states of Connecticut and New Jersey have pursued their respective obligations to develop facilities for the disposal of LLRW generated within their states, each has always recognized the goal of finding an out-of-region alternative for the LLRW generated in the North-east Compact region.

The philosophy and strategy followed by the Commission as it pursues its goal of obtaining outof-region disposal consists of four parts: information; communication; participation; and support.

Information

The Commission collects information about national LLRW management and issues that could influence waste management in New Jersey and Connecticut. The Commission monitors the actions and present status of other states and compacts. The Commission also monitors federal activities, including the promulgation of relevant regulations and the development and issuance of policy statements and guidance, in areas such as DOE waste management and EPA/NRC cleanup standards.

Communication

The Commission shares with other states and compacts its continuing interest in obtaining outof-region access to disposal, and reminds them of this interest at proper times and in appropriate ways. Communication can take the form of correspondence with governors and state/ compact officials, but often, more significantly, personal contacts are developed and maintained.

One key to this strategy is to know when an opportunity to share information is present, as, for example, when a new governor takes office or when other personnel involved in the LLRW issue change. Changes in policies by states, compacts, or operators of sites may affect access by New Jersey or Connecticut.

The Commission has informed other states and compacts that it will work with its member states in an effort to obtain resources that may be required to obtain access to an out-of-region disposal facility. In short: the Commission is willing to try to accommodate another state or compact that may offer a disposal opportunity.

The Commission has also used every opportunity it has had to inform other states and compacts about the ability of the Northeast Compact to admit other states and compacts as members without the need for Congressional ratification. This feature of the Northeast Compact has been an essential part of its communications to other states and compacts that are developing disposal capacity. This potential for Northeast Compact membership would provide a new host state with the protection and ready resources and support of an established Compact.

Participation

The Executive Director and the Commissioners of the Northeast Compact participate in the national LLRW management dialogue. This participation includes attendance at relevant state and compact meetings, as well as meetings, seminars, and workshops sponsored by federal agencies and national organizations. The Commissioners and the Executive Director also testify at hearings conducted by states, federal agencies and Congress to represent the Compact and the interests of the member states. The value of such participation lies not only in the formal aspects of the meetings, but also, and often more importantly, in the informal discussions and contacts that develop as a result of such interactions.

Support

The Commission lends support to the efforts of other states and compacts. This support has included providing assistance to the States of Texas, Maine and Vermont in their efforts to ratify the Texas Compact. The Commission wrote letters urging the support of the Connecticut and New Jersey Congressional delegation, and informed the member state governors' offices in Washington about the Texas Compact and its potential impact on LLRW management in the Northeast Compact region. The Commission also filed an amicus brief on behalf of the State of California in its legal action to compel the U.S. Department of the Interior to transfer to the State the federal land on which the Ward Valley site is located. The Commission has always believed that whatever assistance it can provide to other states or compacts will not only help with the implementation of the Amendments Act, but will also have the potential of building alliances with other states and compacts that could eventually lead to an opportunity for out-of-region disposal.

4. THE POLITICS OF LLRW MANAGEMENT

The politics of LLRW management, particularly disposal, must be included in any overview of this issue. It was the political nature of this relatively simple technical issue that started the compact system and state responsibility for LLRW management. This political characteristic, manifesting itself in citizen reaction to the consequences of this responsibility, has also prevented the successful implementation of this system of LLRW management.

Equity

The political nature of LLRW management probably cannot be overstated. The federal law that encouraged the development of regional compacts was based, at least in part, on the desire of the governors of the three states that were accepting the nation's LLRW for disposal in the late 1970's to end their role as the sole options for disposal.

The concept of equity was therefore an important factor in the development of a regional system. Despite the realities of the current national picture, with the Envirocare site in Utah and the Barnwell facility in South Carolina accepting most of the nation's waste, the ideal of equity is still an important concept in waste management.

Washington state, site of the Hanford facility, will not consider opening this site to generators outside its compact region and the generators in the Rocky Mountain compact because it supports the concept of equity in the federal law and believes it is doing its part to promote the equitable ideal. The State of South Carolina may close the Barnwell facility. Officials of that state and its governor have indicated that their citizens are tired of being the nation's "dumping" ground for waste disposal.

Any negotiations for out-of-state access must include the consideration of the concept of equity. States that accept LLRW for disposal or management must be convinced that their agreement to accept this responsibility does not unfairly burden their state and region.

Controversy

Another factor that must be considered in any discussion or analysis of the political nature of LLRW management is its controversial nature. Even beyond a "not-in-my-backyard"/NIMBY reaction to having any type of unwelcome development in their town or region, citizens who are faced with the prospect of hosting a LLRW disposal facility fear radioactivity and wonder about safety.

Exacerbating this situation are opposition groups. These include local groups and well-organized national anti-nuclear groups. While it is understandable that such an issue would cause concern and raise a sense of urgency in citizens who are confronted with the issue in their city, town or state, it is often impossible to engage in a meaningful dialogue with frightened citizens who receive their information from often unreliable, but ultimately more trusted, sources than the state siting agencies, federal government agencies, or even their own local governments.

In many of the regions that have made progress in siting a disposal facility, even up to the stage of licensing, it has usually been the political climate — elected officials fueled by the opposition — that has stopped or stalled the process. Examples of the victory of politics over science include:

□ Five counties in upper New York State were named as potential LLRW disposal sites in 1989. By June 1990, it was clear that the siting process had reached an impasse. Local opposition was strong, vocal and active, even up to the point of physical altercations between opponents and the police. The siting process was revised and the sites under study were eliminated from further study. In 1992, New York challenged the "take-title" provision in the federal law and won, removing a strong incentive to the State to continue its siting process.

□ In Connecticut, three candidate sites were named in 1991. Opposition was immediate and powerful. In meeting after meeting, State siting officials were often shouted down and certainly not listened to as they attempted to explain the issue of LLRW management and the planned disposal facility. Several local opposition groups, working with local officials and state legislators, were successful in obtaining a relatively quick revision of the State's siting process. By the end of the 1992 legislative session, the old process was terminated and a new process was mandated.

□ The Boyd County, Nebraska facility has been mired in political turmoil for years. A license for the site was submitted to the State in 1990. Almost 9 years and over \$90 million later, the State late last year issued a decision denying the license application of the site developer. Although the rejection listed technical reasons, the opposition to this proposed site has been consistent and insistent. The former governor of the State was one of the site's primary opponents.

❑ The licensing agency for the State of Texas recently released a decision denying the license application for the site in Sierra Blanca, Hudspeth County, Texas. The agency based its decision on an "inferred fault" underneath the site, but socio-political factors were also involved. The site, not far from the Mexican border, had been the subject of international protests and more localized cries of "environmental injustice". Governor George W. Bush has supported the decision of the state licensing agency and has said the site will not be built in Sierra Blanca.

□ In California, a struggle continues for the transfer of the land on which a license has been issued for a disposal site. The Ward Valley site is on federal land. In 1993, then-Secretary of the Interior Manuel Lujan issued an order transferring the land to the State. When Bruce Babbit became Secretary shortly thereafter, he rescinded the order issued by Lujan. The opposition in California has been particularly strong, and has included U.S. Senators and officials of the Clinton administration. Opponents have camped out at the Ward Valley site to prevent work on the site. Lawsuits have been filed to challenge siting work. This case is now probably going to be settled in court, as two lawsuits have been filed in the federal courts to compel transfer of the land and for damages as a result of the long-delayed process.

Overcoming Controversy — The Voluntary Siting Process

One option that attempts to address the political nature of LLRW disposal facility siting is the voluntary siting process. The hope is that such a process will result in the successful siting of a facility because it does not compel a town to site a facility and instead provides an opportunity for a local municipality to learn about LLRW and the siting process. The process often includes substantial incentives for a municipality to volunteer — or even to move along in the process of potentially volunteering. The goal of such a plan is for citizens of a potential volunteer community to learn the facts after careful deliberations and agree to take on this responsibility of siting, enjoy the benefits of such a decision, and not fear the nature of their role as host to a disposal or waste management facility.

This process succeeded in finding a site in Illinois. However, a three-person siting commission appointed by the governor rejected the site. One of the criticisms of the Martinsville, Illinois site was that it had been found technically viable just because it had volunteered.

New Jersey, after watching the siting efforts of its partner state and considering various options for siting, adopted a voluntary process in 1995. The New Jersey process, well-run and carefully executed, never found a local community that went further than initial deliberations. Progress was often stopped because of local opposition that was quickly stirred up when local officials began to discuss the reality of LLRW disposal siting.

Although a voluntary process has allowed for more of a dialogue on the issue of LLRW management, the political nature of such a controversial public policy decision is likely to continue.

5. CURRENT DISPOSAL OPTIONS FOR LLRW GENERATED IN THE NORTHEAST COMPACT REGION

5.1 BARNWELL, SOUTH CAROLINA

Current Access

Since it again became available as a disposal option in 1995 when then-Governor Beasley reopened the facility to generators outside of the Southeast Compact region on July 1 of that year, generators in the Northeast Compact region have resumed shipment of LLRW directly to the Barnwell facility or indirectly to the facility through brokers or waste processors prior to disposal. A commercial, full-service facility, Barnwell has a minimum of an additional 6.4 million cubic feet of capacity, for an operational life of at least 25 years. Barnwell is the only disposal facility available to Northeast Compact generators that can accept Class B and Class C LLRW.

Future Access

One or more of the following factors could impact Barnwell's future as a disposal option.

Relationship with the Southeast Compact - When Governor Beasley re-opened the Barnwell facility in 1995, he also withdrew the State from the Southeast Compact. At the time, this was generally viewed as being of little consequence to all but generators in North Carolina (whose access was cut off as punishment for that State's failure to make progress in its siting efforts).

Now, however, South Carolina's status as an unaffiliated state could have several consequences.

The State of South Carolina has no exclusionary authority to prevent waste from coming to its facility, a matter of concern to those who are opposed to the continued operation of the Barnwell facility. Without a compact, the State of South Carolina receives all the revenues from the facility's operation, but has no assurance that a second host state (in a compact) is responsible for developing a facility to eventually take on the disposal responsibility.

Rejoining the Southeast Compact or joining another Compact could be an issue under the administration of the present Governor, Democrat James Hodges. During the election last fall, Hodges apparently supported a position that would close Barnwell to all but generators in the State. After his election, the press quoted him as saying that the State should consider rejoining the Southeast Compact. Various environmental groups and others in the State who backed Hodges support the idea of rejoining the Compact; some observers believe these groups will push the idea in the days ahead. A bill has been introduced in the State General Assembly that would support efforts to rejoin the Compact; Hodges has voiced his support of this legislation. Another bill would close Barnwell to all but South Carolina's generators; this bill is sponsored by the former speaker to the State House of Representatives.

A spokesman for Chem-Nuclear is quoted as noting that this bill, which calls for Compact membership and the provision that Barnwell only accept waste from the Compact, would shrink revenues from the facility even further than present levels. Chem-Nuclear estimates that the 160,000 CF/yr. disposal rate would drop to 40,000 CF/yr. and that prices would be in excess of \$1000/CF. According to this representative, if the legislation to rejoin the Southeast Compact contains additional provisions or restrictions, legislation may be required in each of the other Southeast Compact states consistent with those provisions. That is, if South Carolina passes legislation and the Governor signs it, the Southeast Compact Commissioners will not be able to readmit South Carolina into the Southeast Compact without legislation passing in each state.

We, however, believe that if the legislation only calls for just South Carolina to rejoin, South Carolina will probably not need consent of the Compact states, because the Compact did not change its law in any way when South Carolina withdrew from the Compact. If the legislation proposes changes to the Compact Act, it will need the consent of all the members of the Compact.

Revenues - The revenues that the Barnwell facility generates are directly related to the question of its continued operation.

After Governor Beasley reopened the Barnwell facility in 1995, he proposed, at a news conference on education, that a percentage of the \$140 million expected to be generated annually from the Barnwell facility be used for a scholarship fund for South Carolina students. Legislation was subsequently passed to implement this idea.

The 1995 Appropriations Act passed by the South Carolina General Assembly established a \$235 per cubic foot surcharge for waste disposed at the Barnwell facility. Of the funds collected through this surcharge, 28.5% are credited to the higher education scholarship grants. The remaining funds are allocated to other educational assistance programs (66.5%) and to Barnwell County (5%). Chem-Nuclear is required to provide \$24 million annually to the State's Higher Education Scholarship Grants portion of the Children's Education Endowment Fund.

Actual revenues have been less than the expected levels noted by Governor Beasley. LLRW volumes have decreased throughout the nation. In addition, the Envirocare facility in Utah is providing competition for the disposal of certain classes and types of LLRW. Tax revenues since FY 1995-1996 have been as follows: FY 95-96 \$92.6 million; FY 96-97 \$77.3 million; and FY 97-98 \$60.2 million. The average revenues to the State for this three-year period: \$77.6 million, significantly less than the expected \$140 million.

For FY 1998 - 1999 (which ends on June 30, 1999), Chem-Nuclear is predicting tax revenues of \$37.6 million, based on expected volumes of 160,000 cubic feet. Of this revenue, only \$11 million (28.5%) will be available for the higher education fund, with Chem-Nuclear responsible for an additional \$13 million to meet its mandated contribution of \$24 million.

A representative for Chem-Nuclear, Mr. George Antonucci, has confirmed that the company may provide an additional \$3 million to make up the \$13 million shortfall and may ask their customers to assist with the rest. During the last fiscal year, Chem-Nuclear fell short of revenues to provide the State with the necessary funds for the higher education scholarship fund (for FY 1998, \$23 million). Working through the Nuclear Energy Institute (NEI), the utility customers of Chem-Nuclear agreed to commit to the disposal of certain waste volumes through June 1998, and to contribute to meet the shortfall of revenues. In May 1999, Chem-Nuclear announced an access fee schedule to fill the financial gap. Fees range from \$500 for generators who have averaged less than 25 cubic feet disposal over the three year period of 1996 through 1998, to \$203,798 for generators with an average over 1,000 cubic feet.

Assuming the \$13 million shortfall is met, it will be added to the \$36.7 million in expected rev-

enues for a total tax payment to the State for fiscal year 1999 of approximately \$50 million. Again, total revenues to the State will be significantly less than the figures originally anticipated by the State.

Chem-Nuclear - Once the undisputed front-runner in LLRW management, this company has run into some recent business issues that could impact its future as the operator of the site. Waste Management, Inc., the parent company of Chem-Nuclear, merged with USA Waste, Inc. several years ago. Waste Management's annual revenue is between \$13 billion and \$15 billion. Early reports indicated that the new company might spin off the unprofitable Barnwell operation. Assurances by corporate officials have silenced this rumor for now. However, the revenue issues confronting the Barnwell operations cannot help Chem-Nuclear's future.

Chem-Nuclear/Barnwell Incentive Plans - In order to meet South Carolina's revenue requirements, Chem-Nuclear began development of a long-term initiative in 1997. Under this plan, Chem-Nuclear proposed to enter into "qualified contracts" with generators or other entities, including states and compacts, to provide disposal capacity at Barnwell for a 25-year period, based on a predetermined fee schedule. The plan called for replacing the current \$235 per cubic foot state-imposed disposal tax with other taxes calculated to give the State both \$75 million annually and to collect funds for a trust estimated to grow to \$1 billion by July, 2024.

During the first week of January 1999, Chem-Nuclear announced that legislation would not be introduced in the South Carolina General Assembly to support the company's plan. The minimum 4 million cubic foot commitment level the company sought was not met; instead, the company received commitments totaling 1.3 million.

Chem-Nuclear President Regan Voit has indicated that company officials will meet with customers to discuss other ideas for stabilizing disposal prices and ensuring continued access to the Barnwell site. New contracts will also be established for only a 1-year duration, to be effective July 1, 1999.

The Northeast Commission and the member states explored the possibility of "purchasing" disposal space for generators under the Chem-Nuclear Plan. Legal questions presented serious problems to such an endeavor. In addition, the Commission concluded that its obligation — to provide access — would be satisfied without purchasing space because under the Chem-Nuclear Plan, generators that did not purchase space under a qualified contract could still dispose of LLRW at Barnwell. According to the plan, Chem-Nuclear would set aside at least 100,000 cubic feet of space for such generators; disposal would be available at market rates.

Governor Hodges - Sworn in on January 13, 1999, Governor Hodges is another factor in the Barnwell option. He made the facility an election issue, claiming it could be closed and lost revenues made up through a state lottery. Since election, Hodges and members of his transition team have made various statements about the future of Barnwell.

