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# Summary Report

Volume 4, Number 1 January 1996

# Low-Level Radioactive Waste Management Activities in the States and Compacts

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# Low-Level Radioactive Waste Forum

## *Summary Report: Low-Level Radioactive Waste Management Activities in the States and Compacts*

*A supplement to LLW Notes*

*Volume 4, Number 1 • January 1996*

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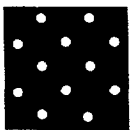
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The Low-Level Radioactive Waste Forum (LLW Forum) is an association of state and compact representatives, appointed by governors and compact commissions, established to facilitate state and compact implementation of the Low-Level Radioactive Waste Policy Act of 1980 and the Low-Level Radioactive Waste Policy Amendments Act of 1985 and to promote the objectives of low-level radioactive waste regional compacts. The LLW Forum provides an opportunity for state and compact officials to share information with one another and to exchange views with officials of federal agencies and other interested parties.



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### Key to Abbreviations

U.S. Department of Energy	DOE
naturally-occurring and accelerator-produced radioactive materials	NARM
naturally-occurring radioactive materials	NORM
U.S. Nuclear Regulatory Commission	NRC

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## Appalachian Compact



**Governing Body** Appalachian States Low-Level Radioactive Waste Commission

**Member States** Delaware, Maryland, Pennsylvania, West Virginia

**Compact Established** The compact was established February 19, 1986, and ratified by Congress on May 19, 1988. The commission's first organizational meeting was held April 30, 1990.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.

## Host State: Pennsylvania

**Regulatory and Program Responsibility**

Bureau of Radiation Protection,  
Department of Environmental Protection (DEP)

**Siting Responsibility**

Chem-Nuclear Systems, Inc.

**Other Involvement**

DEP Low-Level Waste Advisory Committee  
Environmental Quality Board

**Disposal Technology**

earth-mounded above-ground vault

**Siting** Pennsylvania has completed the final stage of a three-stage disqualification process. About 75 percent of Pennsylvania has been disqualified from further consideration. Pennsylvania is developing a volunteer community siting program which is expected to be approved in January 1996. The search for a volunteer community is expected to take about three years.

**Licensing** Chem-Nuclear will submit a license application to DEP. Pennsylvania has applied for limited agreement State status with NRC. A time frame for licensing has not yet been established for the new volunteer community siting program.

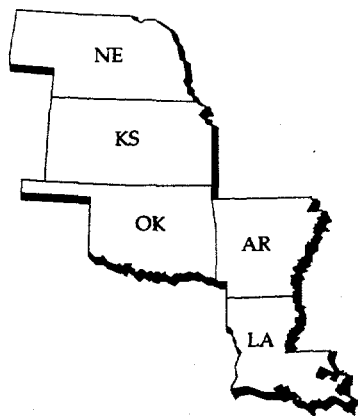
**Development Costs** To date: \$35 million. Estimated total cost including construction: not provided.

**Disposal Facility Operational** A projected completion date is not available.

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## Central Compact



**Governing Body** Central Interstate Low-Level Radioactive Waste Commission

**Member States** Arkansas, Kansas, Louisiana, Nebraska, Oklahoma

**Compact Established** The compact was established May 12, 1983. The commission's organizational meeting was held June 29, 1983.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions

can be shipped to the commercial disposal facility in Hanford, Washington.

**Development Costs** As of October 31, 1995: \$73.4 million. Projected total cost including construction: \$151.5 million.

**Disposal Facility Operational** The Butte facility is projected to be operational no later than autumn 1999.

**Other Information** The Central States Compact Commission has begun the process to amend its Compact Act. The commission has approved draft amendment language for review by member states.

## Host State: Nebraska

**Regulatory and Program Responsibility** Department of Environmental Quality  
Department of Health

**Siting Responsibility** US Ecology, Inc.

**Disposal Technology** above-ground vault

**Siting** Property near Butte in Boyd County, Nebraska, was selected in December 1989.

**Licensing** A license application was submitted in July 1990. On May 31, 1995, US Ecology submitted to the host state its responses to their fourth and final round of technical comments on the application. On June 15, 1995, US Ecology submitted to the host state the eighth and final revision of the Safety Analysis Report (SAR) plus various other documents relating to the license application. The host state will continue its review of the license application.

