SummaryReport

Volume 14, Number 1 September 2007

Low-Level

Radioactive Waste

Management

Activities

in the

States

and

Compacts

Low-Level Radioactive Waste Forum, Inc.

Summary Report: Low-Level Radioactive Waste Management Activities in the States and Compacts A supplement to LLW Notes

Volume 14, Number 1 September 2007

Editor and Writer: Todd D. Lovinger

Layout and Design: Rita Houskie, Central Interstate Low-Level Radioactive Waste Compact

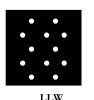
Summary Report: Low-Level Radioactive Waste Management Activities in the States and Compacts is a supplement to LLW Notes and is distributed periodically by the Low-Level Radioactive Waste Forum, Inc. to members of its Board of Directors and to select subscribers of LLW Forum materials and publications.

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The Low-Level Radioactive Waste Forum, Inc. (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. All interested stakeholders—including states, compacts, federal agencies, facility operators, brokers and processors, generators, associations, and others may now join and participate in the LLW Forum.



FORUM, INC

Low Level Radioactive Waste Forum, Inc. 1619 12th Street N.W.
Washington, DC 20009
(202) 265-7990
FAX (202) 265-7995
E-MAIL Ilwforuminc@aol.com
INTERNET www.llwforum.org

| Key to Abbreviations | |
|----------------------------------------------|------|
| U.S. Department of Energy | DOE |
| U.S. Department of Transportation | DOT |
| U.S. Environmental Protection Agency | EPA |
| U.S. General Accounting Office | GAO |
| U.S. Nuclear Regulatory Commission | NRC |
| Naturally-occurring and accelerator-produced | |
| Radioactive material | NARM |
| Naturally-occurring radioactive material | NORM |
| Code of Federal Regulations | CFR |

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Compacts and Their Host States

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 Some low-level radioactive waste generated in the compact is being shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy Solutions Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Richland, Washington.

Other Information On December 2, 1998, the commission amended its bylaws to allow the Chair to assume the duties of the Executive Director. The Commissioners then approved a resolution to close the commission's office, terminate all employment agreements, and transfer all records to the office of the Chair. The commission continues to exist as a legal entity. The commission holds its annual meetings in Harrisburg, Pennsylvania. The commission's Chair and Executive Director is currently the Secretary of the Pennsylvania Department of Environmental Protection.

In mid-2007, the Commission conducted a survey of low-level radioactive waste generators in the Appalachian Compact to assess the potential impact of the planned closure of the Barnwell disposal facility in South Carolina to out-of-region generators. The results of this survey indicated that there is no immediate adverse impact on the low-level radioactive waste generators in the compact should Barnwell close to generators outside the Atlantic Compact. Almost all generators surveyed indicated that they have some type of low-level radioactive waste storage option, if needed.

The Commission will be hosting the fall 2008 meeting of the Low-Level Radioactive Waste Forum, Inc. The meeting will be held at the Westin Hotel in Annapolis, Maryland on September 11 - 12, 2008.

Contact Richard Janati, Chief of Nuclear Safety, Bureau of Radiation Protection, Department of the Environmental Protection, Commonwealth of Pennsylvania, P.O. Box 8469, Harrisburg, PA 17105-8469 (phone – 717/787-2163; fax - 717/783-8965; <u>rjanati@state.pa.us</u>)

Host State: Pennsylvania

Regulatory and Program Responsibility Bureau of Radiation Protection, Department of Environmental Protection (DEP)

Siting Responsibility Pennsylvania Department of Environmental Protection (DEP)

Other Involvement DEP Low-Level Waste Advisory Committee
Appalachian States Low-Level Radioactive Waste Commission
Environmental Quality Board

Siting The low-level radioactive waste disposal facility siting project in Pennsylvania has been officially suspended as of December 31, 1998. The reasons for suspending the siting process include the dramatic reduction in the volume of the low-level radioactive waste that would have been disposed of at a regional facility in the Appalachian Compact and the availability of out-of-state disposal capacity.

DEP suspended the siting process after discussing the issue with its Low-Level Waste Advisory Committee and the Appalachian Compact Commission and receiving their support for the suspension decision. DEP will monitor national low-level radioactive waste disposal developments to insure disposal capacity will continue to be available to generators of low-level radioactive waste in the Appalachian Compact during the suspension. DEP has issued a Waste Minimization Guidance Document and will continue to promote best available practices regarding the low-level radioactive waste minimization.

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

Development Costs To date: Approximately \$37 million.

Disposal Facility Operational A projected date is not available.

Contact Richard Janati, Chief of Nuclear Safety, Bureau of Radiation Protection, Department of Environmental Protection, Commonwealth of Pennsylvania, PO Box 8468, Harrisburg, PA 17105-8469 (phone – 717/787-2163; fax – 717/783-8965; rjanati@state.pa.us)

Atlantic Compact



Governing Body Atlantic Interstate Low-Level Radioactive Waste Commission

Member States South Carolina, New Jersey and Connecticut

Compact Established Congress ratified the original compact (which was then called the Northeast Interstate Low-Level Radioactive Waste Compact and which then consisted of the states of Connecticut, Delaware, Maryland and New Jersey) in 1985 and the President signed it into law 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. Then, in June 2000, South Carolina Governor Jim Hodges signed a law enabling the State of South Carolina to join the compact—with South Carolina being designated as the host state. The compact was, at that time, renamed the Atlantic Interstate Low-Level Radioactive Waste Compact.

Current Waste Management Regional waste may currently be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. New Jersey and Connecticut cannot ship more than a total of 800,000 cubic feet of waste to the Barnwell facility. No non-compact waste will be allowed into Barnwell after June 30, 2008.

Other Information On February 15, 2007, Chairman William D. Witherspoon of the House Agricultural Committee introduced legislation (H.3545) to allow the Barnwell facility to continue taking a limited amount of non-compact waste through fiscal year 2023. On March 19, 2007, Atlantic Compact Chair Benjamin Johnson sent a letter to South Carolina Governor Mark Sanford expressing concern about H.3545. In the letter, Johnson acknowledged that disposal volumes after June 2008 might not generate sufficient operating income under the current law absent changes in the cost structure or income stream for the operations. However, he asserted that the Atlantic Compact Act of 2000's built-in process to address the economics of a low-volume operation post-2008 should be followed.

(For additional details, visit www.atlanticcompact.org.)

On March 23, 2007, the South Carolina House Agriculture, Natural Resources and Environmental Affairs Committee voted 16 to 0 against H.3545, effectively killing it. (See related information under South Carolina, page 4.) Compact and state officials continue to explore various avenues to address anticipated revenue shortfalls for after June 30, 2008—the date upon which the Barnwell facility is scheduled to close to out-of-region waste.

Contact Max Batavia, Executive Director, 1201 Main Street, Suite 1830, Columbia, South Carolina 29201 (phone – 803/737-1879; fax – 803/737-5023; mbatavia@microbyte.net; www.atlanticcompact.org)

Host State: South Carolina

Regulatory Responsibility Division of Radioactive Waste Management, Bureau of Land and Waste Management, South Carolina Department of Health and Environmental Control

Program Responsibility South Carolina Budget and Control Board, Radioactive Waste Disposal Program – sets prices and controls access policies

Other Involvement Energy Solutions, Inc./Chem-Nuclear Systems, L.L.C.—facility operation

Current Waste Management Under current Atlantic Compact policy, waste generators (at their discretion) may ship waste for disposal to the regional disposal facility in South Carolina or to disposal facilities located outside the compact region. State law requires a phased reduction in the total annual volumes of waste that can be disposed at the Barnwell site. In consultation with waste generators and the disposal site operator, the Budget and Control Board sets aside volume each fiscal year to accommodate the needs of Atlantic Compact generators and makes the remainder of the disposal capacity available to waste generators outside the region. After June 30, 2008, the Barnwell site can receive only waste generated within the Compact region.