A spokesman for Hodges announced shortly after the election that Hodges wanted to restrict Barnwell to serve only the needs of South Carolina generators. Perhaps reminded of the Interstate Commerce Clause, Hodges' next attributed statement was his desire to explore rejoining the Southeast Compact — or any other Compact.

Advisors to the new Governor, including an opponent to the Barnwell facility, have continued to

advise him that Barnwell should be closed. Hodges has recently said that the statement of his advisors as to closure is just one of several options being explored for the facility's future.

Hodges says he supports a bill pending in the State Legislature that would have South Carolina try to rejoin the Southeast Compact and restrict the Barnwell facility to members of that Compact. A recent article in the January 24, 1999 edition of the "Charlotte Observer" attributes to the Executive Director of the Southeast Compact the statement that the other members of the Compact would welcome South Carolina back into the fold. The article also quotes the Executive Director on siting in North Carolina: "It's still North Carolina's responsibility, and we still expect them to build a facility."

The article mentions comments made by Governor Hodges in his January 20, 1999 State of the State address that he would "explore" rejoining the Compact, but only if there was a definite date by which Barnwell would close. The Governor also said that the Southeast Compact Commission must require North Carolina to build a replacement site. The article also quotes a spokeswoman for Governor Hodges as indicating that he and North Carolina Governor Hunt met several weeks ago and had "preliminary" discussions about South Carolina's re-entry into the Compact. (The issues on the table probably included funding the North Carolina siting process.) Governor Hodges also said during his State of the State address that if South Carolina cannot rejoin the Southeast Compact, it may want to form a regional compact with other states. (See Action Plan, below.)

The process to put a lottery in place would take several years under the South Carolina referendum process. Hodges may realize that Barnwell is a valuable revenue source, at least for now. There is also the issue of the "outside" money that the Barnwell facility brings into the State versus a lottery that would in effect "circulate" money within the State. The general question of using a lottery as a means to raise revenues is likely to be another issue debated by the State.

Regulatory Picture

Mr. Virgil Autry of the South Carolina Department of Health and Environmental Control (DHEC) was contacted to determine if there are any regulatory issues with the site. The DHEC inspects Chem-Nuclear weekly, and conducts full inspections every six months. There have been no escalated enforcement actions over the last 10 years. Chem-Nuclear's radioactive material license will expire on July 31, 2000. An application for license renewal requires supplying data on operations and monitoring. The regulatory review, which may take five months, may include a public hearing.

Radioactive material migration, from disposal cells used in the early 1970's, was found in the soil in 1978. The plume contained less than 100 Curies of tritium, and gave a good indication of the rate and direction of the flow of groundwater. After \$16-18million was spent on remediation, including an enhanced disposal cell cap, the material has been contained on-site. The tritium migration has provided important information to anticipate any future migration. The company's monitoring system includes approximately 300 sampling points for water, soil and vegetation sampling.

No outstanding regulatory issues were identified.

The Future of Barnwell⁴

It is reasonable to assume that Barnwell will remain open for at least the next six months, and even up to eighteen months. Any legislative action approved this year would have to be initiated very soon and would probably not be effective until, at the earliest, June or July of this year. If nothing happens until the next legislative session, next June or July would likely be the date for an action to be effective. If a lottery is initiated, the process requires a two year referendum procedure.

The long-range future of Barnwell is uncertain. Governor Hodges' statements and his hope for an eventual lottery (which apparently has significant support) make closure a possibility. An attempt to rejoin the Southeast Compact is possible, with the option that the Barnwell facility would be open only to generators in that Compact. Hodges' comments on joining another Compact are also relevant. (see **Action Plan**, below.)

Declining waste volumes have made Barnwell less profitable for its operator and the State. However, Barnwell is the only option that currently exists for the disposal of Class B and C LLRW. Utilities have a great stake in keeping the facility open. Actions that may be taken by utilities and utility groups such as the NEI could serve as important predictors of the future of the facility.

Action Plan

The Northeast Commission wrote a letter to Governor-elect Hodges on December 15, 1998. The letter expressed the Commission's interest in meeting with the Governor to discuss the future of the Barnwell facility, and noted the benefits of membership in the Northeast Compact. On January 6, 1999, Ms. Deshais, the Executive Director of the Commission, spoke at length with an aide to the governor. She was informed that the Governor and his staff are interested in talking to the Commission. At the February 1999 LLW Forum meeting she and Northeast Compact Commissioner McCarthy talked to John Clark and Senator Phil Leventis, both key

⁴ Two items regarding the future of the Barnwell site have occurred since the Siting Board approved this document.

On June 2, the South Carolina Department of Health and Environmental Control (DHEC) announced that the State has reevaluated the capacity of the Barnwell site to 3.2 million cubic feet. Assuming an annual disposal rate of 300,000 cubic feet, this capacity will be sufficient for ten years.

On June 10, South Carolina Governor Jim Hodges announced the creation of a Nuclear Waste Task Force to: a) provide the people of South Carolina and the South Carolina General Assembly with a road map to discontinuance of South Carolina's role as a receiver of low-level radioactive waste from many states; and b) recommend actions to ensure that future disposal needs of South Carolina low-level radioactive waste generators are met. The Task Force will include four members of the state House of Representatives, four state Senators, and five at-large members appointed by the Governor. A South Carolina Compact Delegation, appointed by the Governor from the membership of the Task Force, will also be created. The Delegation shall meet with officials of regional nuclear waste disposal compacts, officials of other states, and other parties to determine terms under which South Carolina's interests can be served through affiliation with a regional compact, and shall report its findings to the Task Force not later than September 15, 1999. The Task Force shall provide a Nuclear Waste Disposal Final Report of its findings and recommendations to the Governor and the General Assembly not later than November 1, 1999.

contacts with the State of South Carolina. The Commission's interest in the future of Barnwell and the possible role of the Northeast Compact was discussed. Subsequently, Clark called the Commission and expressed interest in another meeting soon. At an April meeting of the National Conference of State Legislators, Clark told Commissioner McCarthy that South Carolina is planning to schedule a meeting very soon.

One item to keep in mind if we arrange to meet with South Carolina: It appears that the eventual closure of the Barnwell facility is foremost in the Governor's mind. At first, the issue would be the restriction of waste to the facility because of the compact arrangement, but the issue of the "next host state" is one that must be considered when negotiating with the State of South Carolina.

5.2 ENVIROCARE, UTAH

Current Access

Since early 1988, generators have been able to ship certain waste to the Envirocare facility in Clive, Utah, approximately 80 miles west of Salt Lake City. When this facility began operations, only certain limited types of high volume, low activity wastes were accepted for disposal. Although still primarily available for those types of waste, the acceptance of additional waste volumes and types have increased the options for disposal of Class A waste at the facility.

On October 22, 1998, the Utah Division of Radiation Control renewed Envirocare's license, resulting in new waste disposal practices and significant changes in waste accepted at that facility. The new license specifically provides for the acceptance of higher concentration limits (up to Class A limits) for some radionuclides, and the acceptance of additional radionuclides with concentrations up to 500 picocuries per gram on a case-by-case basis. This new license will have a significant impact on the spectrum of waste that can be shipped to Envirocare for disposal.

Small volume generators have expanded access to Envirocare, due to the recent actions of the Northwest Compact at its November 9, 1998 meeting. The Northwest Compact adopted a second amended "Resolution and Order" removing certain restrictive language contained in the preceding "Resolution and Order" of April 1995.

The previous "Resolution and Order" authorized access for "[I]arge volume, soil or soil-like materials or debris slightly contaminated with low-level radioactive waste" The current "Resolution and Order" now permits access for "[I]ow level radioactive waste...."

Removal of the term **"large volume"** from the definition of LLRW in the current "Resolution and Order" eliminates the 1,000 cubic foot minimum volume requirement for access to the Envirocare facility. Access is now authorized for all volumes of LLRW that comply with the Utah license requirements for Envirocare. This elimination of the minimum cubic foot requirement opens up access to Envirocare to a significant number of smaller LLRW generators in the Northeast Compact region. Although some generators were apparently getting smaller quantities of LLRW into the Envirocare facility by way of brokers, the elimination of this restriction provides for direct access.

Current LLRW disposal costs are approximately \$90/CF. Ten million cubic feet of naturally occurring and accelerator produced radioactive material (NORM), certain types of Class A LLRW and 11(e)(2) material is disposed annually. At this rate, there is storage capacity for

another 62 years. Envirocare estimates that they can dispose of 80-90% of Pressurized Water Reactor (PWR) and 30-40% of Boiling Water Reactor (BWR) Class A waste.

Future Access

There are numerous factors to consider when assessing the future potential for Envirocare to remain or expand as an option for out-of-region disposal.

When the Northwest Compact eliminated the 1,000 cubic foot minimum volume requirement for waste sent to Envirocare, it removed all significant Compact Commission restrictions on access to the facility. Of course, the State of Utah licenses Envirocare and its license restrictions are in place. However, the license recently issued by the State expands the scope of waste that can be disposed of at the facility and puts in place new waste management practices that will benefit operations at the site. Political opposition in Utah seems slight, almost nonexistent. In fact, the Tooele County Planning Commission recently gave the facility an indirect vote of confidence when it turned down the request of a competitor, Safety-Kleen, to amend its permit for hazard-ous waste to include the acceptance of LLRW at its facility near Envirocare. The Commission found no need for a second facility in Tooele County. Safety-Kleen has appealed the Planning Commission to the full Tooele County Commission.

Tooele County receives approximately \$5 million annually from Envirocare; this equates to ~5% of the county's revenue⁵.

Last November, the U.S. Nuclear Regulatory Commission (NRC) granted Envirocare an exemption for special nuclear material (the application was filed in 1992). NRC staff recently completed a criticality analysis and presented the company with a draft outline of the terms and conditions of the exemption. Envirocare approved the draft; negotiations continue on the special nuclear material issue between the NRC and Envirocare. The Division of Radiation Control will also have to agree to any new license condition proposed as a result of these negotiations. This proposed exemption would allow customers to dispose of waste with non-critical levels of uranium and plutonium without being subject to special nuclear material limits. Of course, the usual limits of Envirocare's LLRW license would apply. This is yet another area in which Envirocare is expanding its services.

The company has spent \$30 million last year on a rail wash shed, three locomotives and seven miles of railroad track.

In the past, long term financial assurance was a concern. However, Envirocare now funds bonds that are sufficient to ensure perpetual care at the site for LLRW, 11(e)(2) waste and mixed waste. If Envirocare went out of business, these bonds would allow the waste to remain at the site.

Caveat: Although Envirocare offers many benefits, such as easier access and relatively lowcost disposal, it remains a limited service facility. Not all types of Class A waste are accepted for disposal, and no Class B or Class C waste may be disposed. Another issue worth noting is that the Envirocare facility does not require the same waste processing and packaging as some other facilities, such as the Barnwell facility. For example, dry active waste (DAW) is compacted to minimize its volume before it is sent to the Barnwell facility. If sent to the Envirocare facility,

⁵This data is from Safety-Kleen representative, Maggie Wilde, in personal communication.

this same waste would not be compacted prior to disposal. As Envirocare becomes more used as a disposal option, this difference in waste form requirements could result in higher volumes of waste reported as shipped for disposal. This may have an impact on negotiations for access if facilities are located in states or compacts that seek to minimize waste volumes shipped for disposal at their facilities. This is an important factor to monitor and explain to other states and compacts that may present potential opportunities for disposal.

Regulatory Picture

In October 1996, former Utah Bureau of Radiation Control Director Larry Anderson filed suit against Envirocare and its owner, Kosrow Semnani for in excess of \$5 million for site application and consultation services related to the licensing and operation of Envirocare. The countersuit acknowledged that Semnani gave Anderson approximately \$600,000 worth of goods as a result of extortion. The criminal investigation concluded that Semnani would testify against Anderson and would pay a fine. A consent agreement stipulated that on May 14, 1997 Semnani would remove himself from day-to-day business operations. The stipulation has now expired, and Mr. Semnani has petitioned the Department of Energy to allow him to be involved again in company operations. A petition was recently filed by the National Resource Defense Council before the NRC, requesting that consideration be given to banning Mr. Semnani from any licensed activity. In March 1999, indictments were handed down to Larry Anderson on a variety of charges including extortion and tax fraud. Mr. Anderson pleaded not guilty in federal court to these charges.

Mr. Bill Sinclair of the Utah Bureau of Radiation Control was contacted to determine if there are any outstanding regulatory issues with the site. Envirocare recently received a license renewal; the next renewal is due October 22, 2003. Envirocare and the State maintain independent environmental monitoring around the site; there is no evidence of any off-site releases. Their compliance history is "no different than any other commercial facility." They have been inspected more in the last two years than ever before. With more inspections, there have been more compliance actions both due to the amount of waste arriving and the increased oversight by State and federal agencies resulting from this scandal.

During the relicensing process, documents were submitted to the State that were subsequently discovered to have been certified by an unlicensed engineer in Envirocare's employ. All affected documents were resubmitted, reviewed by the Division of Radiation Control and found to be acceptable. In addition, company President Charles Judd let his engineering license lapse; he paid a \$400 fine to the State's Professional Licensing Division and all diagrams or documents he may have certified with a lapsed license have been recertified.

The May 1997 problem with Envirocare exceeding their licensed capacity for acceptance of Special Nuclear Material has also been resolved. They are under a consent order not to exceed again.

No outstanding regulatory issues were identified.

Action Plan

The Northeast Commission has a standing Resolution in place that authorizes the exportation of LLRW from the Compact region. Previous versions of this Resolution provided for a deadline on which the authority would terminate unless extended by the Commission. (Previous deadlines were tied into milestones of the federal law and other significant dates in national LLRW management.)

Because of discussions with certain generators and representatives of Envirocare, this Resolution has been amended to provide authority for exportation, unless the Commission rescinds such authority. The elimination of a possible termination date will assist in the development of long-term contracts for disposal at Envirocare.

The Northeast Commission will continue to monitor any developments related to the disposal of waste at Envirocare. This facility should continue to grow as a valuable option for LLRW disposal.

5.3 RICHLAND, WASHINGTON

Current Access

The Hanford site, located near Richland, Washington, currently accepts LLRW from the eight member states of the Northwest Compact and, by special agreement, from the three member states of the Rocky Mountain LLRW Compact. Whenever the Northeast Commission has inquired into possible arrangements for access to Hanford, it has been reminded that state law restricts access to the facility.

The Hanford facility must accept for disposal NORM waste (naturally occurring radioactive material) that is generated outside that Compact region. NORM waste is not included in the *Amendments Act*, and is therefore not restricted by the exclusionary provisions of that *Act*. Several generators from the Northeast Compact have disposed of NORM waste at Hanford. Of course, no waste is shipped to the facility without a permit from the State of Washington.

Current disposal costs are approximately \$90/CF including all surcharges. If they continue to receive the present 100,000 CF/yr. disposal volume up until the time of facility closure, 2063, there will be 40 million CF of unused space.

Governor Gary Locke (D) recently reaffirmed his opposition to access to the Hanford facility. Locke recently rejected a proposal by then-Governor Benjamin Nelson of Nebraska to allow use of the Hanford facility by the states of the Central Interstate LLRW Compact.

Future Access

There is more to consider concerning the Hanford facility at Richland than just its present status. Hanford is the only other facility in the nation that accepts Class A, B and C LLRW. Access to this facility could provide an important second option for generators, particularly generators of Class B and C waste. It is therefore very important to avoid the temptation to ignore this facility. Although immediate access is probably unlikely, the importance of the facility requires continued vigilance.

US Ecology, the operator of the facility, has for years protested the access restrictions placed on the facility as the Northwest Compact's regional facility. The company has taken a lead role among commercial operators that argue in favor of a privately run (versus compact) national LLRW management system. There have also been rumors around for years that someday US Ecology will sue the Northwest Compact for restraint of trade. US Ecology is working to put its financial house in order; work has ceased on the Ward Valley, California and Boyd County, Nebraska sites. The company may be looking at ways to increase activities at the Hanford facility.

If the Compact Law is amended or abolished, all states could have access to Hanford. However the Governor of Washington is opposed to accepting out-of-compact waste and would shut down the site rather than accept waste from all over the nation (information from personal communication with Gary Robertson, regulator from Washington).

It also appears that some out-of-region waste is being sent to the Hanford facility for treatment and sent on to the Envirocare facility for disposal. Such an arrangement might eventually lead to logical disposal at Hanford.

