



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

January 24, 1992

MEMORANDUM FOR: Those on Attached List
FROM: *FC* Frederick C. Combs, Assistant Director
State, Local and Indian Relations
Office of State Programs
SUBJECT: STATUS OF STATES IN PROVIDING DISPOSAL OF LOW-LEVEL
RADIOACTIVE WASTE - OCTOBER 11, 1991

Enclosed for your information is the status of States providing disposal of low-level radioactive waste as of October 11, 1991. Some additional schedule information is added as notes from the first week in January 1992. The last status was issued with information as of January 31, 1991. The Office of State Programs would like to continue to update this status on a periodic basis. Any corrections, suggestions, and additional information would be appreciated.

Please forward any comments to Dr. Stephen N. Salomon, OSP, at 301/504-2368.

Enclosure:
As stated

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STATUS OF STATES PROVIDING DISPOSAL CAPACITY FOR LLW - 10/11/91

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EXECUTIVE SUMMARY

The Low-Level Radioactive Waste Policy Amendments Act of 1985 (Act) ensures that currently operating disposal facilities will remain available until the end of 1992, subject to specified limitations on volumes of waste and to certain milestones for specific action by the States. The Act set up a system of incentives and penalties to promote steady progress toward new facility development, and it granted Congressional consent to 7 interstate low-level waste (LLW) disposal compacts. There are now a total of 43 States participating in 9 separate interstate compacts, although Michigan's status is being litigated as explained below.

Although no host State had a complete license application submitted either to the Agreement State regulatory authority or to NRC for the January 1, 1990 Congressional milestone, three States are currently reviewing applications. Licensing decisions by Agreement State authorities are expected in early 1992 for California and Illinois, and the fall of 1993 for Nebraska. The State of Texas may have its license submitted to its Agreement State authority before early 1992. However, these applications do not include mixed waste. The sited States (Nevada, South Carolina, and Washington) have not yet made a determination on their compliance for the January 1, 1992 Congressional milestone which could raise the surcharge for out-of-compact LLW to \$120 per cubic foot.

North Carolina is in the site characterization phase. Connecticut and Maine have identified a number of candidate sites. Vermont had hoped to use a site near Vermont Yankee. However, following preliminary characterization, this site was placed on hold. Vermont authorities have initiated a site screening of the entire State. New Jersey and Pennsylvania will be identifying candidate areas in 1992. New York and Massachusetts are in earlier phases with their progress being set back by revised legislation and budget cuts, respectively. The remaining States of New Hampshire, Rhode Island, District of Columbia, and Puerto Rico have taken little action in terms of establishing their own disposal capacity.

The Compacts and unaffiliated States that are currently scheduled to have their facilities in operation by the final Congressional deadline of January 1, 1996 are Central (Nebraska - fall of 1995), Central Midwest (Illinois - late 1993), Southwestern (California - January-March 1993), and Texas (June 1994 at the earliest).

Post 1996 Compacts and States targeted to have their facilities in operation are Appalachian (Pennsylvania - fall 1996), Midwest (Ohio - unscheduled), Northeast (Connecticut - late 1996; New Jersey - early 1997), Maine (late 1997-early 1998), Massachusetts (December-1996), New York (1998), and Vermont (August 1999). The Southeastern Compact (North Carolina - February 1996) is not

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subject to the Congressional deadline provided the Barnwell facility in South Carolina continues as the Southeastern Compact's regional facility until the North Carolina facility becomes operational.

Mixed waste applications for disposal in the host States are on hold pending the outcome of consideration by the U.S. Department of Energy (DOE) accepting commercial mixed waste for treatment and disposal. The resolution of this issue depends upon DOE and the States making arrangements that involve regionalization and equity among the States. The DOE has to work within the framework of the Programmatic Environmental Impact Statement (PEIS) for DOE facilities. The draft PEIS is due 1993 and the final PEIS in 1996.

The experience to date of all Compacts and States is that schedules or target dates have slipped at all phases of development of the sites for facilities because of technical reasons, litigation, and public/political opposition. Consequently, all future dates should not be viewed with a high degree of confidence but rather the best estimates that are currently available.

On July 29, 1991 the Midwest Compact filed a lawsuit in Minnesota Federal Court on the effective date of Michigan's revocation from the Compact. Earlier, on July 24, 1991 the Compact had revoked Michigan's host State status because of failure to serve as host State. The outcome of the suit will also establish the suspension of all compact privileges for Michigan. All siting activities have ceased in Michigan because the Michigan Low-Level Radioactive Waste Authority has reduced staffing and the scope of their activities. All LLW in Michigan is being stored temporarily because the State lost access to the operating facilities in South Carolina, Washington and Nevada November 10, 1990. At the same time that Michigan's party status was revoked, the Midwest Compact voted Ohio as the host State. Ohio is working on enabling legislation.

A tentative contract between the Northwest Compact Commission and the Rocky Mountain Compact Board is under consideration. The Northwest Compact has not approved the contract pending the resolution by Idaho Governor Andrus' concerns with the U.S. Department of Energy accepting spent fuel from Colorado's Fort St. Vrain nuclear power plant at the Idaho National Engineering Laboratory.

The unaffiliated State of Texas which is developing a LLW disposal facility enacted legislation last summer allowing it to enter into a compact with other States. Two States that are interested and that may qualify are Maine and Vermont.

Because many host States will not have their disposal facilities operating until after the Congressional deadlines of 1993 or 1996,

interim management options, such as storage and volume minimization, are under consideration.

New York State, the State of Michigan and the Concerned Citizens of Nebraska have suits that seek to have the 1985 Act declared unconstitutional. Defendants in the suits include the U.S., the NRC, the U.S. Departments of Energy and Transportation. The New York suit focuses primarily on aspects of the Act; the provision requiring States to take title of LLW being unconstitutional, and the provision that States be responsible for Class C waste. The U.S. Court of Appeals for the Second Circuit affirmed the decision of the federal district court dismissing the lawsuit brought by the State of New York and the counties of Allegany and Cortland against the federal government. New York State appealed the case to the U.S. Supreme Court on September 29, 1991. Thirteen States filed amicus curiae briefs in support of New York. An opposition brief by the federal government was filed December 6, 1991. The Supreme Court decided to hear the case on January 10, 1992.

On August 28, 1991, the U.S. District Court for the Western District of Michigan granted the federal government's motion to dismiss the lawsuit brought against it by Michigan. The State in addition to challenging the constitutionality of the Act included claims brought under the National Environmental Policy Act (NEPA). In this case, the Environmental Impact Statement for 10 CFR Part 61 should be revised to account for the large number of sites (about 13) that are currently being planned by the States. Michigan filed, in mid October 1991, a notice of appeal in the Sixth Circuit Court of Appeals. The U.S. Government response brief is due February 24, 1992.

In July 1991, the Concerned Citizens of Nebraska filed a notice of appeal with the U.S. Court of Appeals for the Eighth Circuit in their suit challenging the constitutionality of the 1985 Act because it fails to meet disposal standards set by Congress, in particular "permanent isolation" and "final disposal". Briefs for the defendants that include NRC were submitted on December 18, 1991. The U.S. District Court for Nebraska had earlier dismissed the suit on October 19, 1990.

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**Status of States
Providing Disposal Capacity for
Low-Level Radioactive Waste**

Prepared by the Office of State Programs, NRC, - Current as of October 11, 1991 with some additional schedule information from early January 1992. For further information, contact Stephen Salomon at 301/504-2368.

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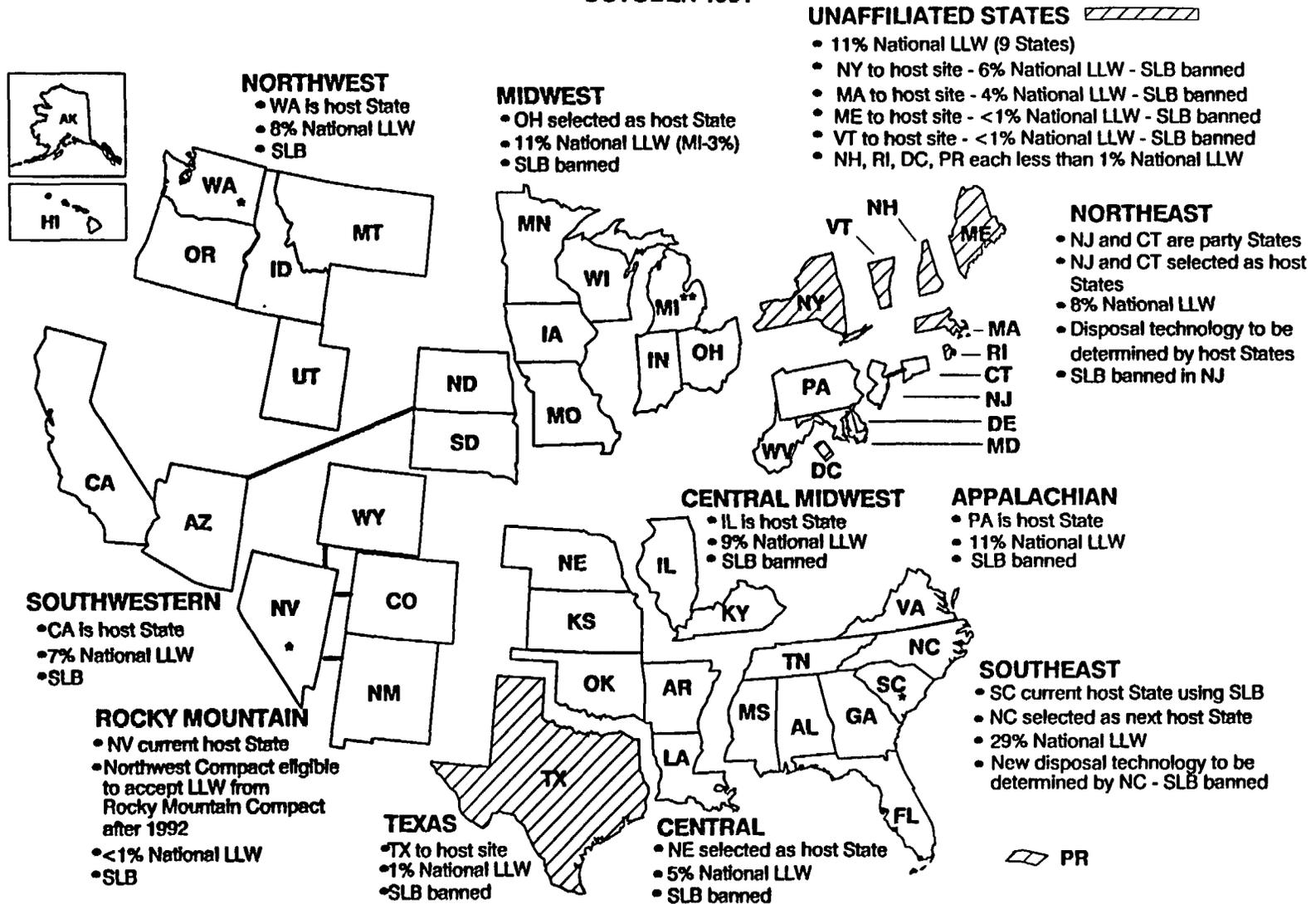
2. INTERSTATE LOW-LEVEL RADIOACTIVE WASTE COMPACTS
GRANTED CONGRESSIONAL CONSENT AS OF OCTOBER 11, 1991

Appalachian	Central	Central-Midwest	Midwest
Delaware	Arkansas	<u>Illinois</u>	Indiana
Maryland	Kansas	Kentucky	Iowa
<u>Pennsylvania</u>	Louisiana		Michigan#
West Virginia	<u>Nebraska</u>		Minnesota
	Oklahoma		Missouri
			<u>Ohio</u>
			Wisconsin
Northeast	Northwest	Rocky Mountain	Southeast
<u>Connecticut</u>	Alaska	<u>Colorado-2*</u>	Alabama
<u>New Jersey</u>	Hawaii	<u>Nevada-1</u>	Florida
	Idaho	New Mexico	Georgia
	Montana	Wyoming	Mississippi
	Oregon		<u>N. Carolina-2</u>
	Utah		<u>S. Carolina-1</u>
	<u>Washington</u>		Tennessee
			Virginia
Southwestern	Unaffiliated States with Siting Plans	Unaffiliated States without Siting Plans	
Arizona	<u>Maine</u>	District of Columbia	
<u>California</u>	<u>Massachusetts</u>	Michigan#	
N. Dakota	<u>New York</u>	New Hampshire	
S. Dakota	<u>Texas</u>	Puerto Rico	
	<u>Vermont</u>	Rhode Island	

 Note: underlining means host State (1=first; 2=second)
 #Michigan's membership in the Midwest Compact is being litigated
 *Colorado is designated as a second host State if the contract with the Northwest Compact is not promulgated.