Disposal Technology below-grade vaults

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. Chem-Nuclear has applied for a new license and is currently operating under timely renewal.

Disposal Facility Operational The Barnwell facility has been in operation since 1969. (See above.)

Other Information Barnwell is currently the only option for the disposal of Class B and C waste and some forms of Class A waste for generators located outside the Northwest and Rocky Mountain Compacts. The South Carolina Budget and Control Board expects to be able to accommodate wastes from all generators in fiscal year 2008. For information on disposal prices, please visit www.barnwelldisposal.com.

During the 2007 legislative session, a bill was introduced in the South Carolina House of Representatives (H.3545) that would have directed the state to authorize the importation of radioactive waste into the Atlantic Compact region for disposal through 2023. The bill was passed in a subcommittee but was subsequently defeated 16 to 0 in the House Agriculture, Natural Resources and Environmental Affairs Committee.

The Commission, state agencies, the disposal site operator, and major waste generators within the region are examining methods for operating the disposal site for regional waste only beginning July 1, 2008. Options include traditional operations at a scaled down level, and receipt of waste campaign-style for limited periods during the year. The parties are evaluating alternatives to traditional trench designs including a "progressive trench" design that would be similar in dimensions to many of the trenches at Barnwell, but constructed in phases as waste is emplaced to avoid issues related to managing rainwater while large areas of trench are open. Another option involves shallow trenches filled with empty concrete vaults pre-staged for future acceptance of waste, as needed. Over 90% of the Barnwell site will essentially be closed after June 2008, and disposal will take place in a seven-acre area in the southeast corner of the site. Budget and Control Board staff projects as much as 11,000 cubic feet of waste per year if Atlantic Compact generators send all of their containerized waste to Barnwell, and less than half of this if they choose to ship Class A waste to the Utah facility.

State Contact Bill Newberry, Manager, Radioactive Waste Disposal Program, South Carolina Budget and Control Board, Energy Office, 1201 Main Street, Suite 430, Columbia, SC 29201 (phone – 803/737-8037; fax – 803/737-1452; bnewberry@energy.sc.gov; www.barnwelldisposal.com)

Operator Contact Deborah Ogilvie, Public Information Director, or Bill House, Vice President of Regulatory Affairs, Chem-Nuclear Systems, LLC/Energy *Solutions*, 140 Stoneridge Drive, Columbia, SC 29210 (phone – 803/256-0450; fax – 803/256-0968; dgogilvie@energysolutions.com or wbhouse@energysolutions.com; www.barnwelldisposal.com).

Central Compact

Member States Arkansas, Kansas, Louisiana, 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. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy Solutions' Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions can be shipped to the commercial disposal facility in Richland, Washington.

Development Costs As of January 1999: \$95.6 million. Projected total cost including construction: \$154.3 million.

Disposal Facility Operational US Ecology's license application for the property near Butte in Boyd County was denied by state regulators on December 18, 1998.

Legal Matters On December 30, 1998, five utilities filed suit in the U.S. District Court for the District of Nebraska challenging actions taken by the State of Nebraska and its officials in reviewing US Ecology's license application. The lawsuit sought, among other things, removal of the state from any further involvement in the licensing process and an award of financial damages. The Central Commission, which was originally named as a defendant to the action, realigned itself as a plaintiff. On September 30, 2002, the district court issued an opinion finding that Nebraska had breached its duty of good faith under the compact. The court entered judgment against Nebraska in the amount of \$151,408,240.37, but declined to award the commission's requested equitable relief in the form of a new, court-supervised licensing process. On August 9, 2004, the Central Compact voted 3 to 1 to accept a settlement under which the state would pay the compact commission \$140.5 million plus interest—which monies were paid on August 1, 2005, thereby amicably ending all suits and claims between the parties. The commission subsequently distributed proceeds from the settlement funds to the member states for their contributions to community improvement funds; the major generators; and US Ecology.

On March 23, 2006, the compact commission notified the major generators that its decision to retain \$5 million of the settlement funds was a "final decision" with respect to their claims "though not a final decision regarding the ultimate disposition of the settlement funds retained." Shortly thereafter, on April 25, 2006, six generators filed a lawsuit in the U.S. District Court for the District of Nebraska against the compact commission seeking, among other things, to preserve their interest in the retained funds. In January 2007, the district court dismissed the suit with prejudice after finding that "there is nothing inequitable about the Commission keeping \$5 million out of more than \$145 million" because the plaintiffs have recovered all of their principal plus interest, the Commission has an arguable need for money since it is still in existence & will continue to be for the foreseeable future, and the Commission itself suffered damages.

Other Information In July 2005, the Central Commission held a two-day meeting in Little Rock, Arkansas during which it passed various resolutions including, among other things, resolutions:

- to defer further pursuit of a regional disposal facility for the time being;
- to continue monitoring national and regional developments concerning LLRW generation and disposal needs; and,
- to direct a consultant to carry out a review of disposal needs & practices of small generators in member states.

In May 2006, the compact transferred land previously designated for a regional facility to the Village of Butte.

Contact Rita Houskie, Office Administrator, Central Commission, 1033 O Street, Suite 636, Lincoln, NE 68508 (phone – 402/476-8247; fax – 402/476-8205; <u>rita@cillrwcc.org</u>; <u>www.cillrwcc.org</u>)

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. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy *Solutions*' Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Richland, Washington.

Other Information The compact and its host state, Illinois, have determined to place siting efforts on hold due to continued access to disposal facilities outside the compact region and a decline in waste volumes which impacts the economies of disposal facility development. A regional disposal facility is not projected to be opened until 2032 or later, when some regional nuclear power plants will begin decommissioning. In the meantime, the compact and state have looked at interim storage as a possible solution until a permanent disposal facility is developed.

In 2004, the Central Midwest Commission requested that the State of Illinois evaluate the potential impacts on the region's generators from the pending loss of access to currently available disposal facilities. In order to make an assessment, the Illinois Emergency Management Agency (IEMA) initially hosted a conference for the region's waste generators in October 2004. The conference was then followed up with the distribution of a questionnaire designed to assess the potential impacts on the generators and their plans and preferences for managing their waste following disposal facility closure. In 2005, IEMA issued a report titled, "An Evaluation of the Potential Effects from the Closure of Available Disposal Capacity on the Central Midwest Compact Region's Low-Level Radioactive Waste Generators." The report concludes that regional generators will not suffer an immediate Class B and C low-level radioactive waste management crisis upon the scheduled loss of access to the Barnwell, South Carolina's disposal facility on July 1, 2008. In explanation, the report finds that the primary generators of Class B and C waste are the nuclear utilities and that they have indicated that they can safely store their Class B and C wastes for the remaining life of their plants (including any plant life extension). There is very little non-reactor generated Class B and C waste produced in the Central Midwest region. Three non-reactor generators combined anticipate generating less than 100 cubic feet of Class B and C waste in the 24-year period following the closure of the Chem-Nuclear facility. In October 2006, the Central Midwest Compact and the State of Illinois sponsored a generators' conference to discuss this report. Another conference is planned for the fall of 2008.