## Compacts and Their Host States (continued)

### Central Midwest Compact



**Governing Body** Central Midwest Interstate Low-Level Radioactive Waste Commission

**Member States** Illinois, Kentucky

**Compact Established** The compact was established in September 1984, ratified by Congress effective January 1986, and most recently amended and ratified in October 1994.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.

### Host State: Illinois

**Regulatory Responsibility** Illinois Department of Nuclear Safety

**Program and Siting Responsibility**  
Low-Level Radioactive Waste Task Group—develop siting criteria  
Illinois State Geological Survey and State Water Survey—statewide screening including evaluation of volunteer locations and identification of ten or more locations likely to meet the criteria  
facility developer—evaluation of the locations, selection and characterization of site, preparation of license application, and facility development  
Illinois Department of Nuclear Safety—licensing agency

**Disposal Technology** above-grade, earthen-covered concrete vault

**Siting** The task group will develop siting criteria, and the Illinois Geological and Water Surveys will be responsible for screening the state and evaluating any volunteered sites in order to locate at least 10 areas of at least 640 acres each that appear likely to meet the criteria. The contractor will evaluate the areas identified by the Geological and Water Surveys, select three promising sites for further study, and present findings to the task group. Following the task group's approval of three sites, the contractor will select one final site for full characterization.

**Licensing** A license application is expected to be submitted by November 1999.

**Development Costs** To date: information not provided. Estimated total cost including construction: information not provided.

**Disposal Facility Operational** Projected by September 2003.

## Midwest Compact



**Governing Body** Midwest Interstate Low-Level Radioactive Waste Compact Commission

**Member States** Indiana, Iowa, Minnesota, Missouri, Ohio, Wisconsin

**Compact Established** The compact was established in October 1983 and was given the consent of Congress in December 1985. Compact amendments were enacted by Ohio and Wisconsin in 1995. The amendments will be introduced in the state legislatures of Indiana, Iowa, Minnesota, and Missouri in January 1996.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.

## Host State: Ohio

<b>Regulatory Responsibility</b>	Ohio Department of Health
<b>Program Responsibility</b>	Ohio Low-Level Radioactive Waste Facility Development Authority (Authority)
<b>Siting Responsibility</b>	Ohio Low-Level Radioactive Waste Facility Development Authority
<b>Other Involvement</b>	Radiation Advisory Council, state agencies
<b>Disposal Technology</b>	above-grade, multiple-barrier facility with continuous monitoring and waste recoverability

**Siting** With the assistance of a contractor, the Authority will initiate a statewide screening process and eventually approve at least three sites for characterization by fall 1998. By early summer 2000, the Authority will select the disposal site to be submitted for licensing.

**Licensing** Upon receipt of a license application, the Health Department will review the application and make a determination on compliance with all regulatory requirements. If requested by an affected party, a License Review Board will conduct an adjudicatory hearing following the department's determination. The Director of the department will issue a decision on the license application.

**Development Costs** To date: \$664,300. Also, \$589,201 expended on public information program. Estimated total cost including construction: not available.

**Disposal Facility Operational** Mid-2005.



## Northeast Compact



**Governing Body** Northeast Interstate Low-Level Radioactive Waste Commission

**Member States** Connecticut, New Jersey

**Compact Established** Congress ratified the compact in 1985, and it was signed into law by the President in 1986. Shortly thereafter, two of the four original member states—Delaware and Maryland—joined the Appalachian Compact. In 1987, the remaining member states of Connecticut and New Jersey were designated as dual host states.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions may be shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions may be shipped to the commercial disposal facility in Hanford, Washington.

### Host State: New Jersey

**Regulatory Responsibility** NRC (New Jersey is not an Agreement State.)  
New Jersey Department of Environmental Protection

**Program Responsibility** New Jersey Low-Level Radioactive Waste Disposal Facility  
Siting Board (Siting Board)

**Siting Responsibility** New Jersey Low-Level Radioactive Waste Disposal Facility  
Siting Board

**Other Involvement** New Jersey Radioactive Waste Advisory Committee (RWAC)

**Disposal Technology** State law precludes shallow land burial. The technology will depend on input from the volunteer community, site-specific requirements, and the ability of the technology to be licensed.

**Siting** The state's siting plan seeks a volunteer community to host a disposal facility and offers significant incentives.