Regulatory Picture

Mr. Gary Robertson of the State of Washington was contacted to determine if there are any outstanding regulatory issues with the site. There have been a number of NORM shipments received at the site containing freestanding liquids. This is unacceptable, therefore, all NORM shipments are now routinely checked. Point of origin inspections are now in place and are controlling the situation.

Soil gas monitoring wells have detected tritium, which could indicate migration. Ground water wells have not detected tritium associated with the facility. Additional wells were drilled under the waste trenches and are being tested for toluene, xylene and tritium. Additional upgradient wells are also in place to monitor a plume that is coming from the neighboring DOE facility.

No outstanding regulatory issues were identified.

Action Plan

Close monitoring of this situation is not a futile exercise. The lifting of some restrictions on waste to Envirocare could lead to a legal action by US Ecology to allow it to make Hanford a competitive operation. Also, although obtaining access to Hanford seems a bit of an uphill battle since access to Hanford is set by Washington State law, the actions of Governor Beasley in South Carolina prove that things can happen that seemed unlikely at one time.

6. POTENTIAL DISPOSAL OPTIONS FOR LLRW GENERATED IN THE NORTHEAST COM-PACT REGION

6.1 LLRW COMPACT FACILITIES

The federal *"Low-Level Radioactive Waste Policy Amendments Act of 1985"* ratified seven national LLRW interstate compacts, including the *"Northeast Interstate Low-Level Radioactive Waste Management Compact"*. The Appalachian and Southwestern Compacts were ratified in 1987. The Texas Compact was ratified by Congress and approved by President Clinton in October 1998.

This is an overview of the ten LLRW Compacts that comprise the national system of regional LLRW management. (See September 1998 map of national LLRW Compacts, attached as APPENDIX C.) This analysis will include a discussion of the legal, political and practical characteristics of the other Compacts that impact potential access.

The Northeast Compact Commission has always pursued several avenues for possible access to another compact facility. It has tried to obtain access by a contract, and has explored the potential of what other types of financial or other "incentives" (some kind of quid pro quo) could be offered for access. It has also explored and advocated various options for consolidation, including: joining another compact; having another state or compact join the Northeast Compact; or forming a new compact with one or more other states or compacts.

If another state or compact joined the Northeast Compact, the conditions of this membership could include the hosting of the regional facility by the new state or compact region. The Commission has analyzed the requirements for membership in each national compact. The conclusions of this report have been shared with other states and compacts. This memo is attached as APPENDIX D.

6.1.1 APPALACHIAN COMPACT

Approved: 1988

Member States: Pennsylvania (host), Delaware, Maryland, and West Virginia **Notable**: Delaware and Maryland withdrew from the Northeast Compact to join this Compact, on the basis of the guarantee that Pennsylvania would serve as host. Membership in this Compact is limited to its four member states — per the eligibility requirements of this Compact Act.

Siting Status - Initially, Pennsylvania pursued a statewide search for a site, the first phase of this search. This effort resulted in the elimination of some areas of the State as possible locations for a facility, and the identification of other areas as meeting the criteria for a further search. Actual candidate sites were never identified, however, and a volunteer approach was later developed and pursued. The goal of this effort was to find a potential host community within the limited areas already identified in the statewide search. Chem-Nuclear was the contractor for the State.

The State suspended its siting efforts during the summer of 1998. On December 2, 1998, the Compact Commission amended its Bylaws to close its office and consolidate its operations under the direction of its Chairman. These actions followed its decision in June 1998 to support Pennsylvania's decision to suspend its siting process for a regional LLRW facility.

Interaction - Given the provisions of the Appalachian Compact Act and the progress of the siting process in Pennsylvania, the Northeast Commission never formally approached Pennsylvania or the Appalachian Compact to request disposal access. That Compact did know of our interest in pursuing out-of-state disposal, and, at various informal meetings, consolidation or Northeast Compact membership was discussed with State and compact officials.

Action Plan - Given the current status of the Appalachian Commission and the Pennsylvania siting plan, no active monitoring is required at this time.

It is noteworthy that the Appalachian Compact established a \$200,000 "Restart Fund" to reestablish the Commission office and the staff if suspension of siting process is terminated. The Commission also noted it may take further action if the new Governor of South Carolina takes any action that affects the disposal of Appalachian Compact LLRW. It is advisable to maintain communications with this Compact and Pennsylvania. There is always the potential for future consolidation or other cooperation.

6.1.2 CENTRAL INTERSTATE COMPACT

Approved: 1986 (Low-Level Radioactive Waste Policy Amendments Act of 1985) Member States: Nebraska (host), Arkansas, Kansas, Louisiana, and Oklahoma Notable: The relationship of the host state of Nebraska and this Compact Commission has been a particularly volatile one. Nebraska has challenged several times the authority of the Compact, most recently over the Compact Commission's authority to impose a deadline on the State's processing of the license application filed by the contractor, US Ecology. (The U.S. District issued a decision in favor of the Compact.) The licensing process for the Boyd County facility has taken almost 9 years — the license application was first filed in July 1990.

Out-going Governor Nelson (D) was an opponent of the Boyd County site. The position of Governor Johanns (R) is not yet known, but he seems, at this early stage, to be less outspoken than Nelson regarding his opinion. The Boyd County site was apparently not a major election issue. The recent actions of State Department of Environmental Control regarding the denial of the license application may place the siting issue higher on his agenda.

Siting Status - On December 21, 1998, the State Department of Environmental Quality denied US Ecology's license application for construction and operation of a regional LLRW disposal facility in Boyd County. Six factors were cited for the denial: 1) Site lacks sufficient depth to the water table to ensure that ground water intrusion will not occur; 2) Site lacks an adequate buffer zone between the facility and the local aquifer; 3) Engineered structures and barriers are being planned as substitutes for a suitable site; 4) Ground water discharges to the surface within the disposal site; 5) Continued maintenance will be necessary after the site is closed; and 6) The applicants did not demonstrate that they could meet the financial assurance requirements for the construction of the facility.

On December 30, 1998, a consortium of utilities in the Central Compact filed parallel lawsuits in the federal and district courts in Nebraska challenging the actions of the State in reviewing the license application. The suits allege in part that the State unreasonably delayed the review process for the license application, adding significantly and unnecessarily to the expense of the process. The power companies seek to recover costs incurred in the siting process. The utilities have collectively invested approximately \$90 million in the disposal project since 1990. The Central Compact Commission was originally named as a party, but has been realigned as a plaintiff because it too has a right to seek relief from the State, and its collaboration is needed to help prove the utilities' allegations against the State.

On January 14, 1999, US Ecology and the Central Compact Commission (with the support of major LLRW generators) appealed the denial of the company's application. According to State officials, the next step in this process is a review of the license application by a state-appointed hearing officer. The federal lawsuit filed by the utilities on December 30 requests an injunction to bar the State from having any further involvement in the license review process.

On April 16, 1999, the U.S. District Court issued preliminary injunction against Nebraska in the case that challenges the State's actions in reviewing US Ecology's license. The preliminary injunction, which extends the temporary injunction issued on March 8, 1999, restrains the State

and its officials, employees, agents and representatives from holding a contested case hearing on its decision to deny license application and spending or attempting to collect any monies from the utilities, the Compact Commission or US Ecology. In its analysis of whether the plaintiffs had a substantial likelihood of succeeding on the merits and as a basis for its order to grant injunctive relief, the Court detailed various events that it found to show "strong evidence of bad faith" on the part of Nebraska during the license process. The State has 30 days from the issuance of the Court's April 17 order to file a notice of appeal.

On January 13, 1999, the states comprising the Central Compact voted to disband the Commission in all but its name. On that date, that Commission voted to further downsize the staff, eliminating the executive director position. (Over the past 18 months, the Commission eliminated the positions of technical director and public information officer. It has reduced the finance and project manager posts to part-time positions. One staffer will be kept on the payroll to run the day-to-day operations.) Gene Crump had been Executive Director for over 7 years.

On March 30, 1999, Nebraska's unicameral legislature gave first-round approval to a bill to remove the State from the Central Compact and to repeal the Compact legislation. Thirty-seven of the State's 49 Senators voted in favor of the bill; none opposed it. In order for the bill to become law, it must be passed by the legislature during two more rounds of debate and be approved by the Governor. Press accounts indicate that the Governor is likely to sign the bill if it is passed without major changes⁶. Like the terms of the Northeast Compact agreement, the terms of the Central Compact agreement provide that withdrawals generally will not take effect until five years from the date that the Governors of the other member States are notified in writing.

Interaction - Given the circumstances of the Host State/Compact relationship and the atmosphere surrounding siting in Nebraska, the Northeast Commission never formally approached Nebraska or the Central Compact to request disposal access. However, the Central Compact knew that the Northeast Commission would closely monitor the situation and would approach the State and/or Compact should the situation ever appear receptive to an arrangement to receive out-of-region waste.

Action Plan - It is advisable to continue to closely monitor this situation. It is not a likely source of disposal capacity anytime soon, however, as the Central Compact will likely be involved in litigation for some time. The decision to terminate the position of executive director could have an impact on the Compact's ability to pursue its lawsuit. Gene Crump has the necessary "institutional memory" and served as legal counsel.

6.1.3 CENTRAL MIDWEST COMPACT

Approved: 1986 (1985 LLRWPAA)

Member States: Illinois (host) and Kentucky

Notable: This Compact was always intended to be a two-state arrangement; the Compact Act provided for two member states, and it was ratified as a two-state compact. Illinois, a state with numerous nuclear power plants (13 at that time) wanted to pair with the small state of Kentucky for the protection of a compact.

⁶On May 12, 1999, Nebraska Governor Mike Johanns (R) signed legislation to remove the state from the Central Compact. The new law will take effect on August 29. The Governor may then, as provided in the legislation, write to the governors of the compact's other member states to notify them of Nebraska's withdrawal.

Siting Status - The Midwest Compact is noted for the expensive, and ultimately unsuccessful, voluntary siting process in Illinois. In October 1992, the three-person Illinois LLRW Disposal Facility Siting Commission, appointed by Governor Jim Edgar (R), voted unanimously to reject the LLRW site in Martinsville, Illinois. This decision was based on testimony received during a lengthy 71-day adjudicatory hearing process. Even after that long process, some relevant officials and parties to the process were not invited to give testimony. The governor accepted the decision of the Siting Commission and halted a siting process that had spanned at least five years and had cost in excess of \$86 million.

At present, the State of Illinois Department of Nuclear Safety (IDNS) has decided that any regional LLRW facility will not be licensed or operational before the year 2011 or 2012. The IDNS explained this 1997 decision on economic grounds. The IDNS maintains that disposal will be more "cost effective" if operation of a regional facility does not begin until 2011 or 2012 when waste from the decommissioning of some nuclear power plants will be available.

Interaction - During the late 1980's and early 1990's, when the siting plan in Illinois was active and the volunteer site in Martinsville was being extensively tested, the Northeast Commission watched the situation carefully and communicated frequently with state and siting officials. Because the site was in a volunteer community that was largely supportive of the facility, there was a possibility that this site could become a disposal option after it began operations. Siting officials and others in that Compact were aware of the interest of the Northeast Compact and receptive to continuing discussions about possible arrangements.

Action Plan - Worth monitoring, as early decommissionings may cause the State to reconsider its plan to delay siting. The Northeast Commission should work closely with its generators, especially utilities, to maintain contacts to be advised of any potential changes. Commonwealth Edison actions could be the key to a future date for any disposal facility. Also, a desire to make disposal economically feasible could lead to opportunities for consolidation, especially between utilities.

The Northeast Compact has a relationship with this Compact through an *Interregional Facility Access Agreement*, a reciprocal agreement between the two compact regions for access to waste treatment facilities in each region. This *Agreement*, in place since 1993, has operated smoothly to the mutual benefit of each region's generators; it has been extended to December 31, 2001.

6.1.4 MIDWEST COMPACT

Approved: 1986 (1985 LLRWPAA)

Member States: Ohio (host until 1997), Indiana, Iowa, Minnesota, Missouri, and Wisconsin

Siting Status - Michigan was the first host state of this Compact. However, that State's siting criteria made the successful development of a regional facility virtually impossible. By 1991, the Midwest Compact Commission voted to revoke Michigan's status as host state and Compact member. Ohio was named host state and began to actively pursue the necessary activities related to the siting of an LLRW facility. Legislation was in place in Ohio, and all member states had approved a series of amendments to that Compact Act. The Compact Commission decided to suspend all siting activities and rescind Ohio's designation as host in June 1997. The Compact then closed its Commission office and transferred the responsibilities of its Executive Director to its Chairman. Dwindling regional waste volumes, continued access to existing waste

disposal facilities, and potentially high development costs were cited as the primary reasons for this decision. Note: By halting the siting process in advance of actual siting work in Ohio, the Midwest Compact avoided large expenditures of money.

Interaction - This was never seriously pursued as an option for disposal, whether it be through a contractual arrangement or some sort of compact consolidation or membership. While Michigan was the host state, it was recognized that the criteria set out in its siting plan were such that no site would be developed in that state. After that Compact "threw out" its wayward host, there was interest in monitoring Michigan to see how its generators handled the need to store waste; Michigan lost access to disposal then available in the "sited states" as a result of being "out of compliance" with the *Amendments Act*.

When Ohio became host state, there were many administrative/legislative matters for that state to handle, including the passage of enabling legislation. The Northeast Commission and the member states made themselves available for any needed information and assistance, especially as Ohio considered a voluntary siting plan.

Ohio was also a member of the "voluntary plan working group" that was active from 1995 to 1997, although a few meetings were held in 1998, notably the meeting in June in Lambertville, NJ with the New Jersey Siting Board. This interaction with Ohio maintained a solid relationship between the siting agencies of the member states and between the Compact Commissions. If Ohio had been successful or had even begun siting, a relationship would have been pursued to ascertain that State/Compact's interest in providing disposal.

Action Plan - The Chairman of the Midwest Compact remains active in the LLW Forum and maintains an interest in discussing issues such as compact consolidation. There is no real possibility of long-term disposal at this juncture, however, it is worth maintaining contact. The Chairman of this Compact has said that the siting process could be restarted if existing disposal options become unavailable.

6.1.5 NORTHWEST COMPACT

Approved: 1986 (1985 LLRWPAA)

Member States: Washington (host), Alaska, Hawaii, Idaho, Montana, Oregon, Utah, and Wyoming

Notable: One of the original "sited" states, the Hanford facility in Richland, Washington has provided disposal capacity only for the members of its Compact region since the Compact was approved. Since 1992, the members of the Rocky Mountain Compact have had access to the facility under a contractual arrangement.

Siting Status - Not applicable. Current Washington state law prohibits any arrangement for disposal at Hanford with states that are not contiguous with the Compact and that generate more than 1,000 cubic feet of LLRW annually.

Interaction - The Northeast Commission has always monitored the actions of the Northwest Compact Commission, including the status of activities at Hanford in general (cleanup on Hanford reservation). The activities of US Ecology are also monitored. The Envirocare facility, although not a "regional facility" for this Compact, is located in this Compact region and included in the Northeast Commission's monitoring efforts. Action Plan - At present, there is no access to Hanford (except for NORM waste). However, it is well worth monitoring this situation particularly since the site operator, US Ecology, supports greater access and rumors have been circulating for years that one day US Ecology will sue the Compact in a restraint of trade action. However, the State of Washington has said that they will close the site if they no longer have the protection of the Compact.

6.1.6 ROCKY MOUNTAIN COMPACT

Approved: 1986 (LLRWPAA) Member States: Colorado, Nevada, and New Mexico

Siting Status - The states of this Compact have access to the Hanford facility under a contract with the Northwest Compact. The states meet the requirement of contiguous states; rates of waste generation are restricted under the contract. There is no current siting program or known plans for any future siting process.

Future/Action Plan - Monitor, but access unlikely. If Safety-Kleen's Deer Trail facility in Colorado accepts DOE waste, it is possible that they will expand waste acceptance to commercial waste.

6.1.7 SOUTHEAST COMPACT

Approved: 1986 (1985 LLRWPAA) **Member States:** Alabama, Florida, Georgia, Mississippi, North Carolina (host), Tennessee, and Virginia

Siting Status - All siting work in North Carolina was halted in late 1997; the impasse over funding between the State and that Compact Commission continues. On April 21, 1999, the Southeast Compact Commission voted to notify North Carolina Governor Jim Hunt (D) and the State legislative leadership that the State has not met its legal obligations as the Compact's host state. The action took place on the second day of a two-day meeting of the Commission in Raleigh, North Carolina. A resolution adopted by the Commission declares that North Carolina "stands in violation of the Compact law, threatening the health and safety and economic well-being of the citizens of seven states by failing to proceed with the process of providing for the disposal of the region's low-level radioactive waste." The resolution asks the elected officials to provide the Commission with a written plan and schedule for returning to compliance and, ultimately, providing for disposal.