For additional information or to obtain a copy of the report, please contact Marcia Marr of IEMA at (217) 785-9982.

Contact Marcia Marr, Executive Director, Central Midwest Interstate Low-Level Radioactive Waste Commission, Illinois Emergency Management Agency (IEMA), State of Illinois, 1035 Outer Park Drive, Springfield, Illinois, 62704 (phone – 217/785-9982; fax – 217/785-9977; Marcia.Marr@Illinois.gov; www.state.il.us/IEMA/dns.asp)

Host State: Illinois

Regulatory Responsibility Illinois Emergency Management Agency (IEMA)

Program and Siting Responsibility Low-Level Radioactive Waste Task Group (Task Group)—develop siting criteria

Illinois State Geological Survey and State Water Survey—statewide screening including evaluation of volunteer locations and identification of locations likely to meet the criteria

Illinois Emergency Management Agency—adopt rules establishing a site selection process for the regional disposal facility which considers land jointly volunteered by the landowner and applicable municipal or county government

Facility developer—conduct evaluation of the sites and locations identified under the site selection process

Illinois Emergency Management Agency—licensing agency

Disposal Technology above-grade, earthen-covered concrete vault

Siting In December 1996, the Task Group published siting criteria. As directed by amendments to the state siting law enacted in June 1997, the Illinois State Geological and Water Surveys screened the state and produced maps showing the application of the siting criteria and submitted their findings to the Task Group and to IDNS by September 30, 1997. IEMA will now develop a volunteer site selection process that will use the Surveys' information. The contractor will conduct a site selection process including the evaluation of volunteered lines. Once the contractor has selected a site and the site is approved by the Task Group, the contractor will proceed with characterization and licensure of the proposed site.

In 1997, Illinois determined to place further siting efforts on hold due to continued access to disposal facilities outside the compact region and a decline in waste volumes which impacts the economies of disposal facility development. A regional disposal facility is not projected to be opened until 2032 or later, when the nuclear power plants will begin decommissioning. In the meantime, Illinois has looked at interim storage as a possible solution until a permanent disposal facility is developed.

Licensing A license application is expected to be submitted by 2029.

Development Costs To date: not available. Estimated total cost including construction: not available.

Disposal Facility Operational Projected by 2032, when the availability of decommissioning waste from the region's nuclear power plants is projected to render the new facility cost effective.

Contact Michael Klebe, Illinois Emergency Management Agency, 1035 Outer Park Drive, Springfield, IL 62704 (phone – 217/785-9986; fax – 217/785-9977; Michael. Klebe@Illinois.gov; www.state.il.us/IEMA/dns.asp)



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 and by Indiana, Iowa, Minnesota, and Missouri in 1996; however, these amendments have not been submitted to Congress for consent.

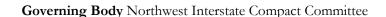
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Other Information On June 26, 1997, the Midwest Compact Commission halted development of a regional disposal facility in Ohio. Citing significant declines in Midwest Compact waste volumes, the potentially high cost of developing new disposal capacity, and continued access to the Barnwell and Envirocare of Utah disposal facilities, the commission also relieved Ohio of its host state designation and its obligation to site and operate a regional facility. After a year-long review, the commission closed its St. Paul office and assigned the executive duties to Stanley York—the commission's chair. In July 2007, the commission elected Roger Suppes as the new commission chair. Stanley York remains, however, the executive director of the compact commission. The commission continues to work with generators to assure long-term access to disposal facilities.

Host State: None

Contact Stanley York, Executive Director, Midwest Interstate Low-Level Radioactive Waste Compact Commission, 2851-1 Century Harbor, Middleton, WI 53562-1824 (phone – 608/831-5434; stan.york@tds.net; www.midwestcompact.org)

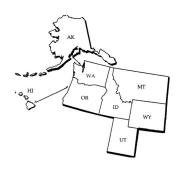
Northwest Compact



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 In-region low-level radioactive waste is disposed of at the regional commercial disposal facility in Richland, Washington. NARM and exempt wastes meeting the Washington Department of Health's license conditions are also being shipped to the Richland facility.



Other Information The designated host state for the Northwest Compact is the State of Washington, which hosts a regional facility operated by US Ecology located on the U.S. DOE Hanford reservation in Richland, Washington. The Richland facility has separate disposal areas and accepts for disposal both in-region low-level radioactive waste (as well as low-level radioactive waste from the Rocky Mountain Compact). Out-of-region low-level radioactive waste (other than that coming from the Rocky Mountain Compact) is prohibited from being disposed of at the Richland facility. NARM waste may be received at the Richland facility from all states.

On November 2, 2004, voters in the State of Washington overwhelmingly approved an initiative (known as the Cleanup Priority Act) to, among other things, require the U.S. Department of Energy to clean up the Hanford nuclear reservation before it sends any additional waste to the facility and to prevent the disposal of waste at the facility in unlined trenches. On June 12, 2006, the United States District Court for the Eastern District of Washington struck down the Cleanup Priority Act as preempted by the Atomic Energy Act (AEA) and in violation of sovereign immunity. The court ruled that the initiative is facially invalid and cannot be applied constitutionally in any circumstances—i.e., severability is not an issue. The State of Washington filed an appeal with the U.S. Court of Appeals for the Ninth Circuit in San Francisco on July 12, 2006. The appeal remains pending. (See section titled "Voter Initiative/Related Litigation" on page 10 of this report for additional information.)

In 2005, the State of Washington and US Ecology agreed to incorporate a clause in the new sublease for the disposal facility in Richland, Washington, allowing the state to terminate the sublease if the Northwest Compact loses exclusionary authority on out-of-region low-level radioactive waste provided by federal law.

In addition, the Northwest Compact's member State of Utah hosts the Energy Solutions' Clive, Utah disposal facility which accepts out-of-region low-level radioactive waste, NARM, and exempt waste. On April 20, 2006, the Northwest Compact approved a third amended resolution and order regarding access to the Clive disposal facility. The purpose of the amendment was to incorporate the company's name change and to modify monthly reporting requirements. Only those low-level radioactive wastes that are approved by the state/compact of origin (including the Northwest Compact) are provided access to the region for disposal at the Clive facility.

Contact Michael Garner, Executive Director, Northwest Interstate Compact, Policy Analyst, Nuclear Waste Program, Department of Ecology, State of Washington, PO Box 47600, Olympia, WA 98504-7600 (phone – 360/407-7102; fax - 360/407-6715; jamg461@ecy.wa.gov)

Host State: Washington

Regulatory Responsibility Department of Health

Program Responsibility Department of Ecology

Disposal Technology 10 CFR Part 61 near surface disposal

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. The sublease was renewed for ten years in 2005, with four ten-year renewal options.

Licensing The site operator's current materials license was issued by the Washington State Department of Health on October 20, 2005. The license expires January 31, 2011. Relicensing was one of three significant actions considered in the May 2004 environmental impact statement.

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. In 2005, the State of Washington and US Ecology agreed to incorporate a clause in the new sublease for the disposal facility in Richland, Washington, allowing the state to terminate the sublease if the Northwest Compact loses exclusionary authority on out-of-region low-level radioactive waste provided by federal law.