**Licensing** New Jersey's current projected date of license submittal to NRC is 1999.

**Development Costs** To date: \$3 million. Estimated total cost including construction: \$100 million.

**Disposal Facility Operational** Projected by 2001.

**Other Information** In February 1995, the Siting Board approved a voluntary siting plan. Siting efforts are funded through generator assessments.

## Host State: Connecticut

<b>Regulatory Responsibility</b>	NRC (Connecticut is not an Agreement State.) Connecticut Department of Environmental Protection
<b>Program Responsibility</b>	Connecticut Office of Policy and Management—coordination Connecticut Hazardous Waste Management Service—program
<b>Siting Responsibility</b>	Connecticut Hazardous Waste Management Service
<b>Other Involvement</b>	Connecticut Siting Council Connecticut Department of Public Works
<b>Disposal Technology</b>	The Board of Directors of the Connecticut Hazardous Waste Management Service will select the technology in consultation with the volunteer community. The board has decided not to consider shallow land burial.

**Siting** The state's siting plan seeks a volunteer community to host a disposal facility and offers significant incentives. The state is prepared to use a statewide screening process if the volunteer approach does not produce a site that protects public health and safety.

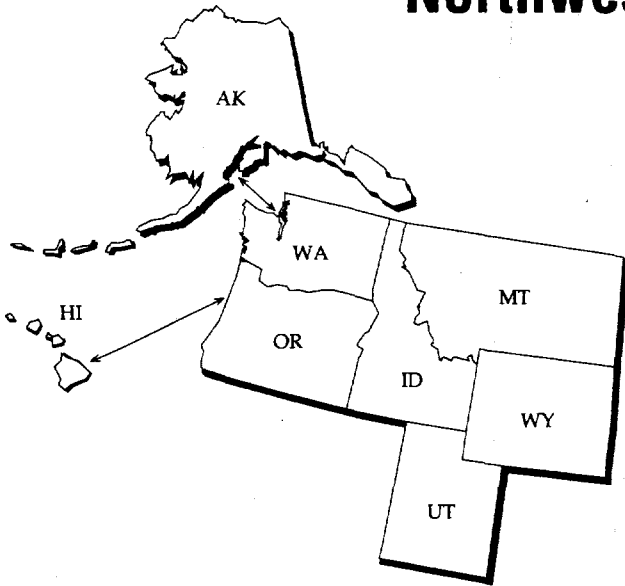
**Licensing** Connecticut's current projected date of license submittal to NRC is 1999.

**Development Costs** To date: \$9.4 million. Estimated total cost including construction: \$100 million.

**Disposal Facility Operational** Projected by 2002.

**Other Information** Effective April 2, 1993, the Connecticut General Assembly approved the 1993 Low-Level Radioactive Waste Management Plan. The plan's volunteer siting approach is being implemented. Siting efforts are funded through generator assessments.

## Northwest Compact



**Governing Body** Northwest Interstate Compact Committee

**Member States** Alaska, Hawaii, Idaho, Montana, Oregon, Utah, Washington, Wyoming

**Compact Established** The compact was established in 1981 and ratified by Congress in December 1985.

**Current Waste Management** Waste is disposed of at the regional commercial disposal facility in Hanford, Washington. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the Hanford facility.

## Host State: Washington

**Regulatory Responsibility** Department of Health

**Program Responsibility** Department of Ecology

**Disposal Technology** shallow land burial

**Siting** The regional low-level radioactive waste disposal facility is located on the U.S. DOE Hanford reservation on 100 acres of land subleased by US Ecology from the State of Washington.

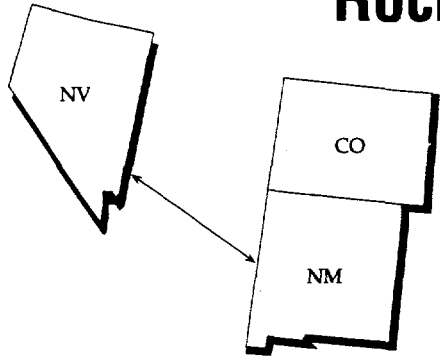
**Licensing** The site operator's current materials license was issued by the Washington State Department of Health on May 29, 1992. The license next comes up for renewal on May 31, 1997.