The North Carolina LLRW Authority is now considering the development of a "decay-in-storage" facility. It is questionable whether this waste technology will satisfy the Southeast Compact's requirements for "permanent" disposal. The Southeast Compact is also considering a lawsuit against North Carolina. At present, the 68 generators in North Carolina send some waste to Envirocare; the rest is in storage. As reported by the State, 60% of these generators will run out of storage space in the next 5 years.⁷

⁷ On June 21, 1999, an administrative complaint against the State of North Carolina to the Southeast Compact Commission for Low-Level Radioactive Waste Management was submitted by the States of Florida and Tennessee. These states recommended sanctions including returning commission funds plus interest, limiting the export and processing of North Carolina waste, and requiring North Carolina to store all waste from the region pending availability of a new regional disposal facility.

Future/Action Plan - Will monitor closely, especially if South Carolina rejoins the Southeast Compact since indications are that this would be contingent on an agreement by North Carolina to resume siting and commit to its responsibility to be the Compact's second host state. The funding impasse would have to be resolved to allow North Carolina to resume its role. Its pursuit of the "decay-in-storage" methodology could also make this situation interesting.

If South Carolina rejoins the Southeast Compact, the Northeast Commission will work to ensure that access to Barnwell continues for generators in the Northeast Compact, and will work to obtain long term access to that facility or any other regional facility.

6.1.8 SOUTHWESTERN COMPACT

Approved: 1988

Member States: Arizona, California (host), North Dakota, and South Dakota

Siting Status - The struggle continues to obtain a transfer of the Ward Valley land to the State of California. Lawsuits have been filed by U.S. Ecology and California against the United States Department of the Interior for damages and to compel the transfer. Recently elected Governor Gray Davis was the Lands Commissioner in 1992 when Ward Valley was transferred; he claims then-Secretary Lujan's action was an attempt to circumvent the Lands Commission. Gray has been an opponent of the facility. There is some indication that US Ecology, the developer of the site, may shut down its operations at Ward Valley.

On March 31, 1999, the U.S. District Court issued an order in favor of the Department of the Interior. The Court refused to order the transfer of the federally owned land on which the Ward Valley site is located. The Court found that Interior Secretary Babbit had a reasonable basis on which to rescind the decision of former Secretary Lujan to transfer the land to the State.

In response to the Court's decision, American Ecology - US Ecology's parent company - reiterated its intention to continue to work toward repeal of the federal LLRW Policy Act. The company has also acknowledged that it must fulfill legal and contractual obligations.

Alan Pasternak, the Director of the California generators' group, CALRAD, commented in a recent newsletter of the LLW Forum that the State of California still has an obligation to provide disposal capacity for its LLRW generators. He also noted that the Court's decision does not prohibit the transfer of the land from the federal government - it simply declines to order the government to do so.

Recent appointments by Davis are interesting. San Diegan Lynn Schenk has been appointed as Davis' top policy advisor. She is a former Congresswoman and state cabinet official who, according to CALRAD, has in the past been supportive of California's biotech industry. Vic Fazio, another former member of Congress, will run the Governor's Washington D.C. office. Apparently, again according to CALRAD, he has broad Washington experience and is aware of the complexities of the Ward Valley situation. Governor Davis has included \$1.2 million in general fund revenues in his 1999 budget to support finding an acceptable solution for the development of a LLRW disposal site in California.⁸

⁸ On June 3, 1999, Governor Davis announced his decision not to pursue an appeal of the U.S. District Court March decision regarding the transfer of federal land in Ward Valley. On June 29, the Southwestern Low-Level Radioactive Waste Commission adopted a reduced budget for the remainder of the calendar year. No funding mechanisms exist presently for year 2000 operations.

Future/Action Plan - Continue to monitor situation. Legal challenges are probably the best chance for successful land transfer. The Northeast Commission has supported California efforts in legal actions, and California knows of the Commission's interest in any potential disposal at that facility.

6.1.9 TEXAS COMPACT

Approved: 1998 Member States: Maine, Texas (host), and Vermont

Siting Status - On October 22, 1998, the Texas Natural Resource Conservation Commission (TNRCC) denied the license application filed by the LLRW Authority. The TNRCC cited an inferred fault beneath the site and possible socioeconomic impacts of the facility. Governor Bush responded by reaffirming his previous position, saying that if state environmental officials said the site is not safe, the facility will not be built at Sierra Blanca.

An LLRW Authority motion for rehearing was effectively denied when the TNRCC took no action. No appeal is pending.

The Texas LLRW Authority is discussing possible public/private initiatives with Envirocare of Texas and Waste Control Specialists (WCS). Each company wants to operate a facility in Andrews County, 250 miles northwest of Sierra Blanca. Officials in Haskell County, 180 miles west of Dallas, also have expressed an interest in hosting a facility and that is a viable option, according to officials at the Authority.

The Authority is also pursuing legislative changes necessary to implement an initiative with a private developer/operator such as Envirocare or WCS. Language in the law that restricts the TNRCC to considering a license application solely from the Authority must be eliminated in order to permit a license application from a private entity. The law also limits the location of a facility to a 400-square-mile section of Hudspeth County. A provision in the law that allows the Authority to contract with a private entity to perform the overall operation of the site has also raised the possibility that legislation might be introduced to permit the Authority to oversee a privately owned and operated LLRW facility in the State.

Numerous bills have been introduced in the Texas legislature⁹. For any site to open in Texas, a bill to at least remove the location and size restrictions on the site must be passed. Apparently, Envirocare and WCS are both exploring this idea. These companies also want legislation that will allow them to be licensed directly by the state to accept DOE waste at their facility — without the need for a license from the NRC.

⁹ On May 29, 1999, the Texas Low-Level Radioactive Waste Disposal Authority was abolished by the Texas State legislature. It is no longer a separate entity, however, its staff, funding, and functions have been transferred to the Texas Natural Resource Conservation Commission. Other legislation regarding the Authority's functions were not passed as of May 29, 1999.

Future/Action Plan - The Northeast Compact has supported Texas' efforts to ratify its Compact, including communications with the Connecticut and New Jersey Congressional delegations for support of the Texas Compact Act. The Compact has discussed financial incentives and Compact membership and/or consolidation with the administrations of Governors Richards and Bush. The Northeast Commission has had direct communications with Texas officials. Texas is aware of the continued interest of the Northeast Compact in gaining access to any facility that may be built for that Compact.

6.2 COMMERCIAL (NON-GOVERNMENTAL)

Some companies, primarily Safety-Kleen Corporation, Waste Control Specialists, and Envirocare of Texas are attempting to develop the ability to include LLRW disposal at their present hazardous waste facilities. These facilities look to the example of Envirocare and seek to find a place in the LLRW market. Private companies also want to be able to accept DOE waste (see below for detailed analysis of this issue). These facilities are also possible sites for commercial LLRW generated in states and compacts.

6.2.1 SAFETY-KLEEN CORPORATION

Safety-Kleen, formerly Laidlaw Environmental Services, Inc., has facilities in Colorado (Deer Trail) and Utah (Grassy Mountain). Laidlaw was one of the country's largest solid waste companies. It divested itself of its holdings in April 1997. At the time, the company said it would focus on its transportation operations, such as public transit and school busing. About one year later, however, the company was vying for DOE's waste business. Maggie Wilde was the spokesperson from Safety-Kleen who provided information to the task group.

During the first phase of the Safety-Kleen proposal, the DOE would pay the company to maintain its Deer Trail disposal site in a condition ready to receive DOE's waste from Rocky Flats. DOE would also reimburse the firm's expenses to obtain state licenses and permits. Safety-Kleen would construct a disposal cell to hold the waste. During phase two, DOE would ship wastes to Deer Trail.

Deer Trail is an existing hazardous waste disposal facility 70 miles east of Denver. Safety-Kleen suggests DOE use the site to dispose of waste from the Rocky Flats site in Golden, Colorado. According to a 1996 published report, Rocky Flats had an inventory of approximately 20,000 cubic meters of mixed LLRW; it is expected to generate more than 47,000 cubic meters of mixed LLRW between 1998 and 2006, and an additional 14,000 cubic meters by 2030. (Note: there are 35.3 cubic feet in a cubic meter.)

This facility could become an important option for LLRW disposal if Safety-Kleen decides to try to obtain permission to accept commercial LLRW from the states and compacts. It is worth noting that the Deer Trail facility is in Colorado, a state that is not inclined towards LLRW disposal within its borders. The Rocky Mountain Compact's contract with the Northwest Compact for disposal at the Hanford facility could also impact the ability of a facility in Colorado to serve as an LLRW disposal facility. At the interview, Maggie Wilde would not even discuss the possibility of commercial waste being accepted at Deer Trail.

Safety-Kleen also operates Grassy Mountain, a hazardous waste landfill near the Envirocare facility in Clive, Utah. It proposes to convert an existing hazardous waste cell into an LLRW cell.

This cell has a capacity of 750,000 cubic yards (CY) in its 10 acres. In addition to obtaining approval of a siting application, the company must receive approval of a license application, as well as approvals by Tooele County, the Utah legislature and the Governor.

Cost projections for LLRW disposal, at concentrations similar to Envirocare's, is \$250/ cubic yard, or less than \$10/CF. There are no volume limits anticipated at this time.

The Utah Radiation Division has approved the siting application. On December 2, 1998, the Tooele County Planning Commission rejected the appeal by Safety-Kleen to amend its permit to allow the company to dispose of LLRW at its site. The Planning Commission noted that a second LLRW disposal facility was not needed or advisable in Tooele County. The company appealed the decision of the Planning Commission to the County Commission. The company is considering an administrative appeal.

6.2.2 WASTE CONTROL SPECIALISTS

Waste Control Specialists operate a site in Andrews County, in west Texas. This site is currently a licensed and operating TSCA and RCRA (wastes defined in the Toxic Substances Control Act and the Resource Conservation and Recovery Act, respectively) hazardous waste facility, and a mixed waste treatment and disposal facility. The site is 16,000 acres with a portion extending into New Mexico. Under their 7-year license, they are presently storing residual radioactive waste remaining from their mixed waste treatment. Bill Dornsife provided information to the task group. In addition to the company's pursuit of DOE waste, WCS may become the site for the Texas Compact facility. (See discussion, above.) Sending LLRW to this facility may be a future possibility. In testifying before the Texas legislature, WCS projected disposal costs in the range of \$36-38/CF.

6.2.3 ENVIROCARE OF TEXAS

ENVIROCARE has organized a Texas corporation that is proposing to develop a LLRW disposal site in the Andrews County of Texas as a potential alternative to the Texas Compact needs. The site is 888 acres but is not currently supporting any disposal operations. Of note, however, is the fact that the former general manager of the Texas LLRW Disposal Authority, Rick Jacobi, joined Envirocare of Texas, Inc., as vice president of operations. Envirocare of Texas is working to obtain permits for a mixed waste treatment, storage and processing facility, as well as obtaining a LLRW license to serve the Texas Compact.

6.3 DOE ACCEPTANCE OF COMMERCIAL LLRW

For several years, the DOE has been exploring the question of whether it can or should use private commercial hazardous waste facilities to dispose of its LLRW and mixed LLRW. Since 1979, the DOE has primarily disposed of LLRW and mixed LLRW at its own sites. The DOE decided on in-house disposal after three of the six operating facilities closed between 1975 and 1978 (see A History of National LLRW Management, above). Waste management officials at DOE were concerned that if DOE became dependent on commercial waste disposal sites, it would not be prepared to handle its own waste if the commercial sites closed.

The current policy of the DOE allows a small percentage of its waste to be disposed of at commercial disposal sites on a case-by-case basis. Thus far, DOE has only sent its waste to the

Envirocare facility, a site that has both state and NRC licenses.¹⁰ Cleanup of the DOE weapons-producing complex has created pressure for DOE to expand its waste-disposal capacity or increase its use of commercial sites. A Federal Register notice seeking public comments has been in circulation for some time in an effort to sort out issues associated with this decision. These often contentious issues include: the role of the private sector in federal waste disposal; who should oversee DOE waste disposal; and which company or companies may get paid to dispose of federal LLRW and mixed LLRW. Some parties claim that DOE's effort to sort out these issues is a stall tactic to allow DOE to continue to give all its waste to Envirocare. The desire of WCS to dispose of DOE LLRW is also part of the impetus behind the call for a policy by DOE on the acceptance of DOE LLRW at commercial facilities.

The amount of LLRW and mixed LLRW generated by the commercial sector in states and compacts is dwarfed by the amounts of waste that will be generated by the DOE. This is one of the reasons why this issue is so important to states and compacts. For several years, the DOE and the states and compacts have discussed whether DOE will accept commercial LLRW and mixed waste at its own facilities. Some commentators have proposed that use of the existing DOE facilities, supplemented by the use of certain commercial facilities such as Envirocare, would solve the problem of LLRW and mixed waste disposal.

The LLW Forum has been in the forefront of this issue and has helped states and compacts maintain an on-going dialogue on this question. A policy decision on this issue by the DOE was announced on March 10, 1999. The DOE decided to maintain its current policy concerning the use of commercial disposal facilities, but will take additional steps to promote competition. These steps include: 1) incentive payments or guarantees of minimum volumes for new facilities that obtain a license from the NRC or Agreement States; 2) separate procurement for the disposal of wastes with very low levels of radioactivity; and 3) assisting potential commercial disposal facilities' efforts to obtain an operating license from an Agreement State or NRC. The DOE announced that this decision to maintain its current policy is premised on the expectation that states and the NRC will issue licenses in accordance with their authority. The DOE also noted that, as with any other policy, if conditions change, and as commercial and federal disposal alternatives evolve, this policy may be re-examined in the future.

6.4 INTERNATIONAL DISPOSAL

From time to time, sources of varying reliability have discussed the development of various disposal options out of the country. The Northeast Commission has been involved in discussions concerning the disposal of waste in countries in which such an arrangement could legitimately be pursued. It has monitored, but not become involved in, discussions involving disposal in countries where such disposal may not be safe or feasible. The Commission is aware of and agrees with serious concerns about transportation issues and disposal standards in another country. At this time, the Commission remains aware of the complex philosophical, political and technical issues implicated in the concept of shipping waste out of the country for disposal.

¹⁰Waste Control Specialists (WCS) successfully argued to a federal court that neither a NRC nor state license are necessary for the acceptance of DOE waste. The Court held that if the DOE chooses to regulate or control a private site, the sites are exempt from NRC and state licensing requirements. It is only where the DOE does not choose to exercise such control that the NRC and Agreement States retain their power to regulate commercial sites providing a service to the DOE. The Court also said that nothing in the law indicates that the DOE must exercise regulatory authority.

6.5 ECONOMIC ANALYSIS

During active siting, the Siting Board contracted the Idaho National Engineering Laboratory to prepare: "Preliminary Cost Estimates for Building, Operating, and Closing a Low-Level Radioactive Waste Disposal Facility for the State of New Jersey." In May of 1997, this document, INEL-96/0310, was sent to the Board.

Estimates of disposal costs per cubic foot, in 1996 dollars, ranged from \$324 for a 3 million cubic foot facility run for three months of each year for thirty years, to \$733 for a 1 million cubic foot facility run continuously for fifty years. These estimates do not include liability funds, finance charges, Compact/State/county/city taxes or surcharges, or business taxes.

7. NATIONAL LLRW MANAGEMENT POLICY ISSUES

A discussion of several issues that impact national LLRW management follows. These issues have affected, or may impact, the effort to obtain access to out-of-region LLRW facilities.

7.1 RECONSIDERATION/REPEAL OF LLRW POLICY AMENDMENTS ACT

The question of whether the *Amendments Act* should be repealed has been discussed for years. In recent months this question has been getting more frequent and vocal attention. The answer to the question of what national LLRW policy would or should be if the *Act* is repealed is being discussed informally among states and compacts and more formally at meetings of states and compacts, including the LLW Forum. Other considerations of this question include the United States General Accounting Office, Study of Commercial LLRW Management. At the request of Senator Murkowski, Chairman of the Senate Committee on Energy and Natural Resources, the GAO is conducting a study of national commercial LLRW management and disposal. The GAO is contacting states and compacts, and has visited the Barnwell facility. This report is to be completed soon.