Voter Initiative/Related Litigation On November 2, 2004, by a margin of roughly 2 to 1, voters in the State of Washington overwhelmingly approved an initiative to require the U.S. Department of Energy to clean up the Hanford nuclear reservation before it sends any additional waste to the facility. In addition, initiative 297 also seeks to prevent the disposal of waste in unlined trenches. The initiative—which is known as the "Cleanup Priority Act"—was sponsored by Heart of America Northwest and received endorsements from environmental groups, the state Democratic Party and the League of Women Voters.

After passage of the initiative, DOE filed a lawsuit in the United States District Court for the Eastern District of Washington challenging its constitutionality and sought a restraining order on its enforcement. In so doing, the department argued that there are too many uncertainties about how the state will implement the measure. In addition, Department of Justice attorneys contended that some cleanup efforts at the site have already been halted as a result of the initiative. On December 2, 2004, the judge for the U.S. District Court of the Eastern District of Washington ruled for the federal government and issued the requested restraining order—although waste shipments to the site had already been halted under another lawsuit. In so ruling, the judge found that there is a possibility that the initiative may be invalid and that DOE will suffer irreparable injury with regard to onsite cleanup at Hanford if it were to immediately become law.

On June 12, 2006, the United States District Court for the Eastern District of Washington struck down the Cleanup Priority Act as preempted by the Atomic Energy Act (AEA) and in violation of sovereign immunity. The State of Washington filed an appeal with the U.S. Court of Appeals for the Ninth Circuit in San Francisco on July 12, 2006. The appeal remains pending.

State Contact Lawrence Goldstein, Chair, Northwest Interstate Compact, Section Manager, Nuclear Waste Program, Department of Ecology, State of Washington, PO Box 47600, Olympia, WA 98504-7600 (phone – 360/407-6573; fax – 360/407-6715; lgol461@ecy.wa.gov)

Operator Contact Chad Hyslop, Sales Director, American Ecology, Lakepointe Centre, 300 E. Mallard Drive, Suite 300, Boise, ID 83706 (phone – 208/331-8400; fax – 208/331-7900; chyslop@americanecology.com)

Host State: Utah

Regulatory Responsibility Division of Radiation Control of the Utah Department of Environmental Quality

Program Responsibility Division of Radiation Control of the Utah Department of Environmental Quality (DEQ)

Disposal Technology & Operation embankment/modified shallow-land burial (facility operation began in 1988)

Siting The Energy Solutions' Clive, Utah low-level radioactive waste disposal facility is located on 540 acres of land in Tooele County, Utah—80 miles west of Salt Lake City. Additional land in Section 29 has been approved by the Executive Secretary, but Energy Solutions voluntarily withdrew its expansion request. (See "Licensing" section below.)

Licensing Subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), out-ofregion low-level radioactive wastes meeting Energy Solutions' Clive, Utah facility license conditions are provided access to the region for disposal at the Clive facility. The site operator's current license was issued on October 22, 1998. On July 2, 2003, the operator submitted a license renewal application and was granted timely renewal. The license renewal is in public comment until August 21, 2007. Following review and consideration of comments, a final decision will be made as to the renewal of the license for another 5-year term—i.e., until 2012. The facility is licensed to accept mixed and lowlevel radioactive waste up to Class A limits, containerized Class A waste, NORM, and uranium and thorium mill tailings. In August 2004, the Division of Radiation Control was granted an amendment from NRC that allowed regulation of uranium mill tailings. The uranium mill tailings license remains in timely renewal.

During the 2005 General Session of the Utah Legislature, 1SSB24 was passed which prohibited the receipt of certain radioactive wastes. The legislation modified the Radiation Control Act (RCA) to state: "No entity may accept in the state or apply for a license to accept in the state for commercial storage, decay in storage, treatment, incineration or disposal: (1) class B or class C low-level radioactive waste or (2) radioactive waste having a higher radionuclide concentration than the highest radionuclide concentration allowed under licenses existing on February 25, 2005. . . " The legislation also modified provisions of the RCA to require an assessment and report to the Utah Legislative Management Committee regarding closure, post-closure, and perpetual care funding every five years with an initial report due by October 1, 2006. A follow-up report to the Utah legislature will occur during September 2007. In February 2005, in response to a request from the Clive facility owners, the company's license to accept class B and C low-level waste was terminated.

On February 27, 2007, legislation (SB 155) governing the oversight of radioactive waste disposal facilities in Utah became law without signature by Gov. Jon Huntsman, Jr. Among other things, SB 155 eliminates the requirement for local government, legislative & gubernatorial approval for "qualifying amendments" to Energy Solutions' operating license. In response, Huntsman threatened to notify the Northwest Compact to limit the volume of waste that can be disposed to current levels. Then, on March 15, 2007, Huntsman and Energy Solutions entered into an agreement that, among other things, requires the company to immediately withdraw a pending license amendment that would have provided additional disposal capacity. In return, Huntsman agreed to refrain from seeking to limit disposal volumes at the facility.

Mergers/Acquisitions and Public Offering On February 3, 2006, it was announced that BNG America, Envirocare of Utah, and Scientech D&D were merging to form Energy Solutions. Subsequently, Energy Solutions acquired several other companies including Duratek, Parallax, Safeguard International Solutions, and Reactor Sites Management Co. In March 2007, Energy Solutions filed to make an initial public stock offering with a maximum aggregate of \$500 million.

Other Information The Clive facility is subject to certain fees and taxes on the disposal of waste at the facility. Certain fees and taxes were raised during the 2003 legislative session after a citizens' initiative to substantially alter the fee and tax structure failed. Generators are required to obtain site access permits on an annual basis.

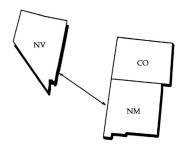
State Contact Dane Finerfrock, Director, Division of Radiation Control, Utah Department of Environmental Quality, 168 North 1950 West, PO Box 144850, Salt Lake City, UT 84114-4850 (phone – 801/536-4257; fax – 801/533-4097; dfinerfrock@utah.gov; www.deq.utah.gov)

Operator Contact Tye Rogers, Senior Vice President, Energy Solutions, 423 West 300 South, Suite 200, Salt Lake City, UT 84101 (phone – 801/649-2000; fax – 801/413-5646; <u>trogers@energysolutions.com</u>)

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's third amended resolution and order (approved April 20, 2006), wastes meeting Energy Solutions' Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the Hanford facility. Certain wastes are being shipped to other facilities including the US Ecology facility in Idaho.

Facility Designation In September 2006, the Rocky Mountain Low-Level Radioactive Waste Board designated the Clean Harbors Deer Trail Facility (CHDTF) in Colorado as a regional facility for the disposal of NORM and TENORM up to 400 pCi/g of radium and 2,000 pCi/g total NORM and TENORM. In-region generated NORM and TENORM may be disposed of in the region at such facilities allowed by the policies and regulations of the state in which such disposal will occur.

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. The compact has jurisdiction (including import/export authority) over NORM/NARM.