**Development Costs** Not applicable.

**Disposal Facility Operational** The compact's regional disposal facility has been in operation since July 1965.

**Other Information** The compact's low-level radioactive waste disposal site is not permitted for mixed waste. The compact is working with other states and compacts to encourage DOE to provide for management of the compact's mixed waste.

## Rocky Mountain Compact



**Governing Body** Rocky Mountain Low-Level Radioactive Waste Board

**Member States** Colorado, Nevada, New Mexico

**Compact Established** The compact was established in 1983 and ratified by Congress in December 1985.

**Current Waste Management** The Rocky Mountain Board has a contract with the Northwest Interstate Compact Committee and the State of Washington for disposal at the Northwest Compact's regional commercial disposal facility in Hanford, Washington. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the Hanford facility.

**Other Information** Export authorization is required for all waste generated within the compact region that is sent outside of the region. Import authorization is required to bring out-of-compact waste into the region for management. No facilities within the compact region are currently authorized to receive out-of-compact waste. The compact has jurisdiction (including import and export authority) over NORM/NARM.

**Host State: None**

## Southeast Compact



**Governing Body** Southeast Compact Commission for Low-Level Radioactive Waste Management

**Member States** Alabama, Florida, Georgia, Mississippi, North Carolina, Tennessee, and Virginia

**Compact Established** The Southeast Compact was established in 1983 and ratified by Congress in 1985. The compact law was amended in 1989.

**Current Waste Management** As of July 1, 1995, waste from all member states except North Carolina may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain

HARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.

Since July 1995, waste in North Carolina is being stored at the sites of generation.

## Host State: North Carolina

**Regulatory Responsibility** Division of Radiation Protection (DRP), North Carolina Department of Environment, Health and Natural Resources

**Program and Licensing Responsibility** North Carolina Low-Level Radioactive Waste Management Authority (Authority)

**Other Involvement** Chem-Nuclear Systems, Inc.—future facility operation

**Disposal Technology** integrated vault

**Siteing** In December 1993, the Authority selected a site in Wake County as its preferred site.

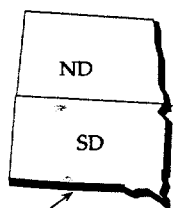
**Licensing** A license application was submitted by Chem-Nuclear to DRP in December 1993. It is expected that DRP will not issue the license before 1998.

**Development Costs** To date: \$90million. Estimated total cost excluding construction: \$112.5 million. Estimated total cost including construction: \$180 million.

**Disposal Facility Operational** Projected by 1999.

**Other Information** The Governor of North Carolina has stated that the ban on North Carolina waste at the Barnwell facility is unconstitutional and may be challenged in court.

## Southwestern Compact

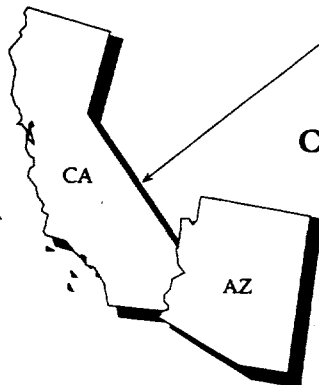


**Governing Body** Southwestern Low-Level Radioactive Waste Commission

**Member States** Arizona, California, North Dakota, South Dakota

**Compact Established** The compact was established in July 1988 and ratified by Congress in November 1988. North Dakota and South Dakota joined the compact in 1989.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.



## Host State: California

<b>Regulatory and Program Responsibility</b>	Department of Health Services (DHS)
<b>Siting Responsibility</b>	US Ecology, Inc.
<b>Other Involvement</b>	U.S. Bureau of Land Management (BLM)
<b>Disposal Technology</b>	enhanced shallow land burial

**Siting** The property in Ward Valley designated as the preferred site by US Ecology in 1988 is currently owned by the federal government. California is working with BLM to transfer the land to the state.