3. LOW-LEVEL RADIOACTIVE WASTE COMPACT STATUS

OCTOBER 1991

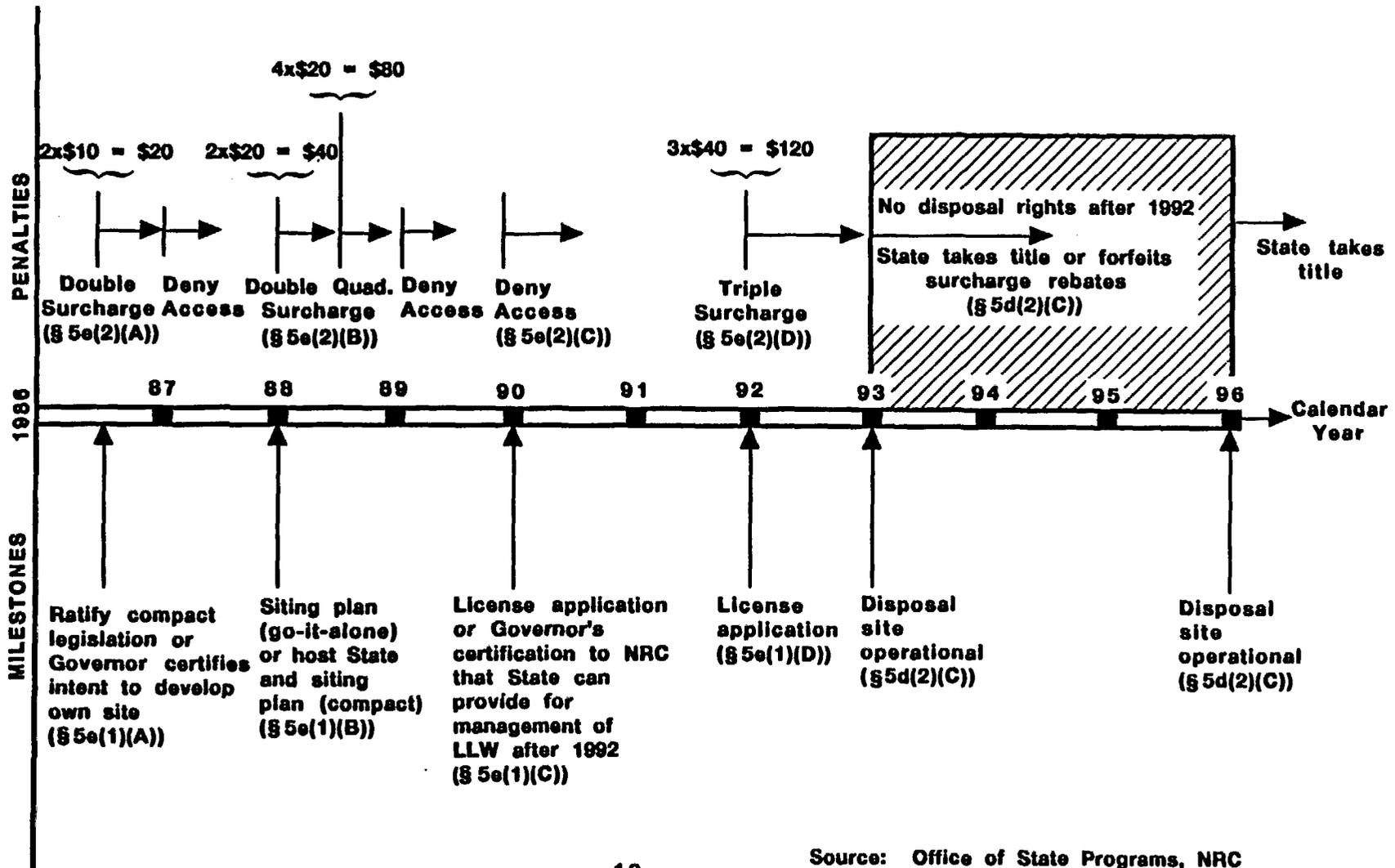


*Operating LLW Disposal Sites
 **Membership being litigated

Note: National LLW volume for 1990 = 1.1 million cubic feet.
 SLB = shallow land burial

Source: Office of State Programs, NRC

4. MILESTONES AND PENALTIES UNDER LLRWPA OF 1985



5.1 MEETING THE CONGRESSIONAL MILESTONES

5.1.1 COMPACTS AND STATES SUBJECT TO CONGRESSIONAL MILESTONES

COMPACTS (non-sited compacts)

Appalachian
Central
Central Midwest
Midwest
Northeast
Southwestern

STATES (States that are not affiliated with a compact)

District of Columbia
Maine
Massachusetts
Michigan#
New Hampshire
New York
Puerto Rico
Rhode Island
Texas
Vermont

SITED COMPACTS (Not subject to Congressional milestones)

Northwest
Rocky Mountain
Southeast

#Michigan's membership in the Midwest Compact is being litigated.

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5.1.2 STATUS OF COMPLIANCE WITH CONGRESSIONAL MILESTONES

COMPACTS	MILESTONES	SITED STATES	DEPARTMENT OF ENERGY
Appalachian	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
Central	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
Central-Midwest	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
Midwest	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
Northeast	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
Southwestern/ Western/ California (1)	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
UNAFFILIATED STATES			
WITH SITING PLANS			
Maine	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
Massachusetts	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
New York	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C

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Texas	July 1, 1986	C	C
	January 1, 1988	C	C
	January 1, 1990	C	C
Vermont	July 1, 1986	C	C
	January 1, 1988	N	N
	January 1, 1990	N	NE
WITHOUT SITING PLANS			
District of Columbia	July 1, 1986	N	N
	January 1, 1988	C	C
	January 1, 1990	N	C
New Hampshire	July 1, 1986	C	NE
	January 1, 1988	N	N
	January 1, 1990	N	NE
Puerto Rico	July 1, 1986	N	NE
	January 1, 1988	N	NE
	January 1, 1990	N	NE
Rhode Island	July 1, 1986	C	N
	January 1, 1988	C	C
	January 1, 1990	N	C

Note: C=compliant

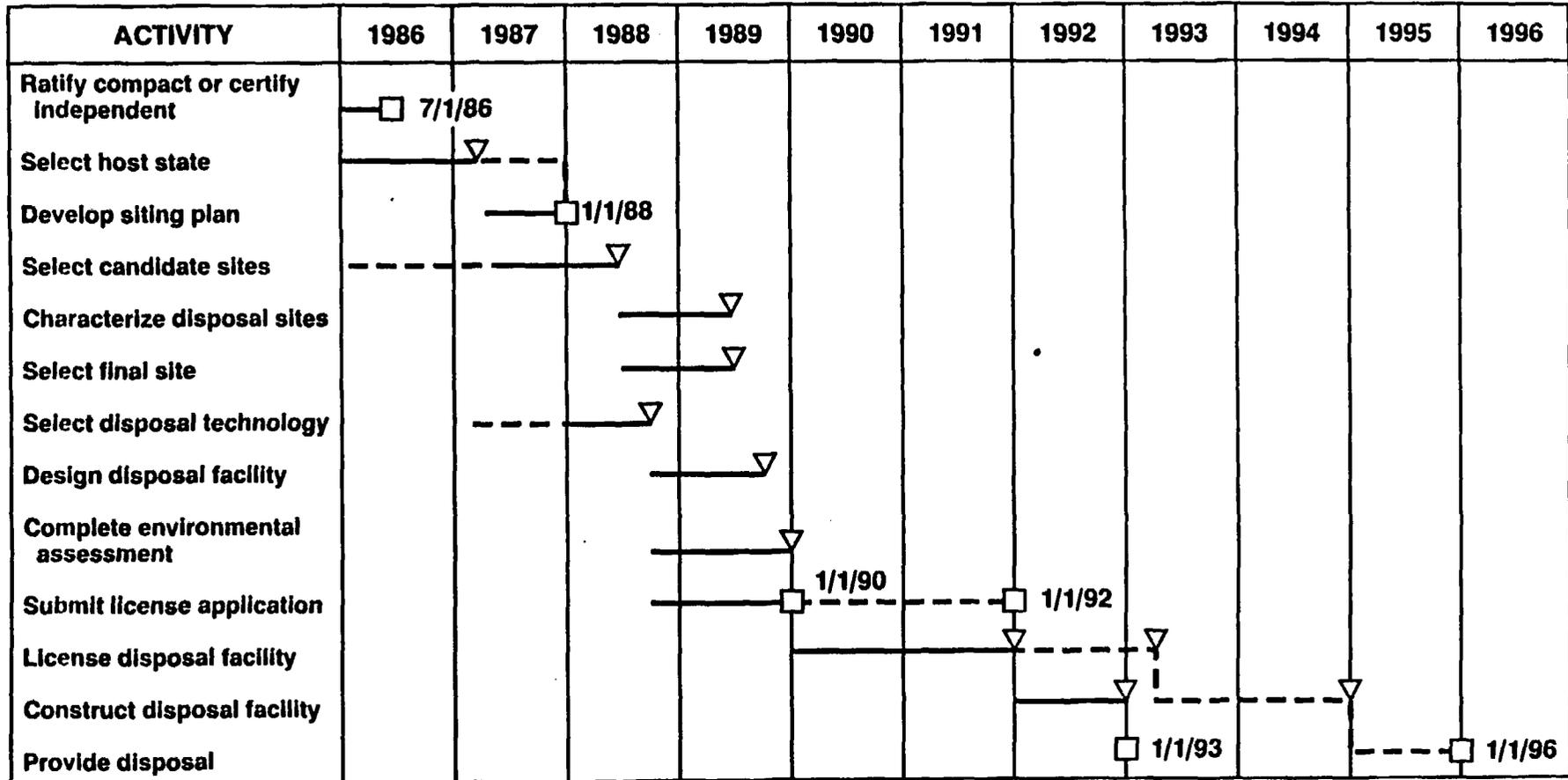
N=noncompliant

NE=not evaluated

(1) North Dakota and South Dakota are combined and not reported separately before becoming parties to the Southwestern Compact.

GENERIC PLAN FOR DEVELOPMENT OF A NEW LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITY

CALENDAR YEAR



□ Denotes Congressional Milestone

Source: U.S. Department of Energy

5.2. PROGRESS IN COMPACTS GRANTED CONGRESSIONAL CONSENT

5.2.1 APPALACHIAN COMPACT
As of October 11, 1991

=====
Activity: 1. Ratify Compact or Certify Independent

The Appalachian States Low-Level Radioactive Waste Compact was granted Congressional consent on May 19, 1988. The first official meeting of the Appalachian Compact Commission was held September 24, 1990.

Timing: Congressional milestone - July 1, 1986
On schedule - by party States

=====
Activity: 2. Select Host State

Pennsylvania is host State according to the Compact. Pennsylvania enacted enabling and siting legislation, February 9, 1988.

Timing: DOE target - March 1987
On schedule - by Compact

=====
Activity: 3. Develop Siting Plan

By host State determination. The Pennsylvania Department of Environmental Resources (DER) issued final regulations for siting on October 18, 1989. A site selection technical guidance report that includes lessons learned from other State siting processes was developed.

The operator-licensee designate, Chem-Nuclear Systems, Inc., was selected July 1989. Subcontractors include LAW Companies Group for geotechnical engineering and environmental science; Morrison-Knudsen, for engineering and construction; NUMATEC, for fuel-cycle services; and RCG/Hagler, Bailly, Inc., for environmental planning and public participation.

A detailed plan for site selection was submitted November 21, 1990. A revised plan that includes all of the siting criteria was approved by the Advisory Committee with comments. After addressing those comments as well as those from the public, the DER approved the revised site-screening plan August 22, 1991.