Recently, Senator Murkowski's committee has also requested that the GAO conduct a study on the cost and status of the Department of Energy's efforts to use private facilities for the disposal of LLRW. This second report is expected to be submitted by year-end. At the very least, it is anticipated that these studies could result in hearings before the Senate Committee on the national LLRW program.

If such hearings are held, New Jersey in coordination with the Northeast Compact will attempt to provide testimony or written documentation on the issues. Representatives of the New Jersey LLRW Siting Board and the Northeast Compact have had discussions with staff members of the GAO at recent LLRW Forum and DOE conferences. In addition, copies of the "Status report: Managing Low-Level Radioactive Waste in New Jersey, 1987-1998 and Beyond:" have been given to the GAO representatives as well as documentation from the Northeast Compact.

The issue of LLRW was also the topic of the National Conference of State Legislators meeting in Jacksonville, FL on April 9, 1999: "National Summit to Assess the Federal LLRW Policy Amendments Act". A representative of the New Jersey Siting Board and representatives of the Northeast Compact Commission attended this meeting and observed various discussions. The initial consideration was the finding that the Federal Policy Amendments Act has not been effective in promoting the development of new low-level radioactive waste disposal sites. During the following sessions several alternatives were discussed, including:

- Let the repeal of the Federal Policy Amendments Act;
- □ the Department of Energy taking on the responsibility for the disposal of all low-level radioactive waste, including that produced by commercial interest;
- opening the disposal activities to normal market development by private ventures; and
- Let the possible combination under the existing Policy Act of any of the above scenarios.

The findings of this meeting are to be developed into a report that is to be delivered to the Senate Energy Committee for appropriate actions.

7.2 PUBLIC/PRIVATE INITIATIVES FOR WASTE MANAGEMENT

The question of how LLRW should be managed has led to the exploration of several options. The first is a continuation of public management and control of LLRW management through state and compact initiatives. The opposite point of view believes LLRW management should become an entirely private enterprise. A third point of view sees continued LLRW management as a form of a public/private combined initiative.

The issue of public versus private will likely unfold as Texas pursues its exploration of a public/ private initiative through an affiliation with either WCS, Envirocare of Texas or another developer. Some companies, such as US Ecology, have been notable supporters of the idea of privatization of LLRW management and the elimination of LLRW compacts.

At the recent annual LLRW meeting of the U.S. Department of Energy sponsored by its National LLW Management Program, this issue was discussed as part of a panel discussion of compact officials.

Issues discussed during the session included the question of the value of the security of regulated, controlled markets that compacts provide, and, conversely, the relative insecurity of private initiatives. The loss of public control was cited as an issue that could impact the ability of generators to have access to waste disposal. For example, a private operator, after developing a facility for LLRW, could subsequently determine that the entire facility will be dedicated to the more profitable, greater volume of DOE waste and not have capacity for commercial LLRW. Without a state or compact involved in regulating access to such a facility, generators of commercial LLRW could lose access to such a facility. The private company's goal of profits may also give the impression that safety is compromised.

It was agreed that compact facilities would probably not be as economical as those developed privately, but the goal of equity, if it is still a goal of the national LLRW system, will be preserved through the maintenance of national compacts. A market controlled by compacts will also provide a stable and guaranteed market, and the possibility for lowering operational costs through arrangements such as splitting a market for waste (for example, one facility takes Class A, the other B and C). Another benefit of compacts may be a safer, more stable waste stream and better waste forms since volume reduction is a goal of compacts.

The public aspect of compacts (open meetings, public comment) versus the ability of a private company to act without public input was another aspect of this issue that was discussed. It was mentioned that although a private company may be able to get more accomplished more quickly through lobbying, etc, (compacts do present a layer of bureaucracy), the value of public input should perhaps not be eliminated in such an important public policy issue. The use of public

money to build and operate a facility was noted as another possible avenue to keep costs down. The answer, the panel concluded, may be a private/public initiative. In this combination, the interests are more than profit. Interests will include the environment, public policy and equity.

As is the conclusion of many discussions on this issue, the panel noted that all should remember the reasons why the federal LLRW laws were adopted in the first place. Total elimination of this system could take the country back to where it was over twenty years ago. In short, what will replace the national system continues to be a question that many are trying to answer.

7.3 NEW DISPOSAL TECHNOLOGY: ASSURED ISOLATION AND ITS CONTEMPORARIES

In 1995, an article appeared in *Radwaste News* that outlined a new disposal methodology. Termed assured storage at that time, this "new" methodology proposed a facility that will have many features such as concrete buildings and overpacks for waste that are now common to engineered disposal facilities. The facility will also have some unique features that do not rely on the long-term performance of the site and take advantage of the fact that inspection and maintenance will continue indefinitely. Over succeeding generations, the assured isolation facility will provide its overseer the multiple options of continuing to monitor and maintain the system at a level justified by its past performance. The facility may be closed and sealed partially or completely, or the waste transferred to another location and the facility decommissioned.

Since this concept was first introduced, states such as Connecticut have taken steps to explore this concept for LLRW management. Some states, such as North Carolina, are exploring the related methodology of "decay-in-storage". Issues under consideration include costs and potential legal and liability issues associated with the development of such a facility. A chief concern of the Northeast Commission is whether such a facility would satisfy the requirements of federal law that a regional facility "permanently isolate" LLRW. This issue could have obvious implications for a compact's exclusionary authority.

The Northeast Commission is planning to evaluate and revise its 1987 *Regional Management Plan* which currently calls for each member state to build and develop a full-service disposal facility for LLRW generated within their borders. The issue of new disposal methodologies will be one of many considered by the Commission in detail as it evaluates a revision of the *Regional Management Plan*.

The possibility of new disposal methodologies could have an impact on the future of out-ofregion disposal options. If a state or compact region operates such a facility, there could be more options for access. The design of such a facility could accommodate additional wastes. Some believe the opportunity for access to these facilities will be enhanced because they will be developed and operated in a less contentious atmosphere than a traditional facility. Others believe the chance for access is diminished because these facilities will be designed only to accommodate the storage of a state's, or possibly a compact's, LLRW.

7.4 INTERREGIONAL ACCESS for WASTE MANAGEMENT AND TREATMENT

Maintaining access by generators to out-of-region processing, treatment and brokerage services remains an important component of LLRW management in the Northeast Compact region. Processing of LLRW can result in a waste stream that has volume reduction and stabilization as essential characteristics. The Northeast Compact and other states and compacts have suc-

cessfully negotiated and executed several interregional agreements for waste management. These agreements have allowed LLRW to continue to move among states and compact regions for treatment. These arrangements illustrate the ability of states and compacts to successfully negotiate, execute and maintain agreements to cooperatively manage LLRW.

7.5 PURCHASE OF OUT-OF-STATE DISPOSAL SPACE

Chem-Nuclear had offered a proposal for generators to purchase space at their disposal facility in Barnwell, South Carolina. The New Jersey Attorney General's office advised the Siting Board that there is no problem in the Board's purchasing the rights to adequate space in the disposal facility. Liability potential depends, as a start, on the provisions of the purchase contract.

Chem-Nuclear has rescinded their offer, but should a similar proposal be forthcoming, the Board would have to carefully examine the contract provisions in view of South Carolina case law.

8. CONCLUSION

The national LLRW program is involved with numerous developments and potential changes which should be monitored by the New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board (Siting Board) and the Northeast Compact. In this light, the Siting Board must maintain a high level of awareness of these issues in order to provide proper guidance in providing for the disposal for LLRW generated in New Jersey. The Siting Board should continue to coordinate its efforts with the Northeast Compact in finding a long-term solution for this disposal problem.

Other than the present opportunities for out-of-region disposal at the Barnwell and Envirocare facilities, there are no other immediate realistic opportunities for out-of-region disposal. There are, however, numerous matters that merit monitoring and possible participation, including:

- □ The status of the Barnwell facility/discussions with Governor Hodges;
- □ The status of LLRW disposal at the Envirocare facility;
- □ The status of California legal actions for damages and to compel transfer of Ward Valley site to the State;
- Developments in Texas, particularly regarding the public/private initiative for waste disposal sites;
- □ International waste management issues and developments;
- □ The continuing consideration by the U.S. DOE of the acceptance of commercial LLRW and mixed LLRW;
- □ The development of new disposal methods, such as assured isolation, and the possible impact of such methods on waste management; and
- □ The national dialogue regarding LLRW management issues and the efficacy of the federal LLRW Policy Amendments Act.

It remains an advantage for the State of New Jersey to be a member of the Northeast Compact. As a member of an interstate compact, the State's interests are represented in the on-going national dialogue on LLRW management. These interests include the continued access to facilities for waste treatment and disposal, including the interregional agreements to which the Compact is a party. It is also a benefit for the State to maintain its status as a participant in the on-going dialogue concerning decisions and issues that are essential to meeting the State's continuing obligation to manage the LLRW generated within its borders. By staying active in the process, the State will be ready to act in a timely and effective manner in the event of an opportunity for out-of-region management of the State's LLRW.

9. FINDINGS

Our findings:

- No new low-level radioactive waste facilities have been sited in the United States under State/Compact direction. Social and political pressures as well as Federal government inaction have thwarted all efforts in this area and appear to preclude any resolution in the near future. A few State/Compact entities are considering alternative low-level radioactive waste management concepts, which may facilitate physical siting; however, there is no assurance that this effort will be more successful.
- 2. Private corporations under government licenses in South Carolina, Utah, and the State of Washington operate the only current low-level radioactive waste disposal sites receiving commercial waste. The Washington location only accepts waste from its compact region and, by agreement, the Rocky Mountain Compact; the Utah site is restricted by State law to only receive certain low-level radioactive waste forms. The South Carolina facility accepts all low-level radioactive waste; however, the State is exploring effectively closing or limiting access to this site in the near future. It appears that this disposal site will continue to accept waste from New Jersey generators for at least two years, before action might be taken to limit out-of-state access.
- 3. There are efforts by private corporations to open new facilities in Texas, Utah, and Colorado but, if successful, these may not be accessible for commercial nationwide low-level radioactive waste disposal. As envisioned, either of the Texas facilities (WCS or Envirocare of Texas) would be restricted to its Compact members, although they may accept Department of Energy (DOE) waste. The proposed Colorado facility (Safety-Kleen's Deer Trail site) would be limited to federal DOE waste. The proposed Utah facility (Safety-Kleen's Grassy Mountain site) would only accept low-level radioactive waste similar in activity to Envirocare of Utah's facility.
- 4. The U.S. Senate Energy Committee has requested the Government Accounting Office (GAO) to prepare reports on the current status and effectiveness of the national Compact/ State low-level programs. The GAO has also been asked to assess the Federal Department of Energy's program in the management of their low-level radioactive waste. These reports are to be submitted to the Committee for action this year. It can not be predicted what this study will conclude or recommend.
- 5. The National Governor's Association reaffirmed their commitment to the Compact system at their annual meeting, however, they limited their resolution to one year, and expect to revisit the issue next year.

6. The economic studies undertaken by the New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board, the Connecticut Hazardous Waste Management Service and several other state entities have indicated that the operational cost of relatively small new disposal facilities designed in keeping with current regulations would be in excess of \$500 per cubic foot of waste. The current disposal cost at South Carolina and Utah is approximately \$300 and \$100 per cubic foot (CF) of waste respectively.

Summary of findings:

It is apparent that the disposal management of low-level radioactive waste throughout the nation is in a state of flux. However, the current private low-level radioactive waste disposal vendors believe that the situation will be stabilized within the next five years through their companies' efforts and/or by a change in the federal *Low Level Radioactive Waste Policy Act*. These firms also believe that the reduced volume of commercial low-level radioactive waste can be accommodated in existing and proposed privately operated disposal sites.

This evaluation of the status of national low-level radioactive waste disposal programs has confirmed the validity of New Jersey Siting Board's previous position and actions to suspend active siting of a low-level waste site in our State. It is also recognized that the problem has not been resolved at this time and that New Jersey may have to again consider the "in-state" siting issue at some future time. However, currently there are disposal facilities accessible to New Jersey generators of low-level radioactive waste and there appear to be several national developments in this waste management dilemma that are being pursued which may resolve the issue for New Jersey.

Recommendations for future action:

The New Jersey Siting Board therefore should continue in the suspension of active siting and work with the Northeast Compact Commission to maintain a national monitoring effort of low-level radioactive waste disposal developments. Liaisons with the National Governor's Association, the National Conference of State Legislators, the Low-Level Radioactive Waste Forum, the Conference of Radiation Control Program Directors and other state agencies and Compacts should be maintained. In addition, the Siting Board should continue its public education program on radioactive waste management and continue to evaluate potential new technological opportunities that may be beneficial to New Jersey low-level radioactive waste generators.

Since the Siting Board has curtailed its activities, its financial requirements have been significantly reduced. Therefore, the Board should consider the return of funds to the contributing low-level radioactive waste generators that are in excess of a nominal 3-year operating budget. If there is need for additional operational funding to resume active siting in New Jersey or for an out-of-state cooperative option undertaking, such appropriate funding can be raised through generator assessments in accordance with N.J.A.C. 7:60.

Appendix A

DISPOSAL OPTIONS REPORT'S WORKGROUP

The members of the workgroup for this report, and their affiliations, are:

- Janice Deshais, Esq., Northeast Interstate LLRW Compact Commission;
- Patricia Gardner, NJDEP;
- □ Mike Hogan, Esq., Board member & NJDEP;
- Jill Lipoti, Ph.D., NJDEP;
- Richard McGoey, Board member & GPU Nuclear;
- Gerald Nicholls, Ph.D., alternate Board member & NJDEP;
- □ James Shissias, Board member & PSE&G;
- Joseph Stencel, Board member & Princeton University;
- Richard Sullivan, Northeast Interstate LLRW Compact Commission;
- Edward Truskowski, NJDEP; and
- Paul Wyszkowski, Board member & AT&T Bell Laboratories

Meetings were held on:

- December 3, 1998 with Mr. Gene Gleason of Envirocare of Utah and Mr. Bill Dornsife of Waste Control Specialists;
- □ February 22, 1999 with Mr. George Antonucci of Chem-Nuclear Systems. The meeting continued with a conference call with Ms. Maggie Wilde of Safety-Kleen and a conference call with Mr. Steve Romano of American Ecology;
- March 3, 1999 to discuss recent developments in waste management in other states and to update the draft report;
- April 9, 1999 at the National Conference of State Legislators meeting in Jacksonville, FL.; and
- April 22, 1999 to discuss recent developments in waste management in other states and to update the draft report.

Phone calls by NJDEP staff were made on:

- □ February 23, 1999 to Mr. Virgil Autry of the South Carolina Department of Health and Environmental Control;
- □ March 1, 1999 to Mr. Gary Robertson of the State of Washington, Division of Radiation Protection, Department of Health;
- March 1, 1999 to Mr. Richard Ratliffe of the Texas Bureau of Radiation Control, Department of Health;
- □ March 2, 1999 to Mr. William Sinclair of the Utah Division of Radiation Control, Department of Environmental Quality; and
- April 1, 1999 via e-mail to Mr. Autry, Mr. Sinclair, and Mr. Robertson to comment on sections of the draft report that referenced communications with their respective state agencies.

Appendix B

Public Law 99-240

(The "Low-Level Radioactive Waste Policy Amendments Act of 1985")

Sec. 227 Northeast Interstate Low-Level Radioactive Waste Management Compact.

In accordance with section 4(a)(2) of the Low-level Radioactive Waste Policy Act, the consent of the Congress is hereby given to the States of Connecticut, New Jersey, Delaware, and Maryland to enter into the Northeast Interstate Low-Level Radioactive Waste Management Compact. Such compact is substantially as follows:

"Article I. Policy and Purpose

"There is hereby created the Northeast Interstate Low-Level Radioactive Waste Management Compact. The party states recognize that Congress has declared that each state is responsible for providing for the availability of capacity, either within or outside its borders, for disposal of low-level radioactive waste generated within its borders, except for waste generated as a result of atomic energy defense activities of the federal government, as defined in the Low-Level Radioactive Waste Policy Act (P.L. 96-573,'The Act'), or federal research and development activities. They also recognize that the management of low-level radioactive waste is handled most efficiently on a regional basis. The party states further recognize that the Congress of the United States, by enacting the Act has provided for and encouraged the development of regional low-level radioactive waste compacts to manage such waste. The party states recognize that the long-term, safe and efficient management of low-level radioactive waste generated within the region requires that sufficient capacity to manage such waste be properly provided.