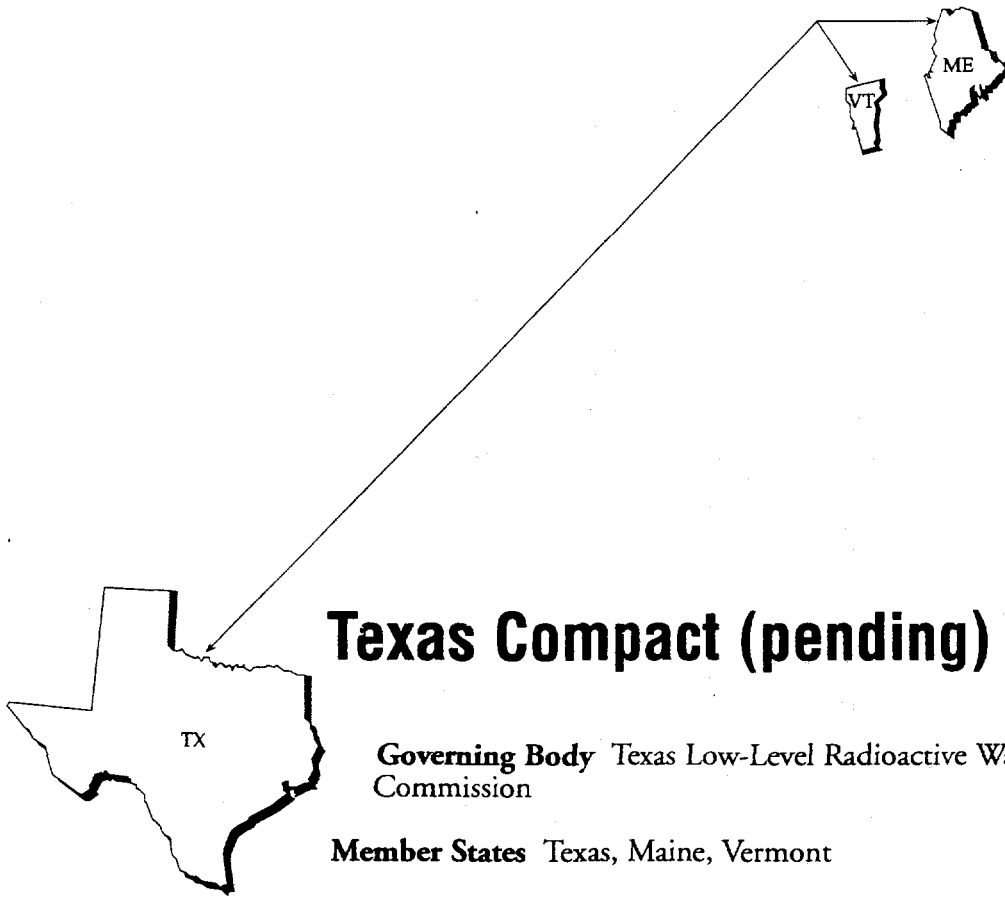
**Licensing** A license was issued by DHS on September 16, 1993, conditioned on DHS ownership of the land. On June 1, 1994, the Superior Court of the State of California ordered DHS to "reconsider its approval of the license." The Court of Appeal of the State of California, Second District, overturned the lower court decision and reinstated the license. On January 18, 1996, the Supreme Court of California denied the plaintiff's petition to review the appellate court's decision. There are no further avenues for appeal available in the state court system.

**Development Costs** As of November 1, 1995: \$62.6 million (estimated \$64.1 million by December 31). Estimated total cost including construction: \$97 million.

**Disposal Facility Operational** Projected by mid-1997 contingent upon the outcome of legal actions.

**Other Information** At the request of the U.S. Interior Secretary, a National Academy of Sciences committee reviewed seven technical issues related to the site and found no obstacles to proceeding with development. Based on this analysis the Department of the Interior has indicated willingness to transfer land for the facility to the state, subject to certain "enforceable commitments." The state, the developer and the generators object to this intrusion into a matter under the state's jurisdiction. The U.S. Congress is seeking to legislatively transfer the land.

The license issued by DHS does not include mixed waste disposal. The Southwestern Commission and DHS are working with other states and compacts to encourage DOE to provide for management of commercial mixed waste.



## Texas Compact (pending)

**Governing Body** Texas Low-Level Radioactive Waste Disposal Compact Commission

**Member States** Texas, Maine, Vermont

**Compact Established** In June 1993, the Governor of Texas signed into law legislation establishing a low-level radioactive waste compact with Maine and Vermont.

Maine completed its approval process with the passage of a referendum on November 2, 1993. Vermont adopted the compact on April 25, 1994. The compact was submitted to the U.S. Congress for consent in the summer of 1994, but action was not taken. Congressional consent is expected in early 1996.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.