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Timing: Congressional milestone - January 1, 1988
On schedule

=====

Activity: 4. Select Candidate Sites

By host State determination. The site screening process is scheduled to begin November 1991 with the first round of Statewide disqualifying screening. There will be another round of regional disqualifying screening in January 1992 with local disqualification to take place in the spring of 1992. During Winter/Spring 1992, 3 potential suitable sites are scheduled to be identified for Environmental Quality Board (EQB) approval. In August 1992, the EQB should issue its decision on potentially suitable sites.

There is an extensive host community protection and benefits package that includes grants for independent evaluation. Each potential host community shall receive a grant of \$100,000.

Budget deficits in the State have adversely affected the program regarding personnel for health physics, regulation and contract oversight.

Timing: DOE target - June 1988
Behind schedule - 4 years, 4 months

=====

Activity: 5. Characterize Disposal Sites

By host State determination. Site characterization will begin after Environmental Quality Board approval and be completed before Spring 1994. The quality assurance plan submitted by Chem-Nuclear was approved by the State.

Timing: DOE target - June 1989
Behind schedule - 4 years, 9 months

=====

Activity: 6. Select Final Site

By host State determination. The operator-licensee designate Chem-Nuclear proposes the final site. Scheduled for Spring 1994.

Timing: DOE target - June 1989
Behind schedule - 4 years, 9 months

=====
Activity: 7. Select Disposal Technology

The Compact and Pennsylvania legislation prohibits shallow land burial and requires that the host State develop alternative technologies.

The alternative technologies must incorporate monitoring and recoverability. The law requires use of an above-grade facility, unless other designs provide significant improvement in recoverability, long-term passive monitoring, public health and environmental protection.

The "Triple Safe Technology" proposed by Chem-Nuclear incorporates concrete overpacks, concrete vaults, and an engineered earthen cover. Other special facility features include disposal unit monitoring and collection system, test disposal unit, and waste tracking system.

The general design features include a capacity to dispose 235,000 cubic feet per year, for 30 years; a site of approximately 500 acres of land including 50 acres for the actual waste disposal with the remainder for a buffer zone and support buildings.

The date for final selection is not scheduled.

Timing: DOE target - September 1988
Behind schedule - more than 3 years, 1 month

=====
Activity: 8. Design Disposal Facility

By host State determination. Draft final technology performance and design criteria were prepared. The final facility design is not yet scheduled.

Timing: DOE target - September 1989
Behind schedule - more than 2 year, 1 month

=====
Activity: 9. Complete Environmental Assessment

By operator-licensee designate Chem-Nuclear. Scheduled for Spring 1994.

Timing: DOE target - January 1, 1990
Behind schedule - 4 years, 3 months

=====
Activity; 10. **Submit Licensing Application**

By operator-licensee designate Chem-Nuclear. Scheduled for submittal by Spring 1994. Governor's certification submitted committing to management, storage or disposal from January 1, 1993, until disposal capacity is available.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind schedule for license application - 4 years, 3 months for first milestone and 3 years, 3 months for second milestone
On schedule for Governor's certification

=====
Activity: 11. **License Disposal Facility**

By Pennsylvania DER. Pennsylvania intends to become a limited Agreement State, which means that its agreement will be limited to the regulation of the LLW disposal facility. A draft package was submitted to NRC in 1990 for review and comment. The DER is scheduled to license the facility by Summer 1995.

Timing: DOE target - January 1, 1992; or March 1993
Behind schedule - 4 years, 3 months for first target and 3 years for second target

=====
Activity: 12. **Construct Disposal Facility**

Operator-licensee designate Chem-Nuclear. Construction of facility scheduled for completion August 1996. Estimated construction cost \$25 million dollars (1988 dollars); and pre-licensing cost \$25 million (1988 dollars). The final disposal cost is estimated to be \$121 per cubic foot (1988 dollars).

Timing: DOE target - January 1, 1993, or January 1, 1995
Behind schedule - 1 year, 8 months after final target

=====
Activity: 13. **Provide Disposal**

Disposal operations scheduled to begin Fall 1996.

Timing: Congressional deadlines - January 1, 1993, or January 1,

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1996
Behind schedule - 9 months after final deadline of
January 1, 1996

=====
Developer/operator: Chem-Nuclear Systems, Inc.

Public Involvement: Public Advisory Committee called for in Pennsylvania legislation consists of 23 members representing local government, environmental, health, engineering, business, academic, and public interest groups. It has met to help the Department of Environmental Resources draft requirements for the disposal technology, and other policy issues. Host municipality grants, guarantees, and other benefits are included in the legislation.

Funding: According to new fee legislation, nuclear utilities other than those in Pennsylvania (Baltimore Electric and Gas for Calvert Cliffs, MD) may voluntarily contribute toward Phase 1 activities, e. g., preconstruction development of the facility estimated at \$33 million. BG&E has contributed \$1.5 million. These contributions will be applied toward future disposal costs. (The Low-Level Radioactive Waste Regional Facilities Act, July 11, 1990.)

Below Regulatory Concern: Pennsylvania enacted legislation on July 11, 1990 prohibiting the disposal of BRC except at designated regional facilities. West Virginia enacted a similar prohibition in March 1991.

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5.2.2

CENTRAL COMPACT
As of October 11, 1991

=====
Activity: 1. Ratify Compact or Certify Independent

The Central Compact was granted Congressional consent on January 15, 1986.

Nebraska has proposed amendments to the Central States Compact that include provisions which specify that a State cannot withdraw from the compact unless it has served as a host State or unless the commission unanimously consents to the withdrawal; and clarification of shared liability.

Nebraska enacted on March 31, 1991, LB 837, which allows the host State of the Central Compact to deny access to the regional facility to any party State that does not amend its existing compact legislation to include the following:

The host State shall have two voting members on the Compact Commission (currently, each party State has one voting Commissioner).

All Compact business shall be conducted consistent with the open meeting and open records provisions of the host State.

The host State will establish fees that will be charged against any user of the facility. The fees will be used to provide the host State with both sufficient revenue to cover all anticipated present and future costs associated with the facility and a reasonable reserve for future contingencies.

All party States will share proportionately in all the costs and liabilities associated with the LLW disposal facility for a minimum of 100 years.

The remaining party States have legislative initiatives similar to Nebraska's; and only Arkansas enacted identical legislation.

Timing: Congressional milestone - July 1, 1986
On schedule

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Activity: 2. Select Host State

Because no State volunteered, a draft request for proposal (RFP) for a potential developer was issued September 1986. The developer would recommend a host State. On June 29, 1987, the Compact Commission voted in favor of US Ecology, Inc., as the developer of a regional facility. US Ecology's proposal included Bechtel as the prime contractor in the site selection, site development and the licensing stages of the project. On December 15, 1987, the Compact Commission approved the recommendation of US Ecology that Nebraska be designated as the first host State for a regional facility. Nebraska accepted responsibility and enabling legislation was enacted on April 12, 1988.

Timing: DOE target - March 1987
Behind schedule - 9 months

=====

Activity: 3. Develop Siting Plan

The siting plan was developed by US Ecology. An outline of the siting plan was submitted by the Compact Commission in December 1987 to meet the Congressional milestone.

Timing: Congressional Milestone - January 1, 1988
On schedule

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Activity: 4. Select Candidate Sites

On January 18, 1989, US Ecology announced the selection of three sites in the southeastern, south central, and north central portions of Nebraska as potential locations for the LLW disposal facility. The three sites are located in Nemaha, Nuckolls and Boyd Counties.

Timing: DOE target - June 1988
Behind schedule - 7 months

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Activity: 5. Characterize Disposal Sites

By US Ecology. According to Nebraska's community consent policy, US Ecology could not conduct detailed site characterization work unless invited to do so by the affected community. The site characterization activities began in May 1989 and were completed at

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all three sites in December 1989 at a cost of about \$2 million per site.

Timing: DOE target - June 1989
Behind schedule - 6 months

=====

Activity: 6. Select Final Site

On December 29, 1989, US Ecology announced the Boyd County site as its preferred site.

In mid-October 1990, Nebraska issued checks for \$300,000 in Community Improvement Funds. These funds are collected on an annual basis by the Central Compact party States excluding Nebraska. The Boyd County Board received \$150,000, the town of Butte \$144,000 and the community of Anoka \$6,000.

Community consent legislation has been proposed by Governor Nelson but no final action has been taken by the legislature.

On August 21, 1991, the residents of McCulley Township in Boyd County voted 28 to 1 not to allow a LLW disposal facility at the planned location within the township. On October 4, 1991, the Nebraska Attorney General issued an opinion that such a little used local township ordinance regarding noxious substances is not inconsistent with State law. The township had voted to "prevent the exposure or deposit of offensive or injurious substances within the limits of the town." The locality may use this ordinance to fulfill the requirements of community consent that Nebraska's Governor Nelson favors. However, it is still not known whether this ordinance is superseded by the Central Compact and federal law.

Timing: DOE target - June 1989
Behind schedule - 6 months

=====

Activity: 7. Select Disposal Technology

By developer following guidelines of the management plan. The Compact Commission expressed interest in greater protection than shallow land burial and criteria exceeding 10 CFR Part 61. The RFP required that the facility's design include an "artificially constructed barrier" between the waste and the natural barrier. Cost was not supposed to exceed \$10 million. US Ecology's preliminary design is for above-grade vaults - one for Class A and another for Classes B and C LLW. There will be a separate vault

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for mixed waste. The cover consists of sand, impermeable clay, roller compacted concrete, soil and vegetation. Nebraska law requires that Class C LLW be recoverable.

Timing: DOE target - September 1988
On schedule

=====
Activity: 8. Design Disposal Facility

By US Ecology. The facility will be developed on 320 acres in Boyd County, 50 acres of which will contain the above-grade, reinforced concrete vaults. The capacity of the facility is 2.5 million cubic feet with a lifetime of 30 years. Completion date July 1990.

Timing: DOE target - September 1989
Behind schedule - 10 months

=====
Activity: 9. Complete Environmental Assessment

By US Ecology. Date completed - July 1990.

Timing: DOE target - January 1, 1990
Behind schedule - 7 months

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Activity: 10. Submit Licensing Application

US Ecology filed the application for all LLW except mixed waste with Nebraska on July 27, 1990. The mixed waste application may be submitted at a future time. Bechtel estimated a disposal cost of \$15,000 per cubic foot for mixed waste. Because of the high cost of disposal and the low volumes generated in the Central Compact, the State is holding off on planning for construction of a mixed waste cell pending the decision by the U.S. Department of Energy to accept for disposal commercial mixed waste.

In October, 1990 the Nebraska Departments of Environmental Control and Health issued an application completeness review to US Ecology. The purpose of the review was to determine if the application, as submitted, contained sufficient information for Nebraska to begin its technical review. Thirty-four items were identified as being deficient in either data or information. The technical review is proceeding on topics where sufficient information was provided.

In early February, 1991. the first round of technical questions was

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sent to US Ecology that covers 700 questions related to design and construction, operations, performance, and site characterization. The completion date is forecast for November-December 1991. There are two major issues -- wetlands and potential flood plains at the site.

The completeness report on the application was anticipated in August 1991, but is behind schedule. This will be followed by one on the technical accuracy.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind schedule for license application - 7 months for first milestone
Congressional milestone met by Governor's certification.

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Activity: 11. License Disposal Facility

By both the Department of Environmental Control and the Department of Health. A Memorandum of Understanding between the two agencies outlines their respective responsibilities. A National Environmental Policy Act (NEPA) type of environmental impact statement is required by State law that includes a socioeconomic and sociocultural analysis. The review is expected to take about 18 months. Licensing is scheduled for the fall of 1993.

One of the issues of debate is site ownership, i.e., whether or not Nebraska should take title to the LLW disposed as currently written in the law. Nebraska authorities are considering changing the law.

Timing: DOE target - January 1, 1992; or March 1993
Behind schedule for licensing disposal facility by 6 months.

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Activity: 12. Construct Disposal Facility

By US Ecology. Initial construction to begin, subject to license approval in the fall of 1993. The administration building and first disposal cells will be built. Additional cells to be constructed in phases on an as-needed basis. Construction will take two years because major construction can take place only during the summer construction seasons of 1994 and 1995. The construction should be completed in order to operate in the fall of 1995, except for mixed waste. The total development cost of the facility, including licensing and construction, is now estimated at \$90 million. Per unit disposal cost is estimated in the range of

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\$300-400 per cubic foot for projected disposal volumes of 85,000-185,000 cubic feet per year.