"In order to promote the health and safety of the region, it is the policy of the party states to: enter into a regional low-level radioactive waste management compact as a means of facilitating an interstate cooperative effort, provide for proper transportation of low-level waste generated in the region, minimize the number of facilities required to effectively and efficiently manage lowlevel radioactive waste generated in the region, encourage the reduction of the amounts of lowlevel waste generated in the region, distribute the costs, benefits, and obligations of proper lowlevel radioactive waste management equitably among the party states, and ensure the environmentally sound and economical management of low-level radioactive waste.

"Article II. Definitions

"As used in this compact, unless the context clearly requires a different construction:

"a. 'commission' means the Northeast Interstate Low-Level Radioactive Waste Commission established pursuant to Article IV of this compact;

"b. 'custodial agency' means the agency of the government designated to act on behalf of the government owner of the regional facility;

"c. 'disposal' means the isolation of low-level radioactive waste from the biosphere inhabited by man and his food chains;

"d. 'facility' means a parcel of land, together with the structures, equipment and improvements thereon or appurtenant thereto, which is used or is being developed for the treatment, storage or disposal of low-level waste, but shall not include on-site treatment or storage by a generator;

"e. 'generator' means a person who produces or processes low-level waste, but does not include persons who only provide a service by arranging for the collection, transportation, treatment, storage or disposal of wastes generated outside the region;

"f. 'high-level waste' means 1) the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentration; and 2) any other highly radioactive material determined by the federal government as requiring permanent isolation;

"g. 'host state' means a party state in which a regional facility is located or being developed; "h. 'institutional control' means the continued observation, monitoring, and care of the regional facility following transfer of control of the regional facility from the operator to the custodial agency;

"i. 'low-level waste' means radioactive waste that 1) is neither high-level waste nor transuranic waste, nor spent nuclear fuel, nor by-product material as defined in section 11e(2) of the Atomic Energy Act of 1954 as amended; and 2) is classified by the federal government as low-level waste, consistent with existing law; but does not include waste generated as a result of atomic energy defense activities of the federal government, as defined in P.L. 96-573, or federal research and development activities;

"j. 'party state' means any state which is a signatory party in good standing to this compact;

"k. 'person' means an individual, corporation, business enterprise or other legal entity, either public or private and their legal successors;

"I. 'post-closure observation and maintenance' means the continued monitoring of a closed regional facility to ensure the integrity and environmental safety of the site through compliance with applicable licensing and regulatory requirements; prevention of unwarranted intrusion, and correction of problems;

"m. 'region' means the entire area of the party states;

"n. 'regional facility' means a facility as defined in this section which has been designated or accepted by the Commission;

"o. 'state' means a state of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands or any other territory subject to the laws of the United States;

"p. 'storage' means the holding of waste for treatment or disposal;

"q. 'transuranic waste' means waste material containing radionuclides with an atomic number greater than 92 which are excluded from shallow land burial by the federal government;

"r. 'treatment' means any method, technique or process, including storage for decay, designed to change the physical, chemical or biological characteristics or composition of any waste in order to render such waste safer for transport or disposal, amenable for recovery, convertible to another usable material or reduced in volume;

"s. 'waste' means low-level radioactive waste as defined in this section;

"t. 'waste management' means the storage, treatment, transportation, and disposal, where applicable, of waste.

"Article III. Rights and Obligations

"a. There shall be provided within the region one or more regional facilities which, together with such other facilities as may be made available to the region, will provide sufficient capacity to manage all wastes generated within the region.

"1. Regional facilities shall be entitled to waste generated within the region, unless otherwise provided by the Commission. To the extent regional facilities are available, no waste generated within a party state shall be exported to facilities outside the region unless such exportation is approved by the Commission and the affected host state(s). "2. After January 1, 1986, no person shall deposit at a regional facility waste generated outside the region, and further, no regional facility shall accept waste generated outside the region, unless approved by the Commission and the affected host state(s).

"b. The rights, responsibilities and obligations of each party state to this compact are as follows:

"1. Each party state shall have the right to have all wastes generated within its borders managed at regional facilities, and shall have the right of access to facilities made available to the region through agreements entered into by the Commission pursuant to Article IV(i)(11). The right of access by a generator within a party state to any regional facility is limited by the generator's adherence to applicable state and federal laws and regulations and the provisions of this compact.

"2. To the extent not prohibited by federal law, each party state shall institute procedures which will require shipments of low-level waste generated within or passing through its borders to be consistent with applicable federal packaging and transportation regulations and applicable host state packaging and transportation regulations for management of low-level waste; provided, however, that these practices shall not impose unreasonable, burdensome impediments to the management of low-level waste in the region. Upon notification by a host state that a generator, shipper, or carrier within the party state is in violation of applicable packaging or transportation regulations, the party state shall take appropriate action to ensure that such violations do not recur.

"3. Each party state may impose reasonable fees upon generators, shippers, or carriers to recover the cost of inspections and other practices under this compact.

"4. Each party state shall encourage generators within its borders to minimize the volumes of waste requiring disposal.

"5. Each party state has the right to rely on the good faith performance by every other party state of acts which ensure the provision of facilities for regional availability and their use in a manner consistent with this compact.

"6. Each party state shall provide to the Commission any data and information necessary for the implementation of the Commission's responsibilities, and shall establish the capability to obtain any data and information necessary to meet its obligation as herein defined.

"7. Each party state shall have the capability to host a regional facility in a timely manner and to ensure the post-closure observation and maintenance, and institutional control of any regional facility within its borders.

"8. No non-host party state shall be liable for any injury to persons or property resulting from the operation of a regional facility or the transportation of waste to a regional facility; however, if the host state itself is the operator of the regional facility, its liability shall be that of any private operator.

"c. The rights, responsibilities and obligations of a host state are as follows:

"1. To the extent not prohibited by federal law, a host state shall ensure the timely development and the safe operation, closure, post-closure observation and mainte-

nance, and institutional control of any regional facility within its borders.

"2. In accordance with procedures established in Articles V and IX, the host state shall provide for the establishment of a reasonable structure of fees sufficient to cover all costs related to the development, operation, closure, post-closure observation and maintenance, and institutional control of a regional facility. It may also establish surcharges to cover the regulatory costs, incentives, and compensation associated with a regional facility; provided, however, that without the express approval of the Commission, no distinction in fees or surcharges shall be made between persons of the several states party to this compact.

"3. To the extent not prohibited by federal law, a host state may establish requirements and regulations pertaining to the management of waste at a regional facility; provided, however, that such requirements shall not impose unreasonable impediments to the management of low-level waste within the region. Nor may a host state or a subdivision impose such restrictive requirements on the siting or operation of a regional facility that, along or as a whole, they serve as unreasonable barriers or prohibitions to the siting or operation of such a facility.

"4. Each host state shall submit to the Commission annually a report concerning each operating regional facility within its borders. The report shall contain projections of the anticipated future capacity and availability of the regional facility, a financial audit of its operations, and other information as may be required by the Commission; and in the case of regional facilities in institutional control or otherwise no longer operating, the host states shall furnish such information as may be required on the facilities still subject to their jurisdiction.

"5. A host state shall notify the Commission immediately if any exigency arises which requires the permanent, temporary, or possible closure of any regional facility located therein at a time earlier than projected in its most recent annual report to the Commission. The Commission may conduct studies, hold hearings, or take such other measures to ensure that the actions taken are necessary and compatible with the obligation of the host state under this compact.

"Article IV. The Commission

"a. There is hereby created the Northeast Interstate Low-Level Radioactive Waste Commission. The Commission shall consist of one member from each party state to be appointed by the Governor according to procedures of each party state, except that a host state shall have two members during the period that it has an operating regional facility. The Governor shall notify the Commission in writing of the identity of the member and one alternate, who may act on behalf of the member only in the member's absence.

"b. Each Commission member shall be entitled to one vote. No action of the Commission shall be binding unless a majority of the total membership cast their vote in the affirmative.

"c. The Commission shall elect annually from among its members a presiding officer and such other officers as it deems appropriate. The Commission shall adopt and publish, in convenient form, such rules and regulations as are necessary for due process in the performance of its duties and powers under this compact.

"d. The Commission shall meet at least once a year and shall also meet upon the call of the presiding officer, or upon the call of a party state member.

"e. All meetings of the Commission shall be open to the public with reasonable prior public notice. The Commission may, by majority vote, close a meeting to the public for the purpose of considering sensitive personnel or legal matters. All Commission actions and decisions shall be

made in open meetings and appropriately recorded. A roll call vote may be required upon request of any party state or the presiding officer.

"f. The Commission may establish such committees as it deems necessary.

"g. The Commission may appoint, contract for, and compensate such limited staff as it determines necessary to carry out its duties and functions. The staff shall serve at the Commission's pleasure irrespective of the civil service, personnel or other merit laws of any of the party states or the federal government and shall be compensated from funds of the Commission.

"h. The Commission shall adopt an annual budget for its operations.

"i. The Commission shall have the following duties and powers:

"1. The Commission shall receive and act on the application of a non-party state to become an eligible state in accordance with Article VII(e).

"2. The Commission shall receive and act on the application of an eligible state to become a party state in accordance with Article VII(b).

"3. The Commission shall submit an annual report to and otherwise communicate with the governors and the presiding officer of each body of the legislature of the party states regarding the activities of the Commission.

"4. Upon request of party states, the Commission shall mediate disputes which arise between the party states regarding this compact.

"5. The Commission shall develop, adopt and maintain a regional management plan to ensure safe and effective management of waste within the region, pursuant to Article V."6. The Commission may conduct such legislative or adjudicatory hearings, and require such reports, studies, evidence and testimony as are necessary to perform its duties and functions.

"7. The Commission shall establish by regulation, after public notice and opportunity for comment, such procedural regulations as deemed necessary to ensure efficient operation, the orderly gathering of information, and the protection of the rights of due process of affected persons.

"8. In accordance with the procedures and criteria set forth in Article V, the Commission shall accept a host state's proposed facility as a regional facility.

"9. In accordance with the procedures and criteria set forth in Article V, the Commission may designate, by a two-thirds vote, host states for the establishment of needed regional facilities. The Commission shall not exercise this authority unless the party states have failed to voluntarily pursue the development of such facilities.

"10. The Commission may require of and obtain from party states, eligible states seeking to become party states, and non-party states seeking to become eligible states, data and information necessary for the implementation of Commission responsibilities.

"11. The Commission may enter into agreements with any person, state, regional body, or group of states for the importation of waste into the region and for the right of access to facilities outside the region for waste generated within the region. Such authorization to import requires a two-thirds majority vote of the Commission, including an affirmative vote of the representatives of the host state in which any affected regional facility is located. This shall be done only after the Commission and the host state have made an assessment of the affected facilities' capability to handle such wastes and of relevant environmental, economic, and public health factors, as defined by the appropriate regulatory authorities.

"12. The Commission may, upon petition, grant an individual generator or group of generators in the region the right to export wastes to a facility located outside the region. Such grant of right shall be for a period of time and amount of waste and on such other terms and conditions as determined by the Commission and approved by the affected host states. "13. The Commission may appear as an intervenor or party in interest before any court of law, federal, state or local agency, board or commission that has jurisdiction over the management of wastes. Such authority to intervene or otherwise appear shall be exercised only after a two-thirds vote of the Commission. In order to represent its views, the Commission may arrange for any expert testimony, reports, evidence or other participation as its deems necessary.

"14. The Commission may impose sanctions, including but not limited to, fines, suspension of privileges and revocation of the membership of a party state in accordance with Article VII. The Commission shall have the authority to revoke, in accordance with Article VII(g), the membership of a party state that creates unreasonable barriers to the siting of a needed regional facility or refuses to accept host state responsibilities upon designation by the Commission.

"15. The Commission shall establish by regulation criteria for and shall review the fee and surcharge systems in accordance with Articles V and IX.

"16. The Commission shall review the capability of party states to ensure the siting, operation, post-closure observation and maintenance, and institutional control of any facility within its borders.

"17. The Commission shall review the compact legislation every five years prior to federal congressional review provided for in the Act, and may recommend legislative action.

"18. The Commission has the authority to develop and provide to party states such rules, regulations and guidelines as it deems appropriate for the efficient, consistent, fair and reasonable implementation of the compact.

"j. There is hereby established a Commission operating account. The Commission is authorized to expend monies from such account for the expenses of any staff and consultants designated under section (g) of this Article and for official Commission business. Financial support of the Commission account shall be provided as follows:

"1. Each eligible state, upon becoming a party state, shall pay \$70,000 to the Commission, which shall be used for administrative cost of the Commission.

"2. The Commission shall impose a 'commission surcharge' per unit of waste received at any regional facility as provided in Article V.

"3. Until such time as at least one regional facility is in operation and accepting waste for management, or to the extent that revenues under paragraphs (1) and (2) of this section are unavailable or insufficient to cover the approved annual budget of the Commission, each party state shall pay an apportioned amount of the difference between the funds available and the total budget in accordance with the following formula:

"(a) 20 percent in equal shares;

"(b) 30 percent in the proportion that the population of the party state bears to the total population of all party states bears to the total population of all party states, according to the most recent U.S. census;

"(c) 50 percent in the proportion that the waste generated for management in each party state bears to the total waste generated for management in the region for the most recent calendar year in which reliable data are available, as determined by the Commission.

"k. The Commission shall keep accurate accounts of all receipts and disbursements. An independent certified public accountant shall annually audit all receipts and disbursements of Commission accounts and funds and submit an audit report to the Commission. Such audit report shall be made a part of the annual report of the Commission required by Article IV(i)(3).

"I. The Commission may accept, receive, utilize and dispose for any of its purposes and func-

tions any and all donations, loans, grants of money, equipment, supplies, materials and services (conditional or otherwise) from any state or the United States or any subdivision or agency thereof, or interstate agency, or from any institution, person, firm or corporation. The nature, amount and condition, if any, attendant upon any donation, loans, or grant accepted pursuant to this paragraph, together with the identity of the donor, grantor, or lender, shall be detailed in the annual report of the Commission. The Commission shall by rule establish guidelines for the acceptance of donations, loans, grants of money, equipment, supplies, materials and services. This shall provide that no donor, grantor or lender may derive unfair or unreasonable advantage in any proceeding before the Commission.

"m. The Commission herein established is a body corporate and politic, separate and distinct from the party states and shall be so liable for its own actions. Liabilities of the Commission shall not be deemed liabilities of the party states, nor shall members of the Commission be personally liable for action taken by them in their official capacity.

"1. The Commission shall not be responsible for any costs or expenses associated with the creation, operation, closure, post-closure observation and maintenance, and institutional control of any regional facility, or any associated regulatory activities of the party states.
"2. Except as otherwise provided herein, this compact shall not be construed to alter the incidence of liability of any kind for any act, omission, or course of conduct. Generators, shippers and carriers of wastes, and owners and operators of sites shall be liable for their acts, omissions, conduct, or relationships in accordance with all laws relating thereto.

"n. The United States district courts in the District of Columbia shall have original jurisdiction of all actions brought by or against the Commission. Any such action initiated in a state court shall be removed to the designated United States district court in the manner provided by Act of June 25, 1948 as amended (28U.S.C. § 1446). This section shall not alter the jurisdiction of the United States Court of Appeals for the District of Columbia Circuit to review the final administrative decisions of the Commission as set forth in the paragraph below.

"o. The United States Court of Appeals for the District of Columbia Circuit shall have jurisdiction to review the final administrative decisions of the Commission.

"1. Any person aggrieved by a final administrative decision may obtain review of the

decision by filing a petition for review within 60 days after the Commission's final decision. "2. In the event that review is sought of the Commission's decision relative to the designation of a host state, the Court of Appeals shall accord the matter an expedited review, and, if the Court does not rule within 90 days after a petition for review has been filed the Commission's decision shall be deemed to be affirmed.

"3. The courts shall not substitute their judgment for that of the Commission as to the decisions of policy or weight of the evidence on questions of fact. The Court may affirm the decision of the Commission or remand the case for further proceedings if it finds that the petitioner has been aggrieved because the finding, inferences, conclusions or decisions of the Commission are:

- "a. in violation of the Constitution of the United States;
- "b. in excess of the authority granted to the Commission by this compact;
- "c. made upon unlawful procedure to the detriment of any person;

"d. arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion.