## Host State: Texas

<b>Regulatory Responsibility</b>	Texas Natural Resource Conservation Commission
<b>Program Responsibility</b>	Texas Low-Level Radioactive Waste Disposal Authority (Authority)
<b>Siting Responsibility</b>	Texas Low-Level Radioactive Waste Disposal Authority
<b>Other Involvement</b>	Texas Department of Health
<b>Disposal Technology</b>	below-ground concrete canisters

**Siting** The Authority began statewide site screening activities under newly enacted state law in 1983. Initial efforts identified several desirable sites in south Texas. In 1985, the Texas Legislature instructed the Authority to give preference in its site search to state-owned land. In 1987, the Authority identified several possible sites in Hudspeth County, Texas, including a site at Fort Hancock. El Paso County and others filed a lawsuit to enjoin the Authority from selecting the Fort Hancock site, and the site was abandoned in early 1991. In May 1991, the Texas Legislature amended the Authority's statute, to require the selection of a site in a 400-square mile area near Sierra Blanca in Hudspeth County. In February 1992, the Authority selected a site on the Faskin Ranch for the state's proposed low-level waste disposal facility. The ranch was purchased and site characterization began. Site characterization concluded in November 1993.

**Licensing** The initial installment of the license application was submitted to the Texas Natural Resource Conservation Commission in March 1992. The application is now complete. Licensing review is under way and should be complete in March 1996.

**Development Costs** To date: \$36 million. Estimated total cost including construction: \$90 million.

**Disposal Facility Operational** Projected by mid-1997 contingent upon the outcome of administrative review and litigation.



## Unaffiliated States



# Massachusetts

### Primary Regulatory Responsibility

Department of Public Health

### Secondary Regulatory Responsibility

Department of Environmental Protection  
Low-Level Radioactive Waste Management Board  
(Management Board)

### Program and Siting Responsibility

Low-Level Radioactive Waste Management Board

### Disposal Technology

Shallow land burial is prohibited in Massachusetts; the chosen technology must allow monitoring and package retrieval. After a site is selected, the disposal technology will be chosen by the sited community from methods certified by the Management Board.

### Current Waste Management

As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.

**Siting** The Management Board continues to work on its two-track effort to discuss out-of-state disposal solutions with other states and compacts while also pursuing an in-state disposal facility siting process. In addition to using the three-stage technical site screening process required by state law, the Management Board developed draft policies and regulations for a program to encourage volunteered sites. Issued for public review and comment in April 1995 were a *Draft Volunteer Sites Program Plan*, draft regulations to implement the plan and to provide for local technical assistance and planning funds, and a *Draft Siting Plan*. Public comments were received through July 1995 following six public hearings and briefing sessions held during May and June. The Management Board is evaluating these comments and will finalize the documents in early 1996.

In April 1995, the Management Board contracted with Foster Wheeler Environmental Corp. for technical services to support its first stage of technical screening, called Statewide Mapping and Screening. (The other two stages will follow the initial implementation of the Volunteer Sites Program.) A *Draft Statewide Mapping and Screening Protocol and Procedures* will be issued in January 1996 for public review and comment through March, before the actual screening activities begin using the state's Geographic Information System—MassGIS.

Foster Wheeler completed a second contract in December 1995 assisting the Management Board in identifying "preference" siting criteria and in preliminarily evaluating options for their application. The Management Board will initiate a series of meetings during 1996 and early 1997 to finalize the preference criteria policies.

**Licensing** The projected date for submittal of a license application is 2000.

**Development Costs** To date: not provided. Estimated total costs of preoperation and initial construction for a hypothetical above-ground vault facility without a cover have been developed based on four potential facility capacities: 35,000 cubic feet per year—\$47.5 million; 50,000 cubic feet per year—\$48.7 million; 80,000 cubic feet per year—\$49.8 million; 467,000 cubic feet per year—\$65.7 million.

**Disposal Facility Operational** Projected by 2001/2002.

## Michigan



**Regulatory Responsibility** Michigan Department of Public Health  
Michigan Department of Natural Resources  
U.S. Nuclear Regulatory Commission  
(Michigan is not an Agreement State.)

**Program and Siting Responsibility** Michigan Low-Level Radioactive Waste Authority  
(Authority)

**Disposal Technology** State law limits disposal technology to above- or below-ground vaults or above- or below-ground modular canisters. No final determination has been made on facility design.