Compact Contact Leonard Slosky, Executive Director, Rocky Mountain Board, 1675 Broadway, Suite 1400, Denver, CO 80202 (phone – 303/825-1912; fax – 303/892-3882; board@rmllwb.us; www.rmllwb.us)

Operator Contact Phillip Retallick, Senior Vice President, Compliance and Regulatory Affairs, Clean Harbors Environmental Corp., 200 Arbor Lake Drive, Suite 300, Columbia, SC 29223 (phone – 803/691-3427; fax – 803/691-3493; Retallick.Phillip@cleanharbors.com)

Host State: Colorado

Regulatory Responsibility Colorado Department of Public Health and Environment (CDPHE)

Program Responsibility Colorado Department of Public Health and Environment (CDPHE)

Siting The Clean Harbors Deer Trail Facility (CHDTF) is located in Adams County, Colorado

Licensing In May 2005, the Rocky Mountain Board received an application from the State of Colorado for the designation of CHDTF as a limited regional low-level radioactive waste disposal facility. Colorado filed the application after receiving in January 2005 a radioactive materials license application from CHDTF that proposes the disposal of Naturally Occurring Radioactive Materials (NORM) and Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) at the facility. The application is on the board's web page at www.rmllwb.us. (See related information regarding the board's designation of the facility under "Rocky Mountain Compact," page 12.)

On December 21, 2005, CDPHE issued the Deer Trail Facility a hazardous waste permit renewal and radioactive materials license. The radioactive materials license allows the facility to accept limited types of naturally occurring radioactive waste (NORM) or such waste that has been modified in industrial processes. It prohibits the acceptance of artificial or artificially altered radioactive material from research, medicine, weapons, nuclear power plants or other operations. Pursuant to the license, CHDTF has been accepting NORM and TENORM since December of 2006.

Litigation On January 20, 2006, the Adams County Board of Commissioners ("Adams County") filed two lawsuits against CDPHE. One suit—which was filed in the District Court of Adams County—challenges the hazardous waste permit for CHDTF. The other suit—which was filed in the District Court for the City and County of Denver challenges the issuance of the radioactive materials license for the facility. In the lawsuit, Adams County contends CDPHE's issuance of a radioactive materials license to the Deer Trail facility "was in excess of its statutory jurisdiction, authority, purposes and limitations, was arbitrary and capricious, was an abuse of discretion, was unsupported by substantial evidence, was a denial of a statutory right, was contrary to the Radiation Control Act and its regulations, and otherwise contrary to law" for a variety of reasons.

On May 17, 2006, the Denver District Court issued an order dismissing the lawsuit challenging the issuance of a limited radioactive materials disposal license to CHDTF. In dismissing the suit, the court held that the plaintiff lacks constitutional and prudential standing and that the court thus lacks subject matter jurisdiction over the action. Shortly thereafter, the plaintiffs announced plans to appeal the court's decision.

On July 5, 2006, the District Court of Adams County ruled that the plaintiff does not have judicial standing to sue the State of Colorado. The court vacated the judicial stay of the CHDTF radioactive materials license via bench verdict.

On April 25, 2007, Adams County filed suit against CHDTF in the District Court of Adams County, Colorado. The suit alleges, among other things, that CHDTF has violated applicable laws by operating a regional low-level radioactive waste disposal facility without applying for and obtaining the necessary permit from Adams County. The plaintiff asserts that CHDTF's conduct violates various statutes, rules and regulations including the Local Government Land Use Control Enabling Act, the Colorado Hazardous Waste Siting Act, the Solid Wastes Act, the Adams County Development Standards and Regulations, and the Low-Level Radioactive Waste Act. The suit—which seeks civil penalties, injunctive and declaratory relief -remains pending. CHDTF denies the charges and continues to accept NORM and TENORM.

State Contacts Joe Vranka of the Colorado Department of Public Health and the Environment at (303) 692-3402.

Operator Contact Phillip Retallick, Senior Vice President, Compliance and Regulatory Affairs, Clean Harbors Environmental Corp., 200 Arbor Lake Drive, Suite 300, Columbia, SC 29223 (phone – 803/691-3427; fax - 803/691-3493; Retallick. Phillip@cleanharbors.com)



Southeast Compact

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

Member States Alabama, Florida, Georgia, Mississippi, 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 may be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy *Solutions*' Clive, Utah facility license conditions may be shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions may be shipped to the commercial disposal facility in Richland.

Facility Designation In 1986, the Southeast Compact Commission designated North Carolina as the next host state. The North Carolina General Assembly accepted that designation. North Carolina began development of a disposal facility and accepted nearly \$80 million from the Southeast Compact Commission for site development activities.

Sanctions/Litigation In June 1999, Commissioners from Florida and Tennessee filed a formal administrative complaint against North Carolina seeking sanctions for failure to fulfill its host state obligations. After conducting a formal hearing process, on December 9, 1999, the Southeast Compact Commission voted to impose sanctions on North Carolina, including the repayment of almost \$80 million in funds given to the state by the compact for development of a regional facility, \$10 million in lost future revenues, and an unspecified amount for attorney's fees. The commission resolved that the required amounts "shall be paid in full by July 10, 2000." On June 23, 2002, the Southeast Compact—along with the party states of Alabama, Florida, Tennessee, and Virginia—filed a lawsuit in the U.S. Supreme Court to enforce the sanctions against North Carolina. That suit is in the development of evidence phase before a Special Master appointed by the Court. The Court is not expected to issue a decision until the fall of 2008 at the earliest, although spring of 2009 is more likely.

Withdrawal On July 26, 1999, the State of North Carolina—which had been designated as the compact's host state—enacted legislation to withdraw from the Southeast Compact. The Southeast Compact Commission maintains that although North Carolina is no longer a member state, it is subject to the sanctions resolution of December 9, 1999 (see above) until it satisfies the terms of the sanctions resolution or the case against North Carolina is otherwise resolved as determined by the Commission in its sole discretion.

Post-2008 Study Findings In mid-2005, the Southeast Compact Commission released a report on the potential impacts to regional waste generators of the planned July 2008 closure of the Barnwell disposal facility to out-of-region waste. The report concludes that "[t]he effect of losing access to the Barnwell facility after July 2008 will be limited in scope," but also finds that "the problem is serious enough to warrant action by the Commission" because permanent disposal is preferable to storage and the development of additional storage capacity could be costly.

LLRW Policy Statement On November 30, 2005, the Southeast Compact adopted a policy statement on the management of commercial low-level radioactive waste. The statement identifies a preferred course of action, reviews the impact of the potential loss of access for Class B & C waste, and provides a cautionary note regarding future decisions and alternative proposals. A copy of the policy statement, as well as other compact documents, can be found at www.secompact.org.

Contact Kathryn Haynes, Executive Director, Southeast Compact Commission, 21 Glenwood Avenue, Suite 207, Raleigh, NC 27603 (phone – 919/821-0500; fax – 919/821-1090; khaynes@secompact.org; www.secompact.org)



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. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy *Solutions*' Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Richland, Washington.

Other Information Generators who want to export low-level radioactive waste for disposal at the Barnwell, South Carolina facility or the Energy *Solutions'* Clive, Utah facility must petition the Southwestern Compact Commission for approval. A fee must accompany the petition. A petition is not required for disposal of NARM waste at the Richland, Washington disposal facility nor is a petition required for exportation of low-level radioactive waste for treatment outside of the Southwestern Compact region unless the treated waste is ultimately destined for land disposal. Any party planning to import low-level radioactive waste into the Southwestern Compact region for disposal is required to obtain written approval from (1) the compact or unaffiliated state in which the waste originated; (2) the Southwestern Compact Commission; and (3) the radiation control and waste management agencies of the state into which the waste would be imported for disposal.