Timing: DOE targets - January 1, 1993; or January 1, 1995
Behind schedule by 9 months after second target date.

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Activity: 13. Provide Disposal

The facility is scheduled to operate in the fall of 1995. Preconstruction costs are estimated at \$33 million which include public information activities, characterization of 3 sites, enhanced facility design and engineering requirements.

Timing: Congressional deadlines - January 1, 1993, or January 1, 1996
Behind schedule for first deadline by 2 years, 9 months.

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Developer/operator: US Ecology, Inc.

Public involvement: The League of Women Voters of Nebraska agreed to coordinate and assist in the development of public information materials and involvement strategies for siting the Nebraska LLW disposal facility. A one day conference on LLW was sponsored by the Nebraska League of Women Voters and the University of Nebraska on September 22, 1988. The conference was designed to provide background information to Nebraska citizens on the composition, generation, management and proper disposal of LLW. This conference was on public TV through out the State and questions from the public were solicited.

Funding: Over \$10 million in front-end money was raised from major generators to finance siting activities.

U.S. General Accounting Office (GAO) study: In response to a request made by U.S. Senator J. James Exon, the GAO issued a report, "Nuclear Waste, Extensive Process to Site Low-Level Waste Disposal Facility in Nebraska," July 1991. The GAO observed that it appears that (1) the site-screening and site-selection process was an extensive effort to comply with State law and policy in selecting a site for a LLW facility, (2) the geologic and hydrologic assessments performed at the 3 candidate sites appear to have been conducted in a technically correct manner, and (3) the selection of the Boyd County site, as the preferred site, was supported by the information assembled from existing records and gathered during the on-site characterization of the 3 candidate sites.

Mixed Waste Status: Mixed waste applications for disposal in the host States are on hold pending the outcome of consideration by the U.S. Department of Energy (DOE) accepting commercial mixed waste for treatment and disposal. The resolution of this issue depends upon DOE and the States making arrangements that involve regionalization and equity among the States. The DOE has to work within the framework of the Programmatic Environmental Impact Statement (PEIS) for DOE facilities. The draft PEIS is due 1993 and the final PEIS in 1996.

Concerned Citizens of Nebraska lawsuit: A lawsuit was filed in the U. S. District Court for the District of Nebraska, Lincoln, Nebraska, on February 21, 1990, charging that a proposed LLW disposal facility in Butte, Nebraska, is illegal because it fails to meet disposal standards set by Congress is unconstitutional. The Concerned Citizens of Nebraska argued that NRC and State regulations do not meet the Low-Level Radioactive Waste Policy Amendments Act's test of "permanent isolation" and "final disposal" and challenges other State standards. The Court dismissed the challenge on October 18, 1990, for the defendants US Ecology and the Central Compact Commission. In December, 1990, the Department of Justice filed, on behalf of the NRC, a motion for the Court to dismiss this case. On April 22, 1991, the Court granted the motion to dismiss defendant Dennis Grams, Director, Nebraska Department of Environmental Control. The Court also granted a motion for summary judgment in favor of NRC. On May 3, 1991, the plaintiffs filed a motion asking the Court to amend its judgment. The NRC response to this motion was filed in mid-May. The motion was denied by the Court on May 22, 1991; and on July 19, 1991, the Concerned Citizens of Nebraska appealed the case in the U.S. Court of Appeals for the Eighth Circuit. Note: The Department of Justice and the Nebraska Department of Environmental Control filed their briefs December 18, 1991.

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5.2.3

CENTRAL MIDWEST COMPACT
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

The Central Midwest Compact was granted Congressional consent on January 15, 1986

Timing: Congressional milestone - July 1, 1986
On schedule

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Activity: 2. Select Host State

Illinois designated as host State for 20 years because the Compact excludes any party State as being designated as a host State for a regional facility unless that State produces more than 10% of the total regional waste volume in any year. Kentucky generated 4.5% of the total region's waste in 1990.

The Central Midwest Compact on September 29, 1988 unanimously adopted its regional management plan. The Commission issued its "Statement on Importation of Low-Level Radioactive Waste to Regional Facilities" which clarifies the Compact's policy by requiring local government approval before the Commission considers a request for access to a regional treatment and storage facility from a generator outside the Compact.

On July 19, 1990, the Commission rejected requests from Massachusetts and the District of Columbia to dispose of LLW at the Central Midwest Compact facility.

Timing: DOE target - March 1987
On schedule.

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Activity: 3. Develop Siting Plan

The Illinois State Geological Survey and the Illinois State Water Survey submitted a number of reports required by State law -- mapping suitable geological regions; proposed siting criteria; and the method of characterizing a proposed site.

On May 25, 1987 the Illinois Department of Nuclear Safety (IDNS) announced the selection of Battelle-Columbus and Hanson Engineers

to assist in identifying four alternative sites. The site identification plan was issued in January 1988.

Timing: Congressional Milestone - January 1, 1988
On schedule

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Activity: 4. Select Candidate Sites

Selection of candidate sites occurred in 1988. During 1989, detailed site investigation studies were conducted at two alternative sites, one north of Martinsville in Clark County and the other near Geff in Wayne County. These sites were chosen for characterization from among four alternative sites previously identified by IDNS. Local involvement occurred early in the process, and grants up to \$100,000 per site were given.

Timing: DOE target - June 1988
On schedule

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Activity: 5. Characterize Disposal Sites

By contractor, Battelle and Hanson. In October 1989, IDNS revised the facility siting process to address concerns expressed by the Illinois Geological and Water Surveys and local citizens. As a consequence, full site characterization of both the Martinsville and Geff alternative sites were required prior to final site selection. The studies were completed in March 1990.

Because of the resolution that opposed site development, the Illinois Senate cut funds for additional site study work at the Geff alternative site in Wayne County. Consequently, only the candidate site near Martinsville in Clark County is under consideration. Reports on the data collected were estimated to be completed in July 1990.

The IDNS prepared in late 1990 the last stages of a final report on the Martinsville alternative site investigation studies. The most recent tests indicated a weak and insignificant hydrological connection between the alternate site and the Martinsville municipal water supply. Preliminary results showed that the water underneath the alternative site is on the order of 3,000-10,000 years old and is isolated from the surface.

Timing: DOE target - June 1989
Behind schedule - 1 year, 6 months

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Activity: 6. Select Final Site

On June 28, 1990 a LLW Disposal Facility Siting Commission was established by State law. The Commission will evaluate the safety and suitability of any site proposed by the IDNS Director for the location of a permanent facility, and determine if the proposed site meets State requirements. Formerly, the IDNS Director was to select the final site. According to law, the local community has veto power over the site.

The Siting Commission finalized procedures for hearings on January 8, 1991. On January 9, 1991 the Martinsville City Council requested that the Director, IDNS, propose the site. On January 10, 1991 the Director, IDNS, officially proposed the Martinsville site. The hearings to consider selecting the Martinsville alternative site as the final site began on June 12, 1991 and should be concluded in November-December 1991. The record will be open for 30 days. Afterwards, the Siting Commission will finally select the site. The contentious issues are the extent of the 100-year flood plain, the inter-connectedness of the Vandalia sand layer and local acceptance. A decision may be reached in early 1992.

The Martinsville Town Council passed an unconditional resolution of support for the proposed facility on June 5, 1991 because there were some concerns that the Siting Commission questioned whether the Council's previous resolution met the criteria for local acceptance of the site.

Timing: DOE target - June 1989
Behind schedule - 2 years, 8 months

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Activity: 7. Select Disposal Technology

According to the Compact and Illinois State law, conventional shallow land burial is banned. IDNS signed a \$10 million contract in July 1989 with Chem-Nuclear Systems, Inc., to become facility/operator. The conceptual design is an above-ground vault covered with earth (an earth-mounded concrete bunker) using containers. The design is to accommodate the volume of LLW generated for 50 years. The selection was completed December 1990.

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Timing: DOE target - September 1988
Behind schedule - 2 years, 4 months

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Activity: 8. Design Disposal Facility

By developer/operator, Chem-Nuclear Systems, Inc.
The design was completed in December 1990.

Timing: DOE target - September 1989
Behind schedule - 1 year, 3 months

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Activity: 9. Complete Environmental Assessment

By developer/operator - Alternative site studies were completed in March 1990. However, additional hydrological studies were completed in late 1990. See Activity 5.

Timing: January 1, 1990
Behind schedule - 1 year

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Activity: 10. Submit Licensing Application

The license application to construct, operate and close a LLW disposal facility was submitted to IDNS by the developer/operator, Chem-Nuclear, on May 15, 1991.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind schedule for license application - 1 year, 5 months for first milestone
Congressional milestone met by Governor's Certification

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Activity: 11. License Disposal Facility

By IDNS with oversight by the Illinois LLW Disposal Facility Siting Commission, to insure no conflict of interest, pursuant to legislation signed June 28, 1990. The State became an Agreement State effective June 1, 1987. Final rules for the disposal facility became effective on March 1, 1988 and were later amended on October 31, 1988. The current forecast is to issue the license some time in early 1992 after the hearings of the Siting Commission are completed.

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Timing: DOE targets - January 1, 1992; or March 1993
Behind schedule - several months

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Activity: 12. Construct Disposal Facility

By developer/operator Chem-Nuclear. Construction is estimated to begin during the second quarter of 1992 and be completed by June-August 1993. Facility development and construction cost which were formerly estimated to be \$43 million are now estimated to be substantially more.

Timing: DOE targets - January 1, 1993; or January 1, 1995
Behind schedule - more than 6 months after first target

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Activity: 13. Provide Disposal

The IDNS revised the projected date for opening the disposal facility from January 1993 to late 1993.

Timing: Congressional deadlines - January 1, 1993, or January 1, 1996
Behind schedule - About 1 year after first deadline of January 1, 1993

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Developer/operator: Chem-Nuclear Systems, Inc.

Public involvement: The Siting Commission continues to hold public hearings at the Martinsville site. There was a referendum in the fall of 1990 in Clark County and Martinsville on whether or not the citizens want a LLW disposal facility. IDNS has held seven annual conferences for generators of LLW in Illinois. These are open to the public. On April 4, 1991, the Central Midwest Commission voted to provide an additional \$100,000, to the \$50,000 already voted, to the Illinois Siting Commission to expedite the hearings before the Siting Commission and to ensure the fairness of the outcome. The funds are administered by the League of Women Voters. To date, the Concerned Citizens of Clark County (CCCC) have qualified for \$150,000, which opposes the facility. The People for Responsible Opportunities (PRO), which favors the facility, does not qualify at this time.

On September 17, 1991 the Compact Commission allocated an additional \$261,500 to support citizen opponents and proponents' continued participation in the hearings. CCCC received \$170,000 in

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addition to the \$150,000 already received. PRO received \$91,500 in addition to the \$30,000 already received. Previously, PRO was ineligible.

The Wayne County Board on April 10, 1990 adopted a resolution by a 12-1 vote which informed the State that it opposed the development of a LLW disposal facility. The Board vote followed a non-binding referendum held on March 20, 1990, in which 69.8% of the Wayne County residents voted against a disposal facility. Referenda were considered in November 1990, in Martinsville and Clark County. For Martinsville, the vote was 430 (56%) yes and 335 (44%) no. On the other hand, in Clark County, the vote was 4,844 (73.5%) no and 1,743 (26.5%) yes. Under State law, local government must approve the facility in order for it to be sited. Martinsville City Council is the governing body with jurisdiction for these purposes because the site is within 1.5 miles of the city limits.

Funding: The fees that utilities pay have increased from \$498,000 per reactor for FY 1988 to \$1.15 million per reactor for FY 1989 and FY 1990. A total of \$25 million were collected from generators in 1990 to fund siting activities. \$1.23 million will fund the Siting Commission and about \$5 million was budgeted for the acquisition of land. The annual budget for IDNS is \$44 million.

Below Regulatory Concern: Illinois enacted on September 6, 1991 legislation that prohibited the disposal of BRC LLW except at regionally designated facilities.

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5.2.4

MIDWEST COMPACT
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

The Midwest Compact was granted Congressional consent on January 15, 1986.