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions may be shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions may be shipped to the commercial disposal facility in Hanford, Washington.

**Siting** As required by amendments to state law, a policy advisory board issued a series of recommendations in September 1995. The board's report included specific recommendations regarding the conduct of a volunteer host community process, revisions to state siting criteria, and consideration of compact options. The Authority is now pursuing amendments to state law that would conform state law to the recommended volunteer process.

**Licensing** A projected date for submittal of a license application is not available.

**Development Costs** To date: \$12 million. Estimated total cost including construction: not available.

**Disposal Facility Operational** A projected date is not available.

## Unaffiliated States (continued)

### New York



**Regulatory Responsibility** Department of Environmental Conservation (DEC)

**Program Responsibility** New York State Energy Research and Development Authority (NYSERDA)

**Siting Responsibility** in transition (see siting below)

**Other Involvement** Department of Health (DOH)  
New York City Department of Health  
Department of Labor (DOL)  
New York State Citizens Advisory Committee on Permanent Disposal Facility Siting and Disposal Method Selection

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.

**Disposal Technology** State law bars shallow land burial; above-grade vaults identified as tentative preferred technology.

**Siting** New York's siting program is in transition. The State Budget for FY 1995-96 phased out the activities of the Low-Level Radioactive Waste Siting Commission, which was established in 1987 to select a site and disposal method. The state, under Governor George Pataki, is reevaluating its approach to low-level radioactive waste management. Several relevant proposals have been put before the state legislature, including one that would provide for a volunteer siting process. No new schedule has been developed. Regulations governing site and disposal method selection were adopted by DEC in 1987.

**Licensing** NYSERDA is responsible for obtaining a DEC permit to construct and operate a land disposal facility and a DOL radioactive materials license, once a site and a disposal method are selected.

**Development Costs** Through September 30, 1995, \$65.9 million has been collected through annual assessments on operating nuclear power plants (does not include surcharge rebates); \$55.2 million has been spent on siting, regulation development, public participation and related activities. Estimated total cost including construction: not available at this time.

**Disposal Facility Operational** The DEC issued financial assurance regulations in September 1991 and regulations for design, construction, operation, closure, post-closure and institutional control in March 1993. NYSERDA is responsible for construction and operation.

## South Carolina



- Regulatory Responsibility** Division of Radioactive Waste Management, Bureau of Solid and Hazardous Waste, South Carolina Department of Health and Environmental Control
- Program Responsibility** Division of Radioactive Waste Management, Bureau of Solid and Hazardous Waste, South Carolina Department of Health and Environmental Control—for Barnwell site
- Other Involvement** Chem-Nuclear Systems, Inc.—facility operation
- Current Waste Management** Waste is disposed of at the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, limited mixed wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM (radium) wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.
- Disposal Technology** enhanced shallow land disposal
- Licensing** A license authorizing possession and storage of waste at the Barnwell facility was first issued on November 6, 1969. On April 13, 1971, the license was amended to authorize disposal. The license has been renewed for a five-year period ending July 31, 2000.
- Disposal Facility Operational** The Barnwell facility has been in operation since 1969. (See above.)
- Other Information** The Appropriations Act for FY 1995-96, which became effective June 29, 1995, required the Governor to appoint a Low-Level Radioactive Waste Compact Negotiating Committee. The committee is directed to negotiate with representatives of other states to establish a new low-level radioactive waste management compact, subject to conditions set forth in the statute. New regulations affecting the Barnwell disposal technology became effective January 1, 1996.

◇DC

## District of Columbia

**Regulatory Responsibility** Department of Consumer and Regulatory Affairs (DCRA)

**Program Responsibility** Department of Consumer and Regulatory Affairs  
Service Facility Regulation Administration

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions may be shipped for disposal at the Envirocare facility.

**Siting** Because of the dense population and geographic size of the District of Columbia, and because of the relatively low volume of low-level radioactive waste generated within the district, DCRA is not planning to site a facility.

**Other Information** The District of Columbia is continuing efforts either to join a compact or to contract with one.

NH



## New Hampshire

**Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility.

**Siting** New Hampshire has no plans to site a disposal facility due to the small amounts of low-level radioactive waste generated.