"4. The Commission shall be deemed to be acting in a legislative capacity except in those instances where it decides, pursuant to its rules and regulations, that its determinations are adjudicatory in nature.

"Article V. Host State Selection and Development and Operation of Regional Facilities

"a. The Commission shall develop, adopt, maintain, and implement a regional management plan to ensure the safe and efficient management of waste within the region. The plan shall include the following:

"1. a current inventory of all generators within the region;

"2. a current inventory of all facilities within the region, including information on the size capacity, location, specific waste being handled, and projected useful life of each facility; "3. consistent with considerations for public health and safety as defined by appropriate regulatory authorities, a determination of the type and number of regional facilities which are presently necessary and projected to be necessary to manage waste generated within the region;

"4. reference guidelines, as defined by appropriate regulatory authorities, for the party states for establishing the criteria and procedures to evaluate locations for regional facilities.

"b. The Commission shall develop and adopt criteria and procedures for reviewing a party state which volunteers to host a regional facility within its borders. These criteria shall be developed with public notice and shall include the following factors: the capability of the volunteering party state to host a regional facility in a timely manner and to ensure its post-closure observation and maintenance, and institutional control; and the anticipated economic feasibility of the proposed facility.

"1. Any party state may volunteer to host a regional facility within its borders. The Commission may set terms and conditions to encourage a party state to volunteer to be the first host state.

"2. Consistent with the review required above, the Commission shall, upon a two-thirds affirmative vote, designate a volunteering party state to serve as a host state.

"c. If all regional facilities required by the regional management plan are not developed pursuant to section (b), or upon notification that an existing facility will be closed, or upon determination that an additional regional facility is or may be required, the Commission shall convene to consider designation of a host state.

"1. The Commission shall develop and adopt procedures for designating a party state to be a host state for a regional facility. The Commission shall base its decision on the following criteria:

"a. the health, safety and welfare of citizens of the party states as defined by the appropriate regulatory authorities;

"b. the environmental, economic, and social effects of a regional facility on the party states;

The Commission shall also base its decision on the following criteria:

"c. economic benefits and costs;

"d. the volumes and types of waste generated within each party state;

- "e. the minimization of waste transportation; and
- "f. the existence of regional facilities within the party states.

"2. Following its established criteria and procedures, the Commission shall designate by a two-thirds affirmative vote a party state to serve as a host state. A current host state shall have the right of first refusal for a succeeding regional facility.

"3. The Commission shall conduct such hearings and studies, and take such evidence and testimony as is required by its approved procedures prior to designating a host state. Public hearings shall be held upon request in each candidate host state prior to final evaluation and selection. "4. A party state which has been designated as a host state by the Commission and which fails to fulfill its obligations as a host state may have its privileges under the compact suspended or membership in the compact revoked by the Commission.

"d. Each host state shall be responsible for the timely identification of a site and the timely development and operation of a regional facility. The proposed facility shall meet geologic, environmental and economic criteria which shall not conflict with applicable federal and host state laws and regulations.

"1. To the extent not prohibited by federal law, a host state may regulate and license any facility within its borders.

"2. To the extent not prohibited by Federal law, a host state shall ensure the safe operation, closure, post-closure observation and maintenance, and institutional control of a facility, including adequate financial assurance by the operator and adequate emergency response procedures. It shall periodically review and report to the Commission on the status of the post-closure and institutional control funds and the remaining useful life of the facility.

"3. A host state shall solicit comments from each party state and the Commission regarding the siting, operation, financial assurances, closure, post-closure observation and maintenance, and institutional control of a regional facility.

"e. A host state intending to close a regional facility within its borders shall notify the Commission in writing of its intention and reasons therefore.

"1. Except as otherwise provided, such notification shall be given to the Commission at least five years prior to the scheduled date of closure.

"2. A host state may close a regional facility within its borders in the event of an emergency or if a condition exists which constitutes a substantial threat to public health and safety. A host state shall notify the Commission in writing within three days of its action and shall, within 30 working days, show justification for the closing.

"3. In the event that a regional facility closes before an additional or new facility becomes operational, the Commission shall make interim arrangements for the storage or disposal of waste generated within the region until such time that a new regional facility is operational.

"f. Fees and surcharges shall be imposed equitably upon all users of a regional facility, based upon criteria established by the Commission.

"1. A host state shall, according to its lawful administrative procedures, approve fee schedules to be charged to all users of the regional facility within its borders. Except as provided herein, such fee schedules shall be established by the operator of a regional facility, under applicable state regulations, and shall be reasonable and sufficient to cover all costs related to the development, operation, closure, post-closure observation and maintenance, [and] institutional control of the regional facility. The host state shall determine a schedule for contributions to the post-closure observation and maintenance, and institutional control funds. Such fee schedules shall not be approved unless the Commission has been given reasonable opportunity to review and make recommendations on the proposed fee schedules.

"2. A host state may, according to its lawful administrative procedures, impose a state surcharge per unit of waste received at any regional facility within its borders. The state surcharge shall be in addition to the fees charged for waste management. The surcharge shall be sufficient to cover all reasonable costs associated with administration and regulation of the facility. The surcharge shall not be established unless the Commission has been provided reasonable opportunity to review and make recommendations on the proposed state surcharge.

"3. The Commission shall impose a commission surcharge per unit of waste received at any regional facility. The total monies collected shall be adequate to pay the costs and expenses of the Commission and shall be remitted to the Commission on a timely basis as determined by the Commission. The surcharge may be increased or decreased as the Commission deems necessary.

"4. Nothing herein shall be constructed to limit the ability of the host state, or the political subdivision in which the regional facility is situated, to impose surcharges for purposes including, but not limited to, host community compensation and host community development incentives. Such surcharges shall be reasonable and shall not be imposed unless the Commission has been provided reasonable opportunity to review and make recommendations on the proposed surcharge. Such surcharge may be recovered through the approved fee and surcharge schedules provided for in this section.

"Article VI. Other Laws and Regulations

"a. Nothing in this compact shall be construed to abrogate or limit the regulatory responsibility or authority of the U.S. Nuclear Regulatory Commission or of an Agreement State under Section 274 of the Atomic Energy Act of 1954, as amended.

"b. The laws or portions of those laws of a party state that are not inconsistent with this compact remain in full force.

"c. Nothing in this compact shall make unlawful the continued development and operation of any facility already licensed for development or operation on the date this compact becomes effective. "d. No judicial or administrative proceeding pending on the effective date of the compact shall be affected by the compact.

"e. Except as provided for in Article III(b)(2) and (c)(3), this compact shall not affect the relations between and the respective internal responsibilities of the government of a party state and its subdivisions.

"f. The generation, treatment, storage, transportation, or disposal of waste generated by the atomic energy defense activities of the federal government, as defined in P.L. 96-573, or federal research and development activities are not affected by this compact.

"g. To the extent that the rights and powers of any state or political subdivision to license and regulate any facility within its borders and to impose taxes, fees, and surcharges on the waste managed at that regional facility do not operate as an unreasonable impediment to the transportation, treatment or disposal of waste, such rights and powers shall not be diminished by this compact.

"h. No party state shall enact any law or regulation or attempt to enforce any measure which is inconsistent with this compact. Such measures may provide the basis for the Commission to suspend or terminate a party state's membership and privileges under this compact.

"i. All laws and regulations, or parts thereof of any party state or subdivision or instrumentality thereof which are inconsistent with this compact are hereby repealed and declared null and void. Any legal right, obligation, violation or penalty arising under such laws or regulations prior to the enactment of this compact, or not in conflict with it, shall not be affected.

"j. Subject to Article III(c)(2), no law or regulation of a party state or subdivision or instrumentality thereof may be applied so as to restrict or make more costly or inconvenient access to any regional facility by the generators of another party state than for the generators of the state where the facility is situated.

"k. No law, ordinance, or regulation of any party state or any subdivision or instrumentality thereof shall prohibit, suspend, or unreasonably delay, limit or restrict the operation of a siting or licensing agency in the designation, siting, or licensing of a regional facility. Any such provision in existence at the time of ratification of this compact is hereby repealed.

"Article VII. Eligible Parties, Withdrawal, Revocation, Entry Into Force, Termination

"a. The initially eligible parties to this compact shall be the eleven states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Initial eligibility will expire June 30, 1984.

"b. Each state eligible to become a party state to this compact shall be declared a party state upon enactment of this compact into law by the state, repeal of all statutes or statutory provisions that pose unreasonable impediments to the capability of the state to host a regional facility in a timely manner, and upon payment of the fees required by Article IV(j)(1). An eligible state may become a party to this compact by an executive order by the governor of the state and upon payment of the fees required by Article IV(j)(1). However, any state which becomes a party state by executive order shall cease to be a party state upon the final adjournment of the next general or regular session of its legislature, unless this compact has by then been enacted as a statute by the state and all statutes and statutory provisions that conflict with the compact have been repealed.

"c. The compact shall become effective in a party state upon enactment by that state. It shall not become initially effective in the region until enacted into law by three party states and consent given to it by the Congress.

"d. The first three states eligible to become party states to this compact which adopt this compact into law as required in Article VII(b) shall immediately, upon the appointment of their Commission members, constitute themselves as the Northeast interstate Low-Level Radioactive Waste Commission. They shall cause legislation to be introduced in the Congress which grants the consent of the Congress to this compact, and shall do those things necessary to organize the Commission and implement the provisions of this compact.

"1. The Commission shall be the judge of the qualification of the party states and of its members and of their compliance with the conditions and requirements of this compact and of the laws of the party states relating to the enactment of this compact.

"2. All succeeding states eligible to become party states to this compact shall be declared party states pursuant to the provisions of section (b) of this Article.

"e. Any state not expressly declared eligible to become a party state to this compact in section (a) of the Article may petition the Commission to be declared eligible. The Commission may establish such conditions as it deems necessary and appropriate to be met by a state requesting eligibility as a party state to this compact pursuant to the provisions of this section, including a public hearing on the application. Upon satisfactorily meeting such conditions and upon the affirmative note of two-thirds of the Commission, including the affirmative note of the representatives of the host states in which any affected regional facility is located, the petitioning state shall be eligible to become a party state to this compact and may become a party state in the same manner as those states declared eligible in section (a) of this Article.

"f. No state holding membership in any other regional compact for the management of low-level radioactive waste may become a member of this compact.

"g. Any party state which fails to comply with the provisions of this compact or to fulfill its obligations hereunder may have its privileges suspended or, upon a two-thirds vote of the Commission, after full opportunity for hearing and comment, have its membership in the compact revoked. Revocation shall take effect one year from the date the affected party state received written notice from the Commission of its action. All legal rights of the affected party state established under this compact shall cease upon the effective date of revocation, except that any legal obligations of that party state arising prior to revocation will not cease until they have been fulfilled. As soon as practicable after a Commission decision suspending or revoking party state status, the Commission shall provide written notice of the action and a copy of the resolution to the governors and the presiding officer of each body of the state legislatures of the party states, and to chairmen of the appropriate committees of the Congress.

"h. Any party state may withdraw from this compact by repealing its authorization legislation, and all legal rights under this compact of the party state cease upon repeal. However, no such withdrawal shall take effect until five years after the Governor of the withdrawing state has given notice in writing of such withdrawal to the Commission and to the governor of each party state. No withdrawal shall affect any liability already incurred by or chargeable to a party state prior to that time.

"1. Upon receipt of the notification, the Commission shall, as soon as practicable, provide copies to the governors and the presiding officer of each body of the state legislatures of the party states, and to the chairmen of the appropriate committees of the Congress.

"2. A regional facility in a withdrawing state shall remain available to the region for five years after the date the Commission receives written notification of the intent to withdraw or until the prescheduled date of closure, whichever occurs first.

"i. This compact may be terminated only by the affirmative action of the Congress or by the repeal of all laws enacting the compact in each party state. The Congress may by law withdraw its consent every five years after the compact takes effect.

"1. The consent given to this compact by the Congress shall extend to any future admittance of new party states under sections (b) and (e) of this Article.

"2. The withdrawal of a party state from this compact under section (h) or the revocation of a state's membership in this compact under section (g) of this Article shall not affect the applicability of the compact to the remaining party states.

"Article VIII. Penalties

"a. Each party state, consistent with federal and host state regulations and laws, shall enforce penalties against any person not acting as an official of a party state for violation of this compact in the party state. Each party state acknowledges that the shipment to a host state of waste packaged or transported in violation of applicable laws and regulations can result in the imposition of sanctions by the host state. These sanctions may include, but are not limited to, suspension or revocation of the violator's right of access to the facility in the host state.

"b. Without the express approval of the Commission, it shall be unlawful for any person to dispose of any low-level waste within the region except at a regional facility; provided, however, that this restriction shall not apply to waste which is permitted by applicable federal or state regulations to be discarded without regard to its radioactivity.

"c. Unless specifically approved by the Commission and affected host state(s) pursuant to Article IV, it shall be a violation of this compact for: 1) any person to deposit at a regional facility waste not generated within the region; 2) any regional facility to accept waste not generated within the region; and 3) any person to export from the region waste generated within the region. "d. Primary responsibility for enforcing provisions of the law will rest with the affected state or states. The Commission, upon a two-thirds vote of its members, may bring action to seek

enforcement or appropriate remedies against violators of the provisions and regulations for this compact as provided for in Article IV.

"Article IX. Compensation Provisions

"a. The responsibility for ensuring compensation and clean-up during the operational and post-closure periods rests with the host state, as set forth herein.

"1. The host state shall ensure the availability of funds and procedures for compensation of injured persons, including facility employees, and property damage (except any possible claims for diminution of property values) due to the existence and operation of a regional facility, and for clean-up and restoration of the facility and surrounding areas.
"2. The state may satisfy this obligation by requiring bonds, insurance, compensation funds, or any other means or combination of means, imposed either on the facility operator or assumed by the state itself, or both. Nothing in this article alters the liability of any person or governmental entity under applicable state and federal laws.

"b. The Commission shall provide a means of compensation for persons injured or property damaged during the institutional control period due to the radioactive and waste management nature of the regional facility. This responsibility may be met by a special fund, insurance, or other means.

"1. The Commission is authorized, at its discretion, to impose a waste management surcharge, to be collected by the operator or owner of the regional facility; to establish a separate insurance entity, formed by but separate from the Commission itself, but under such terms and conditions as it decides, and exempt from state insurance regulation; to contract with this company or other entity for coverage; or to take any other measures, or combination of measures, to implement the goals of this section.

"2. The existence of this fund or other means of compensation shall not imply any liability by the Commission, the non-host party states, or any of their officials and staff, which are exempted from liability by other provisions of this compact. Claims or suits for compensation shall be directed against the fund, the insurance company, or other entity, unless the Commission, by regulation, directs otherwise.

"c. Not withstanding any other provisions, the Commission fund, insurance, or other means of compensation shall also be available for third party relief during the operational and post-closure periods, as the Commission may direct, but only to the extent that no other funds, insurance, tort compensation, or other means are available from the host state or other entities, under section a. of this Article or otherwise; provided, that this Commission contribution shall not apply to clean-up or restoration of the regional facility and its environs during the operational and post-closure period.

"d. The liability of the Commission's fund, insurance entity, or any other means of compensation shall be limited to the amount currently contained therein; provided that the Commission may set some lower limit to ensure the integrity and availability of the fund or other entity for liability.

"Article X. Severability and Construction

"The provisions of this compact shall be severable, and if any phrase, clause, sentence or provision of this compact is declared by a federal court of competent jurisdiction to be contrary to the Constitution of the United States or the applicability thereof to any government, agency, person or circumstance is held invalid, the validity of the remainder of this compact and the applicability thereof to any other government, agency, person or circumstance shall not be affected thereby. The provisions of this compact shall be liberally construed to give effect to the purposes thereof."

Approved January 15, 1986.

Appendix C

Appendix D

LLRW COMPACTS/ADMISSION OF NEW MEMBERS

The following summarizes the requirements set out in the ten LLRW compacts regarding the admission of new member states. An outline detailing the relevant statutory language for each of these compacts is included. The relevant provisions of the Northeast Compact are highlighted at the end of this outline.

THREE OF THE TEN COMPACTS MAKE NO PROVISIONS FOR THE ADMISSION OF NEW MEMBER STATES. THESE ARE: THE APPALACHIAN COMPACT, THE CENTRAL MID-WEST (WITH TWO MEMBER STATES, ILLINOIS AND KENTUCKY) AND THE NORTHWEST COMPACT.