The member States of the Midwest Compact reached an agreement on amendments to the Compact. The major issues of the revision include shared cost, shared liability, common application of sovereign immunity, penalties for either party State or member State withdrawing from the compact, and dispute resolution. The actual language of the amendments is not drafted at this time.

These amendments are based in part on an earlier letter to Michigan's Governor Blanchard, dated February 26, 1989, in which the governors of the other party States supported the concept of sharing responsibility and liability for those expenses not paid for by insurance or the funds established by Michigan statute.

Similar amendments are now being sought by Ohio, the newly designated host State that succeeds Michigan. See Activity 2.

Timing: Congressional milestone - July 1, 1986
On schedule

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Activity: 2. Select Host State

Michigan was selected as host State by the Compact Commission on June 30, 1987. In December 1987, Michigan enacted the required host State legislation.

On July 24, 1991, the Midwest Compact Commission revoked Michigan's membership effective immediately, by a vote of 5-2, with Michigan and Ohio voting against the motion. The Commission determined that the State of Michigan "...has not and, it is reasonable to believe, does not intend to fulfill its obligations under the Midwest Compact as host state for the Region's first disposal facility." At the same time, Ohio was selected by a 5-1 vote as the new host State with Minnesota as a first alternate. Ohio voted against the resolution.

Timing: DOE target - March 1987
Behind schedule - 4 years, 4 months

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Activity: 3. Develop Siting Plan

A siting plan was developed by the Michigan Low-Level Radioactive Waste Authority with the help of the Siting Criteria Advisory Committee which developed the final criteria. Battelle Memorial Institute was selected as technical assistance contractor. Legislative authority was enacted to implement the plan, in December 1987. This effort was relevant for satisfying the January 1, 1988 Congressional milestone.

There is no schedule for the development of a facility in Ohio because many fundamental issues must be decided, such as enabling legislation, funding, and what kind of developmental authority Ohio will pursue. Consequently, the milestones of 1992, 1993 and possibly 1996 will be missed. Draft enabling legislation is being circulated for comment.

Timing: Congressional milestone - January 1, 1988
On schedule at the time when Michigan was believed to be the host State.

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Activity: 4. Select Candidate Sites

Nothing available at this time from Ohio. See previous status report for history of Michigan's effort.

Timing: DOE target - June 1988
Behind schedule - schedule unknown, more than 3 years,
4 months

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Activity: 5. Characterize Disposal Sites

Nothing available at this time from Ohio. See previous status report for history of Michigan's effort.

Timing: DOE target - June 1989
Behind schedule - schedule unknown, more than 2 years, 4
months

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Activity: 6. Select Final Site

Nothing available at this time from Ohio. See previous status report for history of Michigan's effort.

Timing: DOE target - June 1989
Behind schedule - schedule unknown, more than 2 years, 4 months

Activity: 7. Select Disposal Technology

The Compact Commission resolved that shallow land burial as currently practiced is unacceptable but should be retained only as a base comparison technology. The Regional Management Plan recommends that disposal alternatives be the prerogative of the host State.

Nothing is available from Ohio at this time. See previous status report for Michigan's effort.

Timing: DOE target - September 1988
Behind schedule - schedule unknown, more than 3 years, 1 month

Activity: 8. Design Disposal Facility

Nothing is available from Ohio at this time. See previous status report for Michigan's effort.

Timing: DOE target - September 1989
Behind schedule - schedule unknown, more than 2 years, 1 month

Activity: 9. Complete Environmental Assessment

Nothing is available from Ohio at this time. See previous status report for Michigan's effort.

Timing: DOE target - January 1, 1990
Behind schedule - schedule unknown, more than 1 year, 10 months

Activity: 10. Submit License Application

Nothing is available from Ohio at this time. See previous status report for Michigan's effort.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind for license application - 1 year, 10 months after first milestone
Congressional milestone met by Michigan Governor's certification.
The certification was denied on November 10, 1990, after review by the sited States; and Michigan generators were denied access to the 3 operating sites. All the waste is being stored temporarily. See MICHRAD lawsuit under Michigan.

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Activity: 11. License Disposal Facility

Ohio has expressed interest in becoming an Agreement State and therefore would be licensing the LLW disposal facility. Nothing more is available at this time. See previous status report for Michigan's effort.

Timing: DOE targets - January 1, 1992, or March 1993
Behind schedule - schedule unknown

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Activity: 12. Construct Disposal Facility

Nothing is available at this time from Ohio. See previous status report for Michigan's effort.

Timing: DOE targets - January 1, 1993, or January 1, 1995
Behind schedule - schedule unknown

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Activity: 13. Provide Disposal

Nothing is available at this time from Ohio. See previous status report for Michigan's effort.

Timing: Congressional milestones - January 1, 1993, or January 1, 1996
Behind schedule - schedule unknown

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Developer/operator: Undetermined

Public involvement: On August 8, 1991, the Ohio Governor's Advisory Board on Low-Level Radioactive Waste held its first meeting since Ohio became host State. The Board consists of 10 members and is chaired by Ohio's Compact Commissioner. In addition to government representatives there are representatives of the material users and environmental organizations. The Board was created by statute in 1984 when Ohio ratified the Midwest Compact.

For Michigan's history, consult the previous status report.

Funding: Nothing is available from Ohio at this time. For Michigan's history, consult the previous status report.

Below Regulatory Concern: Minnesota enacted legislation on May 8, 1990 which prohibits treatment, recycling, storage or disposal of BRC except at a facility that is specifically licensed for such activities.

Iowa's BRC legislation, signed on April 24, 1990 says that "a person shall not dispose of, and a sanitary landfill shall not accept for final disposal, radioactive materials, as defined pursuant to section 136c.1, on January 1, 1990."

Wisconsin enacted a ban on BRC disposal in other than a licensed facility on August 27, 1991.

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5.2.5

NORTHEAST COMPACT
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

The Northeast Compact was granted Congressional consent on January 15, 1986.

Timing: Congressional milestone - July 1, 1986
On schedule

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Activity: 2. Select Host State

The Compact Commission selected in December 1987 the dual designation option of designating both Connecticut and New Jersey due to the lack of clear technical differences between the two States and equity considerations.

Timing: DOE target - March 1987
Behind schedule - 6 months

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Activity: 3. Develop Siting Plan

The Compact's Regional Siting Plan consists of both Connecticut's and New Jersey's siting plans. Both States have enacted siting legislation (CT-July 1987; and NJ - December 1987).

Connecticut - The Hazardous Waste Management Service has key siting responsibility according to legislation. Also, an LLW Advisory Committee will develop siting criteria. The Siting Council will develop regulations. Four candidate sites were scheduled to be selected by the Service by March 1989.

In January, 1990, the Service conducted a public hearing to receive public comments on the 1989 update of the Connecticut LLW Management Plan. The Board of the Service announced that the earliest a preferred site, site designer and site technology could be selected would be June 7, 1991.

The site selection plan was adopted by the Service November 14, 1990, after being issued in draft form May, 1989 and undergoing an extensive period of review and comment by the general public.

New Jersey - According to legislation, the New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board has primary responsibility for site selection assisted by a Radioactive Waste Advisory Committee. Three or four candidate sites are to be identified. The Siting Board held a series of public hearing on its proposed Waste Disposal Plan and formally adopted it on May 3, 1990. The final Waste Disposal Plan that covers a 50-year time period includes provisions for decommissioning all of the nuclear power plants currently operating in the State.

Timing: Congressional milestone - January 1, 1988
On schedule

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Activity: 4. Select Candidate Sites

Connecticut - In early November 1990, the Board of the Service adopted siting criteria. The Service will be evaluating three candidate sites. Battelle Memorial Institute was chosen in September 1990 as contractor to assist the Service in site selection, characterization, and preparation of the final report.

According to the Governor's November 28, 1990 letter to the sited States, the current schedule was to identify 3 candidate sites in March 1991. Site screening began in September 1990. However, it was not until June 10, 1991 that 3 candidate sites were identified using a geographical neutral approach, which means that the members of the Board of the Hazardous Waste Management Services did not know the location of the 9 potential candidate sites. The identified sites are within 2 miles of each other, 10 miles north of Hartford, in prime agricultural land, with nearby residential areas. Two of the sites are in the town of Ellington and one site straddles the border of the towns of South Windsor and East Windsor. The proximity of schools has become a major issue. The sites are 238, 242 and 470 acres with 170 acres needed for 50-years of disposal. In sum, demographic considerations and seasonal high groundwater appear to be the major siting issues.

Because of some problems in the site screening process procedure, the Services suspended site specific activities pending review of the screening procedure. A draft report has been prepared that reviews the process. After the review is completed, site specific activities will start in May 1992.

The Connecticut Congressional delegation became interested in the population/school issue especially with regard to NRC's guidance and introduced a bill (H.R. 3491) on October 3, 1991 by Representative Gejdenson that requires NRC to promulgate rules on this issue.

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The Attorney General in a letter to NRC's Chairman dated August 13, 1991 asked a number of specific questions on population and land use. These were answered in a letter from NRC dated October 16, 1991.

The State legislature is considering bills that would include potential siting nearby the Millstone Nuclear Power Station and State forests which were previously excluded from consideration.

New Jersey - On September 6, 1990, the Siting Board adopted its Siting Methodology for the application of the siting criteria to identify a suite of candidate sites. Using this methodology, the siting contractor, Ebasco, will ultimately identify at least two candidate sites for characterization. The Board began developing the municipal interaction program to accompany the completion of statewide screening and the identification of the candidate sites for pre-characterization. According to the Department of Environmental Protection letter of December 3, 1990, submitted to the sited States, the Board would be able to complete the identification by mid-1991. (This date is a 10 month slip compared to the previous estimate of August 1990 made at that time.) However, this estimate was based on getting the appropriate funding from the State.

Finally, in July 1991, Governor Florio signed funding legislation which is necessary for the siting process to go forward. In the meantime, there was a trial run of the decisionmaking process to select candidate sites. The municipal interaction program is now completed.

Following a public information campaign in the fall of 1991, the Board will announce 3 or more candidate sites and acceptance of volunteer sites in March 1992. A siting schedule is being prepared by a consultant.

Timing: DOE target - June 1988
Behind schedule - CT - more than 4 years
 - NJ - 3 years, 9 months

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Activity: 5. Characterize Disposal Sites

Connecticut -

On November 6, 1990, a draft Quality Assurance Plan and Generic Site Characterization Plan were submitted to NRC and the Connecticut Department of Environmental Protection.

According to the Governor's November 28, 1990 letter to the sited States, site characterization was to be initiated March 1991 with complete site characterization in March 1992. However, the Service will not gain access to the property for walkovers until January-February 1992 when the quality review of the 3 candidate sites is completed. At that time site specific activities may commence. Site characterization will continue at the preferred site for 16-18 months after it is selected in September-October 1992, namely, before June 1994.

New Jersey - The Board is to characterize three or four sites by October 1991 according to legislation. However, because the candidate sites will not be chosen until late-1991, the schedule for site characterization is under revision.

A request for proposals was approved by the Board for precharacterization, characterization and preparations of site related information for the license application. Based on the slip in Activity 4, a new date of the June 1993 is forecast.

Timing: DOE target - June 1989
Behind schedule - CT - 5 years
- NJ - about 4 years

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Activity: 6. Select Final Site

Connecticut - The Service is to select the final site in November 1991, according to the November 28, 1990 letter submitted to the sited States. Although the most recent revision was September-October 1992, the schedule is being revised.

New Jersey - The Board is to select the final site by October 1991 according to legislation. However, because candidate sites will not be chosen until mid-1992, the selection of the final site is forecast to occur in early 1993.

Timing: DOE target - June 1989
Behind schedule - CT - more than 3 years, 4 months
- NJ - 3 years, 9 months

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Activity: 7. Select Disposal Technology

Under the Compact, no specific disposal technology is either identified as preferable or prohibited.

Connecticut - The Service selects the technology. Currently, the

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developer/operator, Chem-Nuclear Systems, Inc., has suggested a system of an above ground vault with canisters that will be covered with earthen material; and will be similar in design to the ones proposed for Pennsylvania and North Carolina. No decision has been made as of this time by the Service.

New Jersey - Shallow land burial is prohibited by legislation. The Board will select the technology. The schedule is under revision for technology selection.