**Other Information** The Governor's Ad Hoc Committee, with the assistance of the State Radiation Advisory Committee, continues to welcome an opportunity to discuss contracts or compacts with any interested state.

PR

## Puerto Rico

Puerto Rico is not planning to site a disposal facility. Further information is unavailable at this time.

## Rhode Island

RI

- Regulatory Responsibility** Rhode Island Department of Health
- Program Responsibility** Rhode Island Department of Health
- Siting Responsibility** none
- Other Involvement** Rhode Island Radiation Advisory Commission
- Current Waste Management** As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. In addition, subject to the Northwest Compact rules of April 20, 1995, wastes meeting Envirocare of Utah's license conditions are being shipped for disposal at the Envirocare facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Hanford, Washington.
- Siting** The state is not planning at this time to site a facility.
- Other Information** The Rhode Island Radiation Advisory Commission has met with a representative of the Massachusetts Low-Level Radioactive Waste Management Board to get a brief update on the board's plans.

# Commercial Low-Level Radioactive Waste Disposal Capacity Development Chart

Compacts/States	Siting	License*	Facility Open*
<b>Appalachian</b> <i>host Pennsylvania</i>	siting process under way	application early 1997	mid-1999
<b>Central</b> <i>host Nebraska</i>	site selected	application submitted	autumn 1999
<b>Central Midwest</b> <i>host Illinois</i>	siting process under way	application Nov. 1999	Sept. 2003
<b>Midwest</b> <i>host Ohio</i>	siting process under development	application late 2000	mid-2005
<b>Northeast</b> <i>host New Jersey</i> <i>host Connecticut</i>	siting process under way siting process under way	application 1999 application 1999	July 2001 2002
<b>Northwest</b> <i>host Washington</i>	<i>facility operational since July 1965, license reissued May 1992</i>		
<b>Rocky Mountain</b> <i>host none</i>	<i>contract with the Northwest and Washington for disposal at Washington facility</i>		
<b>Southeast</b> <i>host North Carolina</i>	site selected	application submitted	1999
<b>Southwestern</b> <i>host California</i>	site selected	issued Sept. 1993, currently being litigated	mid-1997
<b>Texas</b> <i>host Texas</i>	site selected	application submitted	mid-1997
<b>Massachusetts</b>	siting process under way	application 2000	2001/2002
<b>Michigan</b>	siting process under development		
<b>New York</b>	siting process under development		
<b>South Carolina</b>	<i>disposal authorized at facility since April 1971, license renewed through July 2000</i>		
<b>District of Columbia</b>	not siting a facility		
<b>New Hampshire</b>	not siting a facility		
<b>Puerto Rico</b>	not siting a facility		
<b>Rhode Island</b>	not siting a facility		
* All future dates are estimated and subject to change.			

Graphic by Afton Associates for the LLW Forum, January 1996.

# Low-Level Radioactive Waste Disposal Compact Membership



## Appalachian Compact

Delaware  
Maryland  
Pennsylvania •  
West Virginia

## Central Compact

Arkansas  
Kansas  
Louisiana  
Nebraska •  
Oklahoma

## Central Midwest Compact

Illinois •  
Kentucky

## Midwest Compact

Indiana  
Iowa  
Minnesota  
Missouri  
Ohio •  
Wisconsin

## Northwest Compact

Alaska  
Hawaii  
Idaho  
Montana  
Oregon  
Utah  
Washington \* •  
Wyoming

## Rocky Mountain Compact

Colorado  
Nevada  
New Mexico

*Northwest accepts Rocky Mountain waste as agreed between compacts.*

## Northeast Compact

Connecticut  
New Jersey

## Southeast Compact

Alabama  
Florida  
Georgia  
Mississippi  
North Carolina •  
Tennessee  
Virginia

## Southwestern Compact

Arizona  
California •  
North Dakota  
South Dakota

## Texas Compact

Maine  
Texas •  
Vermont

*The compact has been passed by all three states and awaits consent by the U.S. Congress.*

## Unaffiliated States

District of Columbia  
Massachusetts •  
Michigan •  
New Hampshire  
New York •  
Puerto Rico  
Rhode Island  
South Carolina \* •

The Low-Level Radioactive Waste Forum includes a representative from each regional compact, current host state \*, future host state •, and unaffiliated state.