Contact Don Womeldorf, Executive Director, Southwestern Compact Commission, PO Box 277727, Sacramento, CA 95827-7727 (phone – 916/448-2390; fax – 815/361-3848; swllrwcc.org; www.swllrwcc.org)

Host State: California

Regulatory and Program Responsibility California Department of Health Services (DHS)

Siting Responsibility None

Other Involvement None

Disposal Technology enhanced shallow land burial

Siting The state previously chose land in Ward Valley as its preferred site. However, the land is owned by the federal government, which subsequently declined to transfer it to the state. A new preferred site has not been chosen.

Licensing A license for a disposal facility at Ward Valley was issued by DHS on September 16, 1993, conditioned on DHS ownership of the land. The license did not include mixed waste disposal. Due to the federal government's refusal to transfer the land, the license became moot.

Development Costs Through November 1, 1998, approximately \$92 million including interest had been spent on the unsuccessful attempt to develop a facility at Ward Valley.

Disposal Facility Operational Unknown.

Other Information Although the State of California issued a license to build a low-level radioactive waste disposal facility at Ward Valley in 1993, the license became moot when the federal government refused to transfer the site to the state for its intended use. The state subsequently enacted a statute precluding site development in Ward Valley.

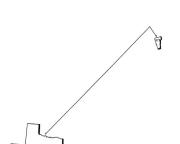
US Ecology, the selected developer for the Ward Valley site, unsuccessfully attempted to recover monetary damages from the failed land transfer process through litigation in state court.

On June 2, 1999, then-California Governor Gray Davis established an advisory group charged with proposing ways to find "workable alternatives for California's low-level radioactive waste disposal." The state's original preferred site—Ward Valley, California—was not among the issues to be studied by the group. In mid-2000, the advisory group delivered a report to the Governor which presents four options: (1) continue current practices—storage for decay and disposal at out-of-state facilities—for management of low-level radioactive waste produced within the state, (2) divide the waste stream into categories according to various criteria and apply different management techniques, (3) operate an assured isolation facility, and (4) operate a disposal facility. The report did not recommend any one option over the others and no further action has been taken by the state since its release.

In addition, on June 16, 1999, the California legislature adopted a budget that effectively eliminated the state's low-level radioactive waste program.

To date, the Southwestern Low-Level Radioactive Waste Commission has sent several letters to California Governor Arnold Schwarzenegger inquiring as to the "administration's plans regarding meeting California's legal obligation to provide a low-level radioactive waste (LLRW) disposal facility." The Governor has not responded to the letters, the most recent of which was sent in May 2005.

Contact Gary Butner, Acting Branch Chief, Radiologic Health Branch, Department of Health Services, State of California, 1500 Capitol Avenue, MS 7610, Sacramento, CA 95899 (phone – 916/440-7942; fax – 916/650-6722; gbutner@dhs.ca.gov)



Texas Compact

Governing Body Texas Low-Level Radioactive Waste Disposal Compact Commission

Member States Texas, 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. President Clinton then signed the compact consent legislation into law on September 20, 1998. Maine's former-Governor, Angus King, signed legislation into law on April 5, 2002 removing Maine from the Texas LLRW Disposal Compact. Based on the provisions of the compact, the withdrawal became effective in April 2004.

Current Waste Management As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy Solutions' Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Richland.

Other Information On August 4, 2004, Waste Control Specialists LLC (WCS) filed an application with the Texas Commission on Environmental Quality (TCEQ). The application was deemed administratively complete on February 18, 2005 and was deemed most meritorious on March 31, 2005. Two technical notices of deficiency were issued on September 16, 2005 and on January 30, 2006—both of which to WCS timely responded. On June 5, 2006, TCEQ sent a letter advising WCS that the application contains "significant" unresolved deficiencies. On August 30, 2006, in response to a request from WCS, TCEQ granted the company an extension to respond to the agencies concerns by May 1, 2007. On March 19, 2007, TCEQ formally accepted the response to noted technical deficiencies from WCS, as well as a revised application. Revised application materials were subsequently accepted on April 27, 2007 and on May 1, 2007. TCEQ will need until October 1, 2007 to review the revised application by WCS, write an environmental analysis and prepare a recommendation on the application—including, if applicable, a draft license. Under Texas requirements, administrative hearing proceedings would be conducted within 90 days (December 2007) and a proposal for decision must be issued within one year thereafter (December 2008). TCEQ commissioners must then issue a license or denial within 90 days—i.e., in March 2009.

Information on the WCS application and review can be found at http://www.tceq.state.tx.us/permitting/waste_permits/rad_waste/WCS_license_app.html.

The WCS site, which is located in Andrews County, Texas, continues to operate facilities for the processing, treatment and storage of hazardous, toxic, low-level, and mixed radioactive wastes. WCS is also seeking additional regulatory authorizations to dispose of 11e.(2) or byproduct material.

State Contact Susan Jablonski, Director of Radioactive Materials Division, Texas Commission on Environmental Quality, State of Texas, PO Box 13087, Mail Code 233, Austin, TX 78711-3087 (phone – 512/239-6731; fax – 512/239-6464; sjablonski@tceq.state.tx.us; www.tceq.state.tx.us/nav/permits)

Operator Contact Rodney Baltzer, President and CFO, Waste Control Specialists LLC, 5430 LBJ Freeway, Suite 1700, Dallas, TX 75240 (phone – 972/450-4235; fax – 972/448-1435; rbaltzer@valhi.net; www.wcstexas.com)

Host State: Texas

Regulatory Responsibility Texas Commission on Environmental Quality (TCEQ)

Program Responsibility Texas Commission on Environmental Quality (TCEQ)

Siting Responsibility Open to any private company

Disposal Technology stable bulk waste or concrete barriers in near-surface landfills

Siting In May 1991, based on preliminary data gathered during the siting process, the Texas Legislature passed legislation requiring the investigation of a site in a 400-square mile area in Hudspeth County for the proposed low-level radioactive waste disposal facility. In February 1992, a site within this area was selected and purchased and extensive testing began. A site in Hudspeth County was chosen to host the facility and a license application was submitted. In May 2003, after the 1998 denial of the license application for the Hudspeth County site, legislation was passed that removed the designation of Hudspeth County as the host county. New legislative exclusionary criteria limits the potential siting area to the panhandle region of Texas—bordered by the states of New Mexico and Oklahoma. Any site must be within the region, meet technical requirements and be supported by resolution of the affected county's Commissioners' Court.

Licensing In March 1992, a license application for a site in Hudspeth County was submitted to TCEQ. In July 1998, administrative law judges who conducted evidentiary hearings on the application recommended that TCEQ deny the application due to insufficiency of information in two of the 17 issues evaluated by the judges. The application was deemed adequate in all other areas. On October 22, 1998 the TCEQ Commissioners denied the application in accordance with the administrative law judges' recommendations. The Authority filed a motion for rehearing, but the motion was overruled by operation of law on December 11, 1998. No appeal was filed.

In the summer of 2003, the Texas legislature passed H.B. 1567, which amends Texas Health and Safety Code provisions dealing with the siting and operation of a commercial low-level radioactive waste disposal facility for the Texas Low-Level Radioactive Waste Disposal Compact. (A copy of the final version of the bill as passed by both the House and Senate can be found at http://www.capitol.state.tx.us/tlo/legislation/bill_status.htm.) The legislation allows for the creation of two privately run waste disposal facilities to be licensed as one site by the TCEQ. One facility may dispose of federal facility waste, as defined under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments, subject to certain specified conditions. The other, adjacent facility, may dispose of commercial low-level radioactive waste. On August 4, 2004, Waste Control Specialists LLC submitted a license application to TCEQ. (For additional information, see the "Other Information" section on the Texas Compact page.)