In March 1990, the Board completed development of its "Disposal Technology Selection Criteria," establishing criteria to select the disposal method most appropriate for LLW disposal in New Jersey. One month later, the Board completed the disposal method selection procedures and the initial generic matching of selection criteria to disposal method.

The National Low-Level Waste Management Program completed development of a facility layout model and an artist's rendering of an earth-mounded concrete bunker disposal facility in response to a request from the Board.

Timing: DOE target - September 1988
Behind schedule - CT - more than 3 years
- NJ - more than 3 years

=====
Activity: 8. Design Disposal Facility

Connecticut - The Service selects the operator who submits application to the Siting Council. According to the November 28, 1990 letter to the sited States, the facility developer was to be selected in March 1991. On February 19, 1991 the Board selected Chem-Nuclear to develop and operate the LLW disposal facility. Contract negotiations are scheduled to be complete soon.

The Siting Council and Department of Environmental Protection adopted regulations.

New Jersey - The Board selects an operator who designs the facility. According to legislation, the process is to be completed by December 1991. However, because the candidate sites will not be chosen until 1992, the schedule is under revision.

The facility site will be about 250 acres with 50 acres devoted to disposal and the balance serving as a buffer. The lifetime will be 50-years with a capacity of about 4 million cubic feet.

Timing: DOE target - September 1989
Behind schedule - CT - more than 2 years
NJ - more than 2 years

=====
Activity: 9. Complete Environmental Assessment

An environmental report has to be prepared for each site in both States for NRC since neither State is an Agreement State.

Connecticut - An environmental report will be prepared by Battelle Memorial Institute for the Service in April 1992, according to the Governor's November 28, 1990 letter to the sited States. However, early 1993 seems more likely

New Jersey - The operator is scheduled, by legislation, to complete this activity by December 1991. However, because candidate sites will not be chosen until 1992, a new forecast date of late 1993 is likely.

Timing: DOE target - January 1, 1990
Behind schedule - CT - about 3 years
NJ - about 3 years

=====
Activity: 10. Submit License Application

Connecticut - The Service and operator submit the application for a license by November 1991, according to legislation. According to the Governor's November 28, 1990 letter submitted to the sited States, the submittal to Federal and State authorities will take place in October 1992. Note: The most recent estimate is to submit the license application to NRC in May/June 1994.

New Jersey - The operator is to submit the application by December 31, 1991, according to legislation. Note: The most recent estimate is January 1995.

Timing: Congressional Milestones - January 1, 1990, or January 1, 1992
Behind schedule - CT - 2 years, 5/6 months after second milestone
- NJ - about 3 years after second milestone

=====
Activity: 11. License Disposal Facility

By NRC since both States are non-Agreement States.

Connecticut - According to the November 28, 1990, letter submitted to the sited States, licensing is forecast for April 1994. The date will need revision in view of the revised date for license application; but would be expected in November 1995 at the earliest.

New Jersey - An estimate for licensing the disposal facility in July 1993 was published in August 1990. Note: A more recent estimate for licensing the disposal facility is April 1996.

Timing: DOE targets - January 1992, or March 1993
Behind schedule - CT - about 2 years, 8 months after the
second target
- NJ - 3 years after the second target

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Activity: 12. Construct Disposal Facility

Connecticut - According to the November 28, 1990, letter submitted to the sited States, construction should be completed and the facility go into operation in January 1995. Note: A more recent estimate is after late 1996. An estimate of the cost of disposal is \$300-800 per cubic foot, depending upon the technology to be selected, according to a July 1991 estimate.

New Jersey - An August 1990 estimate was July 1995. Note: A more recent estimate is early 1997. Construction will take about 6-9 months assuming a modular design.

Timing: DOE targets - January 1, 1993, or January 1, 1994
Behind schedule - CT - More than 2 years, 10 months after
second target
- NJ - about 3 years after second target

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Activity: 13. Provide Disposal

Schedules for both Connecticut and New Jersey are very uncertain. For Connecticut, January 1995 per Governor's November 28, 1990, letter to sited States. This date was revised to July 1995 in the 1990 DOE report to Congress. Because of slippage, late 1996 seems more likely. For New Jersey, no estimate is given according to the

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December 3, 1990, letter. An estimate of mid-1996 was given in the 1990 DOE report to Congress. Note: a more current estimate is early 1997.

Timing: Congressional deadlines - January 1, 1993 and
January 1, 1996
Behind schedule - CT - About 1 year after second deadline
- NJ - more than 1 year after second
deadline

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Developer/operator: CT - Chem-Nuclear Systems, Inc.
NJ - Undetermined.

Public involvement: The Compact Commission is working on public information programs. Since its June 20, 1991, announcement of 3 candidate sites, the Service has held public meetings in each of the 3 towns containing a potential site, as well as in 2 of the 4 towns on the backup list. The Connecticut announcement has generated a surge of public interest in both the compact and its efforts to arrange for out-of-regional disposal. Connecticut appropriated \$400,000 on June 28, 1991, to the 3 towns trying to oppose the siting of a LLW disposal facility - \$200,000 to Ellington and \$100,000 each to East Windsor and South Windsor.

The New Jersey Siting Board completed a series of 9 public meetings/hearings throughout New Jersey on preliminary and revised siting criteria and a Waste Disposal Plan.

Funding: Connecticut Department of Environmental Protection (DEP) assessed generators \$8.25 million for siting activities in FY 1990-91. The total budget of the DEP for FY 1990-91 was \$11 million. The Connecticut Office of Policy and Management's budget assessment for the State's LLW programs was accepted in March 1991 for FY 1991-92 at \$9.6 million.

The Low-Level Radioactive Waste Management Fund along with generator rebate dollars support Connecticut's program efforts. The Fund is financed through annual assessments of generators based on their share of the total volume of waste received for burial in the previous calendar year. Connecticut has collected over \$12 million over the past three years. The FY 1991/92 assessment is anticipated to be an additional \$6-7 million.

New Jersey's Governor Florio enacted legislation in July 1991 authorizing the Board to assess New Jersey's generators for the costs associated with the development of the disposal facility. Draft regulations are now being finalized. In the meantime, funding is limited to \$100 per year per generator.

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The New Jersey Siting Board approved a budget request for about \$13 million for the next fiscal year (July 1, 1991-June 30, 1992.)

Letters from sited States: Both Connecticut and New Jersey received letters from the sited States dated October 1, 1990, regarding "persuasive evidence" of progress in siting a LLW disposal facility. The two States responded on November 28, 1990, and December 3, 1990, respectively. The schedules above reflect the information contained in these letters.

In a letter dated January 28, 1991, Nevada, South Carolina and Washington determined that Connecticut is currently in compliance with the Act.

In a letter dated January 28, 1991, Nevada and Washington requested additional information from New Jersey with regard to the uncertainty of funding. They stated that failure to make significant progress in the immediate future may jeopardize New Jersey's generator access to their disposal facilities.

Government Accounting Office study: U.S. Senator Dodd initiated a U.S. Government Accounting Office (GAO) study, on October 3, 1991, of the Connecticut siting process similar to the GAO study underway in New York State. In addition, the issue of the number of sites being will be addressed.

Below Regulatory Concern: Connecticut enacted a ban on disposal of BRC except in licensed facilities on July 2, 1991.

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5.2.6

SOUTHWESTERN COMPACT
October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

The Southwestern Compact was granted Congressional consent on November 23, 1988, with California and Arizona as initial party States. South Dakota became a party State on February 17, 1989; and North Dakota became a party State on March 14, 1989.

The Southwestern Compact Commissioners were appointed in 1990. At its second meeting on August 27, 1991, the Southwestern Compact Commission voted to reject all current requests from nonmember States to dispose of LLW at the proposed Ward Valley site. At that time, 14 States and the District of Columbia had requests pending.

Timing: Congressional milestone - July 1, 1986
On schedule - by party States

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Activity: 2. Select Host State

California is host State according to the Compact because it generates the most waste. California enacted enabling legislation in 1983.

Timing: DOE target - March 1987
On schedule - by Compact

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Activity: 3. Develop Siting Plan

Legislation enacted in 1982 established a State advisory committee, required areas screening by late 1984, and required the State to establish siting criteria. California's approach to site development is to designate a contractor to select a site and to design, apply for a license, construct, and operate the disposal facility. US Ecology, Inc., was selected in 1985 to develop a facility. Regional screening was carried out by Harding Lawson Associates under contract to US Ecology.

Timing: Congressional milestone - January 1, 1988
On schedule

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Activity: 4. Select Candidate Sites

On February 18, 1987, US Ecology announced 3 potential sites; 2 are in San Bernardino County (both in Ward Valley 25 miles west of Needles, and Silurian, 15 miles north of Baker), and one in Inyo, County (Panamint Valley, 30 miles north of Trona). Site selection was narrowed to the 2 sites in San Bernardino County. The Ward Valley site is preferred because saline groundwater is found at 700 feet, is 10-15,00 years old, with a flow of 10 gallons per minute. However, the site is inhabited by the desert tortoise, which is a candidate threatened species under California law and is subject to Federal law. A multi-agency task force studied various mitigation plans to protect the desert tortoise and a number of features have been incorporated into the facility design and operation.

Timing: DOE target - June 1988
On schedule

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Activity: 5. Characterize Disposal Sites

By US Ecology. California contracted with Roy F. Weston and Bechtel Corporation to verify US Ecology data. Both Needles and Baker wanted the site because of economics and the compensation package. Site characterization was completed late in 1989.

Timing: DOE target - June 1989
Behind schedule - 6 months

=====
Activity: 6. Select Final Site

By US Ecology. Ward Valley was selected on March 11, 1988, as the proposed location. The Silurian Valley site will be the backup. The Panamint Valley site was dropped from further consideration.

Timing: DOE target - June 1989
On schedule

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Activity: 7. Select Disposal Technology

The technology proposed by US Ecology is shallow land burial. After reviewing enhanced technologies, as directed by the Department of Health Services, the final design proposed will be enhanced by providing a minimum of 5 meters of cover, separating Class A from Classes B and C and high-surface-activity packages,

and placing extra earth cover over filled trenches to hasten consolidation.

Timing: DOE target - September 1988
On schedule

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Activity: 8. Design Disposal Facility

Bechtel National, Inc., under contract to US Ecology. The facility is to operate for 30 years.

Timing: DOE target - September 1989
On schedule

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Activity: 9. Complete Environmental Assessment

In parallel with review of the license application, the Department of Health Services prepared an environmental impact report under California Environmental Quality Act. The property proposed for the facility is currently owned by the Bureau of Land Management. Its transfer will be in accord with an environmental impact statement under the National Environmental Policy Act. A single document was jointly written by Dames and Moore, Inc., under contract.

The major environmental issue results from the fact that Ward Valley is in desert tortoise habitat. Public comments on the draft report are similar to issues that were brought up in public hearings 2-3 years ago. They are potential ground water contamination, potential transportation accidents, the US Ecology track record with regard to failed sites, and the desert tortoise. The reptile is protected under both State and federal law. The impact of the project upon the tortoise, and proposed mitigation, are addressed in the environmental document. The opinion of the U.S. Fish and Wildlife Service is that reasonable and prudent measures can be taken to limit the impact on the tortoise population. The primary measures include raven control and construction of fences alongside the 6.5 miles of highway leading to the proposed facility.

The Final Environmental Impact State and Report was announced in the Federal Register on May 8, 1991. Before publication occurred, concerns raised by the Environmental Protection Agency regarding the necessity of using a liner and leachate collection system were addressed. California established a panel of national experts to review this issue. Members included the NRC, U.S. Geological

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Survey, U.S. Environmental Protection Agency, Region IX, the State of California, EG&G Idaho, Inc., and the Sierra Club. After review by the panel in February 1991, the only change was for an enhanced vadose zone monitoring system. Installation of liners and a leachate collection system were considered unnecessary and might detract from the ability of the site to meet the performance objectives.

Timing: DOE target - January 1, 1990
Behind schedule - 1 year, 5 months

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Activity: 10. Submit Licensing Application

US Ecology submitted a complete license application for disposal of all LLW except for mixed waste in late 1989. The Department of Health Services found the license application to be complete on December 8, 1989.