REQUIREMENTS FOR NEW MEMBER STATES IN THE FOLLOWING **SIX** COMPACTS ARE AS FOLLOWS:

1) In the **Central Interstate Compact**, any state may petition the Commission for eligibility. A petitioning state shall become eligible for membership upon the unanimous approval of the Commission. An eligible state shall become a member of the compact and shall be bound by it after such state has enacted the compact into law.

2) In the **Midwest Compact**, any state may petition the Commission for eligibility. The Commission may establish appropriate eligibility requirements which may include, but are not limited to, an eligibility fee or designation as a host state. A petitioning state becomes eligible for membership upon the approval of the Commission, including the affirmative vote of all host states.

3) In the **Rocky Mountain Compact**, any state may be made eligible for membership upon unanimous consent of the Board (i.e., the Commission). An eligible state may become a party state by legislative enactment of the compact or executive order of the governor adopting the compact, however, the legislature must then enact the compact or the eligibility will cease.

4) In the **Southeast Compact**, any state may petition the Commission to be declared eligible. The Commission may establish such conditions as it deems necessary and appropriate to be met by a state wishing to become eligible to become a party state. The petitioning state shall become eligible to become a party state upon satisfactorily meeting the conditions and upon affirmative vote of two-thirds of the Commission, including the affirmative vote of both representatives of a host state in which any affected regional facility is located. No state holding membership in any other regional compact may be considered by the Commission for eligible state or party state status.

5) In the **Southwestern Compact**, any state may petition the Commission to become a party state. Eligibility requires a majority vote of the Commission and ratification by the legislatures of all the party states by statute, and upon compliance with those terms and conditions for eligibility which the host state may establish. An eligible state may become a party state, after compliance with these provisions of the Compact, upon legislative enactment of the compact or executive order of the governor, provided the legislature subsequently adopts the Compact. 6) In the **Texas Compact**, any state may become eligible for party state status by a majority vote of Commission and ratification by the legislature of the host state, subject to the fulfillment of the rights of the initial non-host party states, and upon compliance with those terms and conditions for eligibility that the host state may establish. Provided, however, the specific provisions of the Compact (except those relating to the composition of the Commission) may not be changed except upon ratification by the legislatures of the party states. An eligible state, after fulfillment of the conditions, may become a party state upon enactment of the Compact by its legislature or executive order of the governor, provided the legislature subsequently adopts the Compact. Note: the Texas Compact has volume limitations on waste brought to the facility for non-host states. Briefly, waste cannot exceed 20,000 cubic feet per year from all non-host states.

REQUIREMENTS FOR MEMBERSHIP IN THE NORTHEAST COMPACT ARE AS FOLLOWS:

Any state may petition the Commission to be declared eligible. The Commission may establish such conditions as it deems necessary and appropriate to be met by a state requesting eligibility as a party state, including a public hearing on the application. Upon satisfactorily meeting these conditions and upon affirmative vote of two-thirds of the Commission, including the affirmative vote of the representatives of the host states in which any affected regional facility is located, the petitioning state shall become initially eligible.

Each eligible state shall become a party state upon enactment of the Compact into law by the state, repeal of all statutes or statutory provisions that pose unreasonable impediments to the capacity of the state to host a regional facility in a timely manner, and upon payment of the required fees. An executive order and payment of fees is sufficient, provided the legislature must subsequently act to adopt the Compact by statute and repeal all laws that conflict with the Compact.

No state holding membership in any other regional LLRW compact may become a member of the Northeast Compact.

RELEVANT STATUTORY LANGUAGE

I. COMPACTS WITH NO PROVISION FOR ADMISSION OF NEW MEMBER STATES

APPALACHIAN STATES LOW-LEVEL RADIOACTIVE WASTE COMPACT, 100TH CONGRESS, 1st Session, S. 1551 (adding Sec. 228). (1987, amended Title II of P.L. 99-240.)

The Appalachian Compact contains no provision for the admission of new members.

Only the states of Pennsylvania, West Virginia, Delaware and Maryland were eligible to become parties to this compact. *Article* 5(A)

An eligible state became a party state by legislative enactment of this compact or by executive order of the governor adopting this compact; provided that a state that became a party state by executive order would cease to be a party state upon adjournment of the first general session of its legislature convened thereafter, unless the legislature enacted the [Appalachian Compact] before adjournment. *Article* 5(B) The Compact took effect when it was enacted by the legislature of Pennsylvania and at least one more eligible state, and Congress consented to the Compact. *Article* 5(C)

The Commission may, with the unanimous approval of the Commission members of the host state(s), enter into temporary agreements with nonparty states or other regional boards for the emergency disposal of LLRW at the regional facility, if so authorized by laws of the host state(s), or other disposal facilities located in states that are not parties to the this agreement. *Article* 2(B)(n)

CENTRAL MIDWEST INTERSTATE LOW-LEVEL RADIOACTIVE WASTE COMPACT, P.L. 99-240, Sec. 224, et seq. ("Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act", Title II, "The Low-Level Radioactive Waste Policy Act Amendments Act of 1985".)

The Central Midwest Compact contains **no provision for the admission of new members**. Article VIII (a)

Eligible parties to the Central Midwest Compact were Illinois and Kentucky. Eligibility terminated on April 15, 1985. Article VIII (a)

An *eligible party* became a party state when it enacted the compact into law and paid the required membership fee. *Article VIII (b)* The Central Midwest Compact provided that it would become effective July 1, 1984, or at any date subsequent thereto upon enactment by the eligible states. *Article VIII (e)*

NORTHWEST INTERSTATE COMPACT ON LOW-LEVEL RADIOACTIVE WASTE MANAGE-MENT, P.L. 99-240, Sec. 221, et seq. ("Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act", Title II, "The Low-Level Radioactive Waste Policy Act Amendments Act of 1985".)

The Northwest Compact contains no provision for the admission of new members.

Article V provides that the Northwest LLW Compact Committee may enter into arrangements with states, provinces, individual generators, or regional compact entities outside the region comprised of the party states, for access to facilities on such terms and conditions as the committee may deem appropriate. However, it shall require a 2/3 vote of all such members, including the affirmative vote of the member of any party state in which a facility affected by such arrangement is located, for the committee to enter into such arrangement.

Eligible party states were Alaska, Hawaii, Idaho, Montana, Oregon, Utah, Washington, and Wyoming. *Article VI*.

Initially, the compact became effective upon enactment into law by an *eligible party state*, but only if enacted into law by at least two states.

After the compact initially took effect (i. e., by the enactment into law by two *eligible party states*), any *eligible party state* could become a party to the Northwest Compact by the execution of an executive order by the governor of the state. However, any state becoming a party by executive order would cease to be a party upon the final adjournment of the next general or regular session of its legislature or July 1, 1983, whichever occurred first, unless the compact was by then enacted as a statute by that state.

II. COMPACTS WITH VARYING REQUIREMENTS FOR ADMISSION OF NEW MEMBER STATES

CENTRAL INTERSTATE LOW-LEVEL RADIOACTIVE WASTE COMPACT, P.L. 99-240, SEC. 222, ET SEQ. ("OMNIBUS LOW-LEVEL RADIOACTIVE WASTE INTERSTATE COMPACT CONSENT ACT", TITLE II, "THE LOW-LEVEL RADIOACTIVE WASTE POLICY ACT AMENDMENTS ACT OF 1985".)

Initially eligible parties were Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, North Dakota and Oklahoma. Such initial eligibility terminated on January 1, 1984. *Article VII(a)* To become effective, the compact had to be enacted by at least three party states. *Article VII(f)*

Any state may petition the Commission for eligibility. A petitioning state shall become eligible for membership in the compact upon the unanimous approval of the Commission. *Article VII(b)* The Commission shall receive and approve the application of a non-party state to become a party state in accordance with Article VII.

An eligible state shall become a member of the compact and shall be bound by it after such state has enacted the compact into law. *Article VII(c)* It is expressly stated that the consent given to the Central Interstate LLRW Compact by Congress "shall extend to any future admittance of new party states" under sections b. and c. of Article VII. *Article VII (f)*

MIDWEST INTERSTATE LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT COMPACT, P.L. 99-240, Sec. 225, et seq. ("Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act", Title II, "The Low-Level Radioactive Waste Policy Act Amendments Act of 1985".)

Initially eligible parties were Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Virginia and Wisconsin. Eligibility terminated on July 1, 1984. *Article VIII(a)* The Midwest Compact became effective upon enactment by at least three eligible states and consent by Congress. *Article VIII(g)* It is expressly stated that the consent given to the Midwest Compact by Congress "shall extend to any future admittance of new party states" under sections b. and c. of Article VIII. *Article VIII(g)*

The Commission shall receive and act on the petition of a nonparty state to become an eligible state. Article III(i)(1)

An eligible state becomes a party state upon enactment of this compact into law by the state and upon payment of the required membership fees. *Article* VIII(c)

Any state not eligible for membership in the Midwest Compact may petition the Commission for eligibility. The Commission "may establish appropriate eligibility requirements. These requirements may include but are not limited to, an eligibility fee or designation as a host state. A petitioning state becomes eligible for membership in the [Midwest Compact] upon the approval of the Commission, including the affirmative vote of all host states. Any state becoming eligible upon the approval of the Commission becomes a member of the compact in the same manner as any state eligible for membership at the time the [Midwest Compact] enters in force." Article VIII(b)

ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT, P.L. 99-240, Sec. 226, ET SEQ.("Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act", TITLE II, "The Low-Level Radioactive Waste Policy Act Amendments Act of 1985".)

Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming were initially eligible to become parties to the [Rocky Mountain Compact]. Any other state may be made eligible by unanimous consent of the board. *Article VIII (a)*

An eligible state may become a party state by legislative enactment of the compact or by executive order of its governor adopting this compact; provided, however, a state becoming a party by executive order shall cease to be a party state upon adjournment of the first general session of its legislature convened thereafter unless before such adjournment the legislature has enacted the compact. *Article VIII (b)*

The compact was to take effect when enacted by the legislatures of two eligible states. Article VIII (c) A party state may be excluded from the compact by a 2/3 vote of the members representing the other party states, on the ground that it has failed to carry out its obligation under the compact. Article VIII (e)

SOUTHEAST INTERSTATE LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT COMPACT, P.L. 99-240, Sec. 223, et seq. ("Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act", Title II, "The Low-Level Radioactive Waste Policy Act Amendments Act of 1985".)

Initially eligible parties were Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee and Virginia. *Article* 7(A) Each eligible state was to be declared a party state upon enactment of this compact into law by the state and upon payment of the required fees. The Commission is the judge of the qualifications of the party states and of its members and of their compliance with the conditions and requirements of this compact and the laws of the party states relating to enactment of this compact. *Article* 7(C)

The first three states to enact the compact into law and appropriate the required fees were to immediately constitute themselves as the Southeast LLRW Management Commission. Article 7(D)

Any state not expressly declared initially eligible may petition the Commission to be declared eligible. The Commission "may establish such conditions as it deems necessary and appropriate to be met by a state wishing to become eligible to become a party state to [the Southeast Compact]" and upon "satisfactorily meeting the conditions and upon affirmative vote of two-thirds of the Commission, including the affirmative vote of both representatives of a host state in which any affected regional facility is located, the petitioning state shall be eligible to become a party state to [the Southeast Compact] and may become a party state in the manner as those states declared [initially eligible]". *Article* 7(B)

It was expressly stated that no state holding membership in any other regional LLRW compact may be considered by the Commission for eligible state status or party state status. Article 7(E)

The Commission shall receive and approve the application of a non-party state to become an eligible state, and an eligible state to become a party state, in accordance with Articles 7(B) and 7(C), respectively. Article 4(E)(1); Article 4(E)(2)

SOUTHWESTERN LOW-LEVEL RADIOACTIVE WASTE COMPACT, 100TH CONGRESS, P.L. 100-712 (1988).

The states of Arizona, North Dakota, South Dakota, and California were eligible to become parties to this compact. Any other state could be made eligible by a majority vote of the Commission and ratification by the legislatures of all of the party states by statute, and upon compliance with those terms and conditions for eligibility which the host state may establish. The host state may establish all terms and conditions for the entry of any state, other than those named above, as a member of the [Southwestern Compact]. *Article VII(A)*

Upon compliance with the other provisions of the compact, an eligible state may become a party state by legislative enactment of the compact or by executive order of the governor adopting this compact; provided that a state becoming a party state by executive order will cease to be a party state upon adjournment of the first general session of its legislature convened thereafter, unless the legislature has enacted the [Southwestern Compact] before adjournment. *Article VII(B)*

The Compact took effect when it was enacted by the legislature of California and at least one more eligible state, and Congress has consented to the Compact. *Article VII(E)* A party state may be excluded from the compact by a 2/3 vote of the Commission members if it has failed to carry out obligations required by compact. *Article VII(D)*

TEXAS LOW-LEVEL RADIOACTIVE WASTE COMPACT, 105th Congress, (1998).

Texas, Maine and Vermont are initial party states under the [Texas Low-Level Radioactive Waste Disposal Compact Consent Act]. *Article 7, Sec. 7.01* The initial states of this compact cannot be members of another LLRW compact. *Article 4, Sec. 4.03* Any other state may be made eligible for party status by a majority vote of the Commission and ratification by the legislature of the host state, subject to fulfillment of the rights of the initial non-host part states, and upon compliance with those terms and conditions for eligibility that the host state may establish. The host state may establish all terms and conditions for the entry of any state, other than the initial party states, as a member of the Texas Compact; provided however, the specific provisions of the Texas Compact [except those pertaining to composition of the Commission those pertaining to Sec. 7.09] may not be changed except upon ratification by the legislatures of the party states. *Article 7, Sec. 7.01*

Upon compliance with the other provisions of the compact, an eligible state may become a party state by legislative enactment of the compact or by executive order of the governor adopting this compact; provided that a state becoming a party state by executive order will cease to be a party state upon adjournment of the first general session of its legislature convened thereafter, unless the legislature has enacted the [Southwestern Compact] before adjournment. *Article 7, Sec. 7.02*

By no later than 180 days after all members of the commission are appointed ... [the Commission] may establish by rule the total volume of LLRW that the host state will dispose of in the compact facility in the years 1995 - 2045, including decommissioning waste. The shipments of low-level radioactive waste from all non-host party states shall not exceed 20 percent of the volume estimated to be disposed of by the host state during the 50-year period [20,000 cubic feet a year]. *Article III, sec. 3.04 (11)*

III. THE NORTHEAST COMPACT

NORTHEAST INTERSTATE LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT COMPACT, P.L. 99-240, Sec. 227, et seq. ("Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act", Title II, "The Low-Level Radioactive Waste Policy Act Amendments Act of 1985".)

Initially eligible parties were Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.

Initial eligibility expired on July 30, 1984. Article VII(a) The Compact became effective in a party state upon enactment by that state. Article VII (c) To become effective, the compact had to be enacted by at least three party states and be approved by Congress. Article VII(c) The Commission is the judge of the qualifications of the party states and of its members and of their compliance with the conditions and requirements of this compact and of the laws the party states relating to the enactment of the [Northeast Compact]. Article VII (d)(1)

Any state not expressly declared eligible to become a party state may petition the Commission to be declared eligible. "The Commission may establish such conditions as it deems necessary and appropriate to be met by a state requesting eligibility as a party state to the [Northeast Compact]...including a public hearing on the application. Upon satisfactorily meeting such conditions and upon the affirmative vote of two-thirds of the Commission, including the affirmative vote of the representatives of the host states in which any affected regional facility is located, the petitioning state shall be eligible to become a party state in the same manner as those states declared [initially eligible]." Article VII(e)

The Commission shall receive and act on the application of a non-party state to become an eligible state and of an eligible state to become a party state in accordance with Article VII(e) and VII(b), respectively. Article IV(i)(1) and (i)(2).

Each eligible state shall become a party state upon enactment of the [Northeast Compact] into law by the state, repeal of all statutes or statutory provisions that pose unreasonable impediments to the capability of the state to host a regional facility in a timely manner, and upon payment of the required fees. An eligible state may become a party to the [Northeast Compact] by an executive order by the governor of the state and upon payment of the required fees. However, any state which becomes a party state by executive order will cease to be a party state upon the final adjournment of the next general or regular session of its legislature, unless the compact has by then been enacted as a statute by the state and all statutes and statutory provision that conflict with the compact have been repealed. *Article VII(b)*

It was expressly stated that no state holding membership in any other regional LLRW compact may become a member of the Northeast Compact. Article VII(f)

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