On May 31, 2007, the Texas legislature passed a bill (SB 1604) that, among other things, consolidates most waste management licensing authority within the TCEQ. Previously, the Department of State Health Services & the Executive Commissioner of the Health and Human Services Commission had jurisdiction over some of these authorities.

Development Costs To date: unknown. Estimated total cost including construction: unknown

Disposal Facility Operational Unknown.

Other Information The Texas Low-Level Radioactive Waste Disposal Authority (the Authority) closed its doors on September 1, 1999. Its functions were transferred to the TCEQ. In August 2000, TCEQ issued two documents—a technical study and a legal analysis—relating to the management of low-level radioactive waste in Texas. Both contain extensive discussion of the assured isolation concept.

Contact Susan Jablonski, Director of Radioactive Materials Division, Texas Commission on Environmental Quality, State of Texas, PO Box 13087, Mail Code 233, Austin, TX 78711-3087 (phone – 512/239-6731; fax – 512/239-6464; sjablonski@tccq.state.tx.us; www.tccq.state.tx.us/permits)

Operator Contact Rodney Baltzer, President and CFO, Waste Control Specialists LLC, 5430 LBJ Freeway, Suite 1700, Dallas. TX 75240 (phone – 972/450-4235: fax – 972/448-1435): rbaltzer@valhi.net: www.wcstexas.com)

Unaffiliated States

Massachusetts



Primary Regulatory Responsibility Department of Public Health (DPH)

Secondary Regulatory Responsibility Department of Environmental Protection (DEP)

Program and Siting Responsibility Department of Public Health

Disposal Technology Shallow land burial is prohibited in Massachusetts; the chosen technology must allow monitoring and package retrieval. The sited community will select the disposal technology from methods approved by DPH.

Current Waste Management As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy Solutions' Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial facility in Richland.

Siting As a result of renewed access to the Barnwell site in July 1995 and the expanded availability of the Envirocare (now known as Energy Solutions) facility, Massachusetts decided in March 1996 to cease its activities involving statewide mapping and screening—the first major stage of its in-state siting efforts—and to continue discussions with other states and compacts for future disposal arrangements, while monitoring changes in the national low-level radioactive waste management situation.

Development Costs In 1996, estimated total costs of preoperation and 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.

Contact Robert Walker, Director, Radiation Control Program, Department of Public Health, Commonwealth of Massachusetts, Schrafft Center, Suite 1M2A, 529 Main Street, Charleston, MA 02129 (phone – 617/242-3035 ext. 2001; fax - 617/242-3457; bob.walker@state.ma.us; www.mass.gov/dph/rcp)

Maine

Current Waste Management As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy Solutions' Clive, Utah facility license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial facility in Richland, Washington.

Maine has no plans to site a disposal facility due to the small amount of low-level radioactive waste generated. The Governor has a State Nuclear Safety Advisor and an Advisory Commission on Radioactive Waste and Decommissioning to advise him on the issues.

Contact Department of Health and Human Services, Maine Center for Disease Control and Prevention, Division of Environmental Health, Radiation Control Program, 286 Water Street, 4th Floor, Augusta, ME 04333 (phone - 207/287-5676; fax - 207/287-3059)

Michigan



Regulatory Responsibility Michigan Department of Environmental Quality

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. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy *Solutions*' Clive Utah license conditions may be shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions may be shipped to the commercial disposal facility in Richland.

Siting 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. Amendments to state law must be enacted before these recommendations can be implemented and a new siting process pursued. No effort is currently under way to enact amendments.

Development Costs To date: \$12.6 million. Estimated total cost including construction: not available

Contact Thor Strong, Acting Commissioner, Low-Level Radioactive Waste Authority, Department of Environmental Quality, State of Michigan, 525 West Allegan, P.O. Box 30241, Lansing, MI 48909 (phone – 517/241-1252; fax – 517/241-1326; strongt@michigan.gov; www.michigan.gov/deq)

New Hampshire



Current Waste Management As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy *Solutions*' Clive, Utah license conditions may be shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial facility in Richland, Washington.

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

Contact Department of Health and Human Services, State of New Hampshire, 129 Portland Street, Concord, NH 03301 (phone – 603/271-4688; fax – 603/271-4912)

Nebraska



Regulatory and Program Responsibility

Nebraska Department of Environmental Quality (NDEQ)

Nebraska Department of Health and Human Services Regulation and Licensure (HHSR&L)

Licensing On December 18, 1998, regulators in NDEQ and HHSR&L denied US Ecology's license application for construction and operation of a regional low-level radioactive waste disposal facility in Boyd County, Nebraska. The decision to deny the application was based on six objections—five of which relate to the site characteristics, and one that concerns US Ecology's financial qualifications. (The regulators had announced in August 1998 that the state intended to deny the application based on the six objections, plus concerns about the radiation safety program's ability to address accidents. The latter issue was subsequently resolved.) The decision to deny the license was made following a 90-day public comment period and public hearing in Boyd County on the proposed decision.

As part of a legal settlement agreement (see "Other Information" below and the Central Compact page of this document), the Central Interstate Low-Level Radioactive Waste Compact Commission subsequently agreed to cease all efforts to site a facility in the State of Nebraska. In addition, the state is not currently conducting any siting activities of its own.

Other Information In May 1999, the Nebraska legislature passed legislation withdrawing the state from the Central Compact. The legislation became effective on August 12, 1999. Under the terms of the compact, however, withdrawal does not take effect until five years after the passage of such legislation and the provision of written notice to the Governors of each party state. On June 25, 2003, commissioners from the member states of Arkansas, Kansas, Louisiana and Oklahoma voted to revoke Nebraska's membership in the Central Compact (which revocation took effect one year after Nebraska received notice thereof) and to impose certain sanctions upon the state. On August 22, 2003, the State of Nebraska filed a lawsuit in the U.S. District Court for the District of Nebraska challenging the June 25 attempt to revoke and sanction the State of Nebraska as invalid and unenforceable on the grounds that it violates state and federal law and the express terms of the Central Compact. The lawsuit was ended amicably by the parties upon Nebraska's completion of payments made pursuant to a legal settlement agreement involving various lawsuits that was reached on August 9, 2004. (For additional information, see the Central Compact page of this document.) Pursuant to the terms of the settlement agreement, Nebraska paid to the Central Compact \$145.8 million on August 1, 2005. Furthermore, Nebraska is no longer a member of the Central Compact as of August 2004 and all issues between the parties are now resolved.

Contact Carla Prange Felix, Manager, Low-Level Radioactive Waste Program, Department of Environmental Quality, State of Nebraska, 1200 N Street, Suite 400, Lincoln, NE 68509-8922 (phone - 402/471-3380; fax – 402/471-2909; Carla.felix@ndeq.state.ne.us; www.deq.state.ne.us)

New York



Regulatory Responsibility Department of Environmental Conservation (DEC)

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

Siting Responsibility Siting activities suspended in 1995.

Other Involvement Department of Health (DOH)

New York City Department of Health and Mental Hygiene

Current Waste Management As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy *Solutions*' Clive Utah license conditions may be shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions may be shipped to the commercial disposal facility in Richland, Washington.