The party States of the Southwestern Compact submitted separate Governors' certifications documents on how they plan to manage mixed waste to meet the requirements of the 1990 Congressional milestone.

California evaluated the volumes and types of mixed waste and who will generate them after December 31, 1992. After evaluating a number of options, it has chosen to pursue a series of actions that will provide for interim storage and ultimate disposal of mixed waste which is generated after December 1992. The final mixed waste management plan has been postponed pending the potential acceptance of commercial mixed waste for disposal by the U.S. Department of Energy.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
On schedule for application except for mixed waste.
On schedule for Governors' certifications for mixed waste.

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Activity: 11. License Disposal Facility

The Department of Health Services and its contractor, Roy F. Weston, Inc., began intensive review in early December 1989. In addition, the Department of Health Services is being assisted by an ad hoc license review team made up of representatives from regulatory and other governmental agencies. License review is under quality assurance/quality control auditing by the

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Department's contractor, Ebasco Environmental. A licensing decision was scheduled for December 1990 with issuance in February 1991. However, because of questions raised by the Environmental Protection Agency regarding the necessity of having a liner and monitoring system, there was a delay in the schedule. After review by a panel, the only change was in the monitoring system.

Public hearings were held July 22, 1991, in Los Angeles, Sacramento, and Needles. About 1000 people participated including State and local politicians, a Hollywood Women's Group, Greenpeace, and demonstrators. Media coverage included both CBS and the MacNeil Lehrer news programs. The main issue is taxpayer liability where it is alleged that the taxpayers will eventually have to remediate the site due to leakage because the facility is not lined, near the surface, and US Ecology has a 50 percent failure rate.

The two other main issues are emergency access and the procedural process used during licensing. In emergency access, it is alleged that out-of-compact LLW will be allowed entry by either NRC or Congress because California will be offering the first new facility since 1980 when the Low-Level Radioactive Waste Policy Act was enacted. In procedures, an adjudicatory process which will allow cross examination is proposed to replace the quasi-legislative process that is now scheduled by the Department of Health which has great latitude. It will take about 6 weeks for California staff to prepare answers to comments. Both U.S. Representatives Barbara Boxer and George Miller are reported to be considering Congressional hearings.

Representative Miller sent a letter dated August 2, 1991 to the California Secretary of Health and Welfare in which he identifies the issues, so far, as the selection of US Ecology as license-designee; the past record and financial status of US Ecology; liability and insurance; reserve funds; and the potential for the importation of waste from outside the Southwestern Compact party States.

In response to a letter from the Director of the California Department of Health Services, the NRC Chairman emphasized that the Commission remains strongly opposed to implementation of the emergency access provisions as an alternative for those States not meeting the milestones in the Act. (Letter dated August 2, 1991.)

Public comments closed October 5, 1991, with about 4000 comments. A summary is being prepared by the contractor. The license is scheduled to be issued in early 1992. Lawsuits are expected on two issues -- the adequacy of the Environmental Impact Statement and that the licensing hearings should have been adjudicatory, rather than legislative.

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The California Assembly's Committee on Natural Resources conducted hearings On October 8, 1991 on the issues of liability, the import of out-of-compact LLW, and ground water protection. The issue of land transfer from the Bureau of Land Management to the State of California could be handled by other options, such as direct purchase, if the State Lands Commission fails to vote favorably because of its concern with the State assuming any liability.

Timing: DOE targets - January 1, 1992; and March 1993
Behind DOE first target - 3 months

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Activity: 12. Construct Disposal Facility

US Ecology has Bechtel National, Inc., as designer constructor. Construction is to begin in the spring of 1992 with operations to begin in January - March 1993. The total cost is estimated at \$40 million. The cost for the license application to date is about \$28 million. The estimated cost for disposal is \$320 per cubic foot.

Timing: DOE targets - January 1, 1993; January 1, 1995
Behind schedule - 1 - 3 months

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Activity: 13. Provide Disposal

Disposal operations are scheduled to begin in January - March 1993.

Timing: Congressional deadlines - January 1, 1993,
or January 1, 1996
Behind schedule - 1 - 3 months after first deadline

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Developer/operator: US Ecology, Inc.

Public Involvement: The State and contractor held a number of public meetings. In addition, the contractor mounted a multi-medias educational program for the public, established a citizens advisory committee, and sponsored tours of the Beatty site. the California Radioactive Materials Management Forum has been active since 1983 in organizing meetings as a technical support group composed of education, research, medical and industrial interests that are concerned with the safe management of radioactive materials. The League of Women Voters has been helpful in involving the public.

Funding: All upfront costs of the project are borne by the

STATUS OF STATES PROVIDING DISPOSAL CAPACITY FOR LLW - 10/11/91

applicant; in return, the company is guaranteed to recover all costs and to realize a profit. The Department of Health Services is supported by an annual license fee of \$250,000 paid by US Ecology, plus surcharge rebates, which total about \$1.5 million as of June 1990.

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5.3 PROGRESS IN UNAFFILIATED STATES WITH PLANS TO DEVELOP A FACILITY

5.3.1

MAINE

As of October 11, 1991

Activity: 1. Ratify Compact or Certify Independent

Maine is not in a compact. Maine enacted legislation in 1986 indicating its intent to develop a disposal facility if other means are unable to satisfactorily manage the State's LLW. Therefore, the Department of Energy and the sited States determined Maine to be in compliance with the Congressional milestone.

A referendum passed in 1985 requires Statewide approval for any plan for the storage or disposal of LLW in Maine. An act creating the Maine Low-Level Waste Disposal Authority was signed on June 30, 1987. Three voter approvals are required before a LLW disposal facility can be constructed, i. e., approval by 60 percent of those voting in the local community where the facility is proposed to be located; approval by the State Legislature; and approval by State referendum.

Maine has been pursuing prospects for access to a LLW disposal facility elsewhere in the country by means of a long-term, non-reciprocal contract or compact agreement. For example, a compact proposal to the State of Texas was submitted in January, 1989. To date, initiatives with other States, such as compacting, have failed.

Timing: Congressional milestone - July 1, 1986
On schedule - Governor's certification

Activity: 2. Select Host State

Maine is host State unless access can be found outside the State.

Timing: DOE target - March 1987
On schedule

Activity: 3. Develop Siting Plan

A siting plan was completed December 24, 1987. Unique features include local voter approval and a Statewide referendum following legislative approval all before site acquisition but after licensing by NRC. Also, because the Authority has no power of eminent domain, it must purchase a site on the free market. Annual revisions to the siting plan have been conducted.

The Department of Energy determined Maine to be in compliance with the Congressional milestone in January 1988 whereas the sited States determined Maine to be in compliance in early 1988 after Maine was requested to submit additional information.

Timing: Congressional milestone - January 1, 1988
On schedule

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Activity: 4. Select Candidate Sites

Site selection began in February 1989, when a consulting team headed by the E. C. Jordan Company of Portland, Maine, was picked to conduct the Authority's technical siting activities. The principal subcontractors are Stone and Webster Engineering Corporation, Boston, Massachusetts, and J. W. Sewall Company, Old Town, Maine.

The Department of Environmental Protection established by rule the technical and siting criteria in September 1988. Exclusionary criteria, avoidance factors, and technical performance factors were developed by the technical consulting team and discussed at length by the Citizens Advisory Group. The revised siting methodology was adopted by the Authority on July 17, 1990.

The Authority announced on November 15, 1990, 12 candidate regions for a LLW disposal facility. The candidate regions comprise of 140 towns and townships. Local government approval by 60 percent is required before any characterization can take place. Previously, the Authority voted not to authorize any further technical studies of a site volunteered by the Maple Mountain Manganese Company, which is 500 acres, located in an unorganized township west of Bridgewest in Aroostook County, which is in northern Maine. Preliminary studies showed the site to be technically unsuitable because of thin soil and location in a watershed of a lake. Also, the 4 residents where the site is located voiced their opposition.

On August 24, 1990, Maine Yankee volunteered. The Maine Yankee site, which is located in Wiscasset, is 740 acres. The site

includes a containment building. Of the 740 acres, 430 acres remain outside the State's exclusionary factors and 200 acres fall outside the State's avoidance factors for locating a facility.

By July 25, 1991, 8 additional sites were volunteered to the Authority. The Authority began testing on all 9 volunteered sites.

Municipalities in which sites have been volunteered have been offered \$10,000 educational grants to obtain outside opinion on the benefits and risks of hosting a facility. Only one municipality (Auburn) has accepted a grant. Pre-characterization and environmental assessment has begun on some sites. Two towns, New Vineyard and Industry, took legal action to restrain the Authority from proceeding but the Authority has prevailed.

On September 3, 1991, 4 sites that were volunteered as potential disposal facility sites were dropped from consideration, due to perennial streams and for other reasons. Three additional volunteered sites are being precharacterized.

The Authority is no longer planning a November announcement of 12 candidate sites, approximately 200 acres in size, but will instead send letters to about 60 towns asking for information that would disqualify sites in or near those towns before making announcements. Sites will then be identified through technical screening in January or February 1992. This schedule will allow time to work with landowners whose permission is needed to work on specific sites.

In May 1992, the Authority will choose one preferred site and two alternate sites.

Timing: DOE target - June 1988
Behind schedule - 3 years, 11 months

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Activity: 5. Characterize Disposal Sites

Maine LLW Authority. Detailed site characterization work will take place from May 1992 until May 1994. All sites which have been pre-characterized, and have not been eliminated from further considerations will be evaluated relative to each other using the Authority's established preference factors. One preferred candidate site and two back-up sites will be selected. Site characterization will begin on all three sites, but will be focused on the primary site.

**Timing: DOE target - June 1989
Behinds schedule - about 5 years**

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Activity: 6. Select Final Site

Maine LLW Authority followed by local voter approval, Board of Environmental Protection, State Legislature, and Statewide referendum all in 1994. Site acquisition by the Authority is without eminent domain.

**Timing: DOE target - June 1989
Behind schedule - more than 5 years**

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Activity: 7. Select Disposal Technology

By law, disposal by shallow land burial is prohibited. The Authority has scheduled completion of technology selection and final design by summer 1993.

**Timing: DOE target - September 1988
Behind schedule - 3 years, 9 months**

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Activity: 8. Design Disposal Facility

By the Authority by summer 1993. The Board of Environmental Protection must sign the development contract.

**Timing: DOE target - September 1989
Behind schedule - 3 years, 9 months**

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Activity: 9. Complete Environmental Assessment

By Authority scheduled for 1995.

**Timing: DOE target - January 1, 1990
Behind schedule - about 6 years**

=====

Activity: 10. Submit License Application

By Authority scheduled for late 1995 to early 1996.

Maine submitted Governor's certification in 1994.

Timing: Congressional milestones - January 1, 1990; January 1, 1992
Behind schedule for license application - about 4 years after second milestone
On schedule for Governor's certification

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Activity: 11. License Disposal Facility

By NRC. Scheduled for completion by early 1997 to mid 1997. Although the NRC is the regulatory authority, a license to operate and close the facility must be obtained also from the Maine Board of Environmental Protection.

The Board of Environmental Protection adopted rules for disposal of LLW.

Timing: DOE targets - January 1992; March 1993
Behind schedule - about 4 years after second target

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Activity: 12. Construct Disposal Facility

By Authority. Scheduled for completion by late 1997 to early 1998.

Timing: DOE targets - January 1, 1993; January 1, 1996
Behind schedule - about 2 years after second target

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Activity: 13. Provide Disposal

By Authority. Scheduled for operation by late 1997 to early 1998.

Timing: Congressional milestones - January 1, 1993, or January 1, 1996
Behind schedule - about 2 years after second deadline.

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Developer/operator: Maine Low-Level Radioactive Waste Authority

Public involvement: The public is mainly involved through a requirement for approval by 60 percent of the voters at the local level of the selected site, public hearings by the Board of Environmental Protection, and legislative approval and a Statewide referendum. In 1989, the Authority created a Citizens Advisory Group which is a volunteer assembly of individuals representing anti- or pro-nuclear interests, environmental and business groups, and concerned citizens. This group meets monthly to advise the Authority on siting, facility design, compensation packages, and other issues. The Authority began publishing a newsletter in 1990 and created a public information program at schools throughout the State. The Director for Community Programs oversees a community development program focusing on meetings throughout the State.