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

Siting 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. While subsequent legislative proposals have offered alternative siting processes, including solicitation of volunteer host communities, a revised siting process has not been determined. The DEC adopted low-level radioactive waste disposal facility siting and disposal method selection regulations in 1987. No siting activities are currently being conducted.

Licensing Once a site and a disposal method are selected, NYSERDA is responsible for obtaining both a DEC permit to construct and operate the facility and a DOH radioactive materials license.

Development Costs Through March 2007, \$89.8 million has been collected through annual assessments on operating nuclear power plants (does not include surcharge rebates); \$78.9 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.

Contact Jack Spath, Program Manager, Radioactive Waste Policy and Nuclear Coordination, Energy Research and Development Authority, State of New York, Corporate Plaza West, 17 Columbia Circle, Albany, NY 12203-6399 (phone – 518/862-1090 ext. 3302; fax – 518/862-1091; ips@nyserda.org)

North Carolina



Regulatory Responsibility Radiation Protection Section (RPS), North Carolina Department of Environment and Natural Resources

Program and Siting Responsibility none at this time

Disposal Technology under prior plan - integrated vault

Siting 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 RPS in December 1993. Several problems were identified during the license review and a funding dispute broke out with the Southeast Compact Commission. Subsequently, the state terminated the license review and withdrew from the Southeast Compact. (See "Other Information.")

Development Costs To date: \$112 million.

Disposal Facility Operational No date set. (See "Other Information.")

Other Information On July 26, 1999, the State of North Carolina enacted legislation which, among other things, (1) withdrew the state from the Southeast Compact, (2) limited the functions of the North Carolina LLRW Management Authority to closing and restoring the proposed disposal site in Wake County and finalizing closure and restoration by June 30, 2002, (3) directed the N.C. Radiation Protection Commission to develop a plan for complying with the state's responsibilities under federal low-level radioactive waste policy, and (4) prohibited the issuance or consideration of a facility license prior to action by the General Assembly.

On December 9, 1999, the Southeast Compact Commission voted to impose sanctions on North Carolina for violations of the compact agreement, including the repayment of almost \$80 million in funds given to the state for development of a regional facility, \$10 million in lost future revenues, and an unspecified amount for attorney's fees. The commission resolved that the required amounts "shall be paid in full by July 10, 2000." North Carolina did not comply with the resolution.

On May 15, 2000, the North Carolina Radiation Protection Commission submitted a report to the General Assembly recommending a new plan for low-level radioactive waste management in the state. Among other things, the report (1) advocates a change in national low-level radioactive waste disposal policy, (2) endorses opening the disposal market to private industry, and (3) finds that a central disposal facility in the state is not needed as long as access to treatment facilities and the Envirocare of Utah (now known as Energy *Solutions*) disposal facility remains available, but notes that disposal capacity for Class B and C waste is needed. Subsequently, the North Carolina Low-Level Radioactive Waste Management Authority permanently shut down.

Contact Beverly Hall, Radiation Protection Section, Department of Environment and Natural Resources, State of North Carolina, 3825 Barrett Drive, Raleigh, NC 27609-7221 (phone – 919/571-4141; fax – 919/571-4148; Beverly.hall@ncmail.net; www.ncradiation.net)

District of Columbia



Regulatory Responsibility Department of Health (DOH)

Program Responsibility Bureau of Food, Drug and Radiation Protection, Department of Health

Current Waste Management As of July 1, 1995, waste may be shipped to the disposal facility in Barnwell, South Carolina. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy *Solutions'* Clive, Utah license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial facility in Richland, Washington.

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 its borders, DOH is not planning to site a facility. The District of Columbia is continuing efforts either to join a compact or to contract with one.

Contact Gregory B. Talley, Program Manager, Radiation Protection Division, Bureau of Food, Drug, and Radiation Protection, Environmental Health Administration, Department of Health, District of Columbia, 51 N Street, NE, Suite 6025, Washington, D.C. 20002 (phone – 202/535-2320; fax – 202/535-1359; greg_talley@dc.gov; www.dchealth.dc.gov)

Puerto Rico



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

Rhode Island

Regulatory Responsibility Rhode Island Department of Health



Program Responsibility Rhode Island Atomic Energy Commission

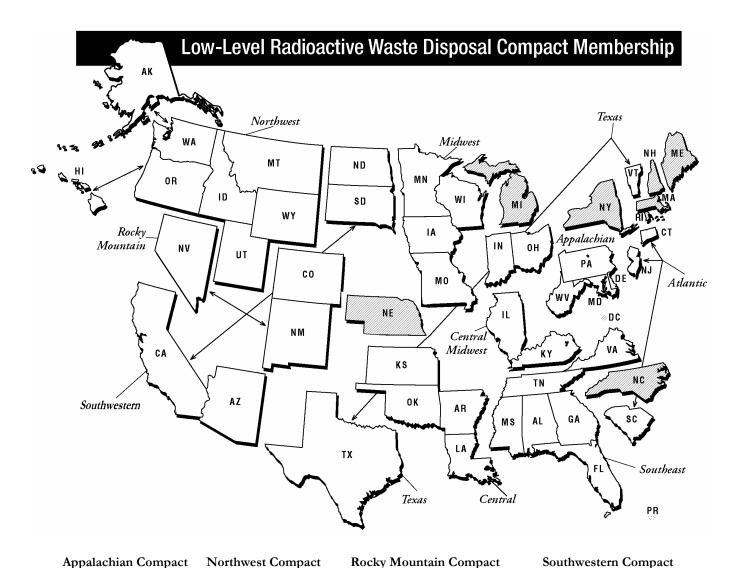
Siting Responsibility none

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. However, pursuant to South Carolina law, there will be a gradual reduction in the annual total waste volume from all sources allowed at Barnwell through June 30, 2008, with the Atlantic Compact's waste receiving priority for disposal. No non-compact waste will be allowed into Barnwell after June 30, 2008. In addition, subject to the Northwest Compact's third amended resolution and order (approved April 20, 2006), wastes meeting Energy Solutions' Clive, Utah license conditions are being shipped for disposal at the Clive facility. Certain NARM wastes meeting the State of Washington's conditions are being shipped to the commercial disposal facility in Richland, Washington.

The state is not planning at this time to site a facility. The Rhode Island Atomic Energy Commission has assumed responsibility for low-level radioactive waste management and compact participation from the Department of Environmental Management effective January 1996.

Contact Terrence Tehan, Director, Atomic Energy Commission, State of Rhode Island, 16 Reactor Road, Narragansett, RI 02882 (phone – 401/789-9391; fax – 401/782-4201; ttehan@gso.uri.edu)



Appalachian Compact

Delaware Maryland Pennsylvania West Virginia

Atlantic Compact

Connecticut New Jersey South Carolina

Central Compact

Arkansas Kansas Louisiana Oklahoma **Midwest Compact**

Indiana Iowa Minnesota Missouri Ohio Wisconsin

Alaska

Hawaii

Idaho

Montana

Oregon

Washington

Wyoming

Utah

Central Midwest Compact

Illinois Kentucky **Rocky Mountain Compact**

Colorado Nevada New Mexico

Nothwest accepts Rocky Mountain waste as agreed between compacts

Southeast Compact

Alabama Florida Georgia Mississippi Tennessee Virginia

Southwestern Compact

Arizona California North Dakota South Dakota

Texas Compact

Texas Vermont

Unaffiliated States

District of Columbia Maine Massachusetts Michigan Nebraska New Hampshire New York

North Carolina Puerto Rico Rhode Island