Funding: The Authority's administrative activities is currently \$400,000 per year and is provided by assessments on all generators on a prorated basis, according to both curies and volume. The Maine Yankee Atomic Power Company pays the full cost of site screening and characterization, which was about \$2 million in FY 90. By the end of the current fiscal year in June 1991, \$5.1 million will have been spent. The major costs of the screening process, facility siting and construction amount to \$10 million and are levied on the generators. About \$8 million in cumulative assessments were received by June 1991.

Letter from sited States: The 3 sited States notified Maine (along with New York, Connecticut, New Jersey and Massachusetts), on October 1, 1990, that the State will be denied access unless "persuasive evidence" is submitted by December 7, 1990, that efforts are sufficient to guarantee its wastes will not constitute an involuntary burden on other States. The Governor submitted a letter dated December 5, 1990, that emphasized the progress to date. The schedules listed were updated from this letter. The sited States notified Maine in a letter dated January 28, 1991, that Maine is currently in compliance with the Act. They intend to closely monitor Maine's progress because the pace is not sufficient compared to the vast majority of other States and compacts.

Below Regulatory Concern: In 1989, the Maine Legislature established a requirement that any reactor generated LLW which would not then be considered to be below regulatory concern (BRC) will require disposal in a licensed LLW facility, despite any broadening of the BRC definitions in the federal statutes. The legislation was signed by the Governor on June 26, 1989.

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5.3.2

MASSACHUSETTS
As October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

Massachusetts is not in a compact. Legislation was enacted December 8, 1987 to establish the process for siting a LLW disposal facility for LLW generated in Massachusetts only. Compact formation or entering one is not precluded. The State continues to pursue out of State disposal as well as in-State.

Timing: Congressional milestone - July 1, 1986
On schedule - Governor's certification.

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Activity: 2. Select Host State

Massachusetts is the host State.

Timing: DOE target - March 1987
On schedule

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Activity: 3. Develop Siting Plan

The key State agencies are the Massachusetts Low-Level Radioactive Waste Management Board; Secretary of Environmental Affairs; Department of Environmental Protection; and the Department of Public Health. The Management Board consists of 7 Governor-appointed public members, 2 ex-officio members of the Governor's Cabinet; and 2 local representatives appointed later. The Management Board develops the management plan including facilities and interim storage arrangements. Public Health must develop source and volume minimization programs and facility licensing regulations. The Department of Environmental Protection develops siting criteria and guidelines for site selection.

On July 10, 1991, the Management Board was transferred from the aegis of the Executive Office for Administration and Finance to the Executive Office of Environmental Affairs.

Timing: Congressional milestone - January 1, 1988
On schedule

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Activity: 4. Select Candidate Sites

The Management Board identifies two to five sites based on siting criteria and guidelines developed by the Department of Environmental Protection. Reviews involve the Secretary of Environmental Affairs, Community Supervisory Committees and the public. Siting regulations are being redrafted by the Department of Environmental Protection and are expected to be finalized December 1991. Public hearings on all the regulations are required.

The State's computerized geologic information system is being used to locate potentially suitable areas. Management Board contractors will conduct more detailed screening and characterization.

Because of severe financial problems plaguing Massachusetts ever since the Board was formed in 1988, progress has been limited. The Board hired a consulting firm to prepare information for a Management Plan, and to institute a 1990 survey of all radioactive materials users. The survey will be published in November 1991. The Management Board has determined from the data that a significant amount of mixed waste is produced.

By June 1992, the Management Board will vote to initiate facility siting and an RFP for siting services will be initiated. By September 1992, the RFP's will be received and site identification contractor evaluation and negotiations will begin. By December 1992, the contract for siting contractor will be awarded and siting work will begin.

Timing: DOE target - June 1988
Behind schedule - more than 3 years, 4 months

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Activity: 5. Characterize Disposal Sites

The Management Board in cooperation with Community Supervisory Committees will perform the site characterization. The Secretary of Environmental Affairs will review the characterization report. At this time there is no announced schedule for site characterization report.

Timing: DOE target - June 1989
Behind schedule - more than 2 years, 3 months

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Activity: 6. Select Final Site

The Management Board is projected to select a superior site by June 1994.

Timing: DOE target - June 1989
Behind schedule - 5 years

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Activity: 7. Select Disposal Technology

The Department of Public Health is prohibited to license shallow land burial. The Management Plan has to review and analyze the current and developing disposal technologies. The Management Board has to establish a pool of applicants to operate the facility. The Community Supervisory Committee of the Site Community will choose the technology and the developer/operator of the facility. There is no date projected for the host community to choose the operator at this time.

Timing: DOE target - September 1988
Behind schedule - more than 3 years, 1 month

=====

Activity: 8. Design Disposal Facility

Operator/developer. The Management Board signs the development contract. Dates unknown. The criteria for the selection of an operator were completed in April 1990, but require public hearings.

The State Siting Law requires mixed waste to be managed with the same level of protection as hazardous waste. The Board believes that the State's LLW management law enables it to regulate the disposal of any new BRC waste on economic grounds.

The National LLW Management Program developed a waste minimization program for the Board, guidance to local officials and generators. Because of the significant drop in the disposal volume from over 300,000 cubic feet in 1981 to about 40,000 in 1990 and a projection of 25,000 cubic feet by 1995, interesting questions are raised about the economics of a facility of minimal size. In addition, Massachusetts is unique in that only 23 percent of the volume of LLW in the State is generated by utilities. The remainder comes from industry, research institutions, hospitals, etc. By the year 2000, the biotechnology industry in the State will most likely be the largest generator of LLW.

Timing: DOE target - September 1989
Behind schedule - more than 2 years, 1 month

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Activity: 9. Complete Environmental Assessment

Operator/developer is estimated to complete the environmental assessment. There is currently no schedule available.

Timing: DOE target - January 1, 1990
Behind schedule - more than 1 year, 10 months

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Activity: 10. Submit License Application

The operator is projected to submit the license by November 1994.

Governor's certification letter was submitted on December 22, 1989, with a clarification letter on January 31, 1990. An information update was submitted on September 20, 1990.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind schedule for license application by 2 years, 11 months after second milestone.
On schedule by Governor's Certification

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Activity: 11. License Disposal Facility

By Department of Public Health by November 1995. Massachusetts has enabling legislation to become an Agreement State; the Department of Health completed the necessary draft regulations but require review before promulgation. After public hearings, the State will submit to NRC the package to become an Agreement State.

Timing: DOE targets - January 1, 1992; March 1993
Behind schedule - 2 years, 8 months after second target

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Activity: 12. Construct Disposal Facility

Operator/developer. The projected date is by the end of 1996.

Timing: DOE targets - January 1, 1993, or January 1, 1995
Behind schedule - about 2 years after second target

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Activity: 13. Provide Disposal

Disposal operations scheduled to begin by December 1996.

Timing: Congressional deadlines - January 1, 1993 or January 1, 1996

Behind schedule - about 1 year after second deadline.

=====
Developer/operator: Not selected.

Public involvement: The Board holds periodic public meetings.

Funding: Funding legislation was enacted on July 10, 1991, that allows the Management Board to assess fees on all radioactive materials users. The fee bill has two levels of assessments: (1) it would assess a flat fee on all NRC licensees and NARM users, and (2) would charge a "disposal-volume/activity" fee on only those who produce waste requiring disposal. However, an upper limit on fees of \$500,000 total from all generators will cause the Board some funding difficulties during next fiscal year.

Letter from sited States: The three sited States notified Massachusetts (along with Maine, New York, Connecticut and New Jersey), on October 1, 1990, that the State will be denied access unless "persuasive evidence" is submitted by December 7, 1990, that efforts are sufficient to guarantee its wastes will not constitute an involuntary burden on other States. The Chairman of the Massachusetts LLW Management Board submitted a letter dated December 5, 1990, that emphasized the progress to date. The sited States of Nevada and Washington notified Massachusetts by a letter dated January 28, 1991. They deemed it essential that adequate funding for the LLW disposal facility effort in Massachusetts be forthcoming and prompt actions be undertaken on site identification, characterization and development. Those sited States warned that failure to take such actions will result in denial of access to their disposal facilities.

Below Regulatory Concern: Massachusetts claims, under legislation approved in 1987 (Chapter 111H), to have the authority to ban the disposal of BRC in landfills.

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5.3.3

NEW YORK
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

New York is not in a compact. Legislation was enacted August 1, 1986 to establish the process for siting a LLW disposal facility for LLW generated in New York. Although New York has no present plans to join a compact, the legislation would not preclude it from forming or entering a compact.

In July 1990, Governor Cuomo signed legislation to redirect and strengthen the LLW Siting Commission by changing the focus of the Commission to methods selection before site characterization, and by creating a scientific review panel to support the Commission. The Advisory Commission was redesigned as a Citizens Committee by removing all State agency staff and by requiring public hearings throughout the process to serve as an instrument for public involvement.

Timing: Congressional milestone - July 1, 1986
On schedule by legislation

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Activity: 2. Select Host State

New York is host State unless access can be found outside the State.

Timing: DOE target - March 1987
Not applicable

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Activity: 3. Develop Siting Plan

Sites cannot presently include the western New York nuclear service center, i. e., West Valley. In 1990, Ashford, the local jurisdiction at West Valley, amended its prohibition against radioactive waste management activities so that it no longer excludes LLW; and that might result in the removal of the ban by the State legislature. After 6-7 months of discussion between the utilities and the Town of Ashford, on July 10, 1991, the Town Board voted 5-0 to propose to State legislators to remove the ban and go forward with an interim storage and final disposal facility.

STATUS OF STATES PROVIDING DISPOSAL CAPACITY FOR LLW - 10/11/91

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The benefits package that was negotiated starts at \$1.5 million and continues at \$4.5 million per year at operation which results from an annual assessment on all commercial power plant licensees and includes a library, visitor center, school, scholarship, roads, sewers, property guarantees, and a school of science and technology. In this new proposal, the current siting activities will continue as a backup. Disposal technologies that the Siting Commission are considering are a drift mine and an above ground vault that is earth covered.

There was a nonbinding referendum resulting in 702 votes against the proposal and 533 in favor (567 and 489 if only the votes of town residents are counted) on July 9, 1991. However, the Town Board's vote was based on additional proposed statutory protection for the town that were agreed upon which the referendum was already underway. The protection cover conditions for incineration, additional land, disposal of only New York LLW, and town oversight.

Two bills were introduced into the State legislature on the benefits package in exchange for the removal of the ban but the legislature recessed on July 4 without acting on the bills.

The proposed legislation includes benefits for Cattaraugus County that were negotiated between county representatives and generators of LLW; however, on July 17, 1991, the county legislature voted 17-5 against endorsing the proposal. In September the legislature succeeded in passing a resolution that supports an economic benefits package agreed to by the generators and the town council of Ashford.

A coalition of 44 national, State and regional organizations delivered a resolution to the New York State Legislature on August 19, 1991 stating their strong opposition to the reopening of West Valley as the State's LLW disposal facility.

The Siting Commission, pursuant to the July 1990 legislation, will issue a report concerning all lands excluded from consideration for siting permanent disposal facilities. The report shall be reviewed by the Citizen Advisory Committee and by an independent technical and scientific evaluation panel.

Final siting regulations for certifications of sites were promulgated by the Department of Environmental Conservation on December 31, 1987.

Timing: Congressional milestone - January 1, 1988
On schedule

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Activity: 4. Select Candidate Sites

The Siting Commission approved the selection of 5 sites in the State as possible locations for a LLW disposal facility on September 14, 1989. The sites included 2 in Cortland County and 3 in Allegheny County. The 2 in Cortland were located near the town of Taylor. The 3 in Allegheny were located near the towns of Canadaca, Allen and West Almond. Of the 5, 3 are capable of supporting drift mine disposal facilities -- 2 in Cortland and one in Allegheny. All have the capability of hosting a surface facility.

However, based on the July 1990 legislation, consistent with the Department of Conservation's decision on the preferred disposal method or methods (see Activity 7), the Siting Commission shall proceed to select the site or sites for permanent disposal facilities. The schedule is under revision.

The geographic information system constructed by Weston for the Siting Commission will be technically verified under contract to the National Academy of Sciences and made to become user friendly to the staff of the Siting Commission and the public. The earthquake fault in Allegheny county, one of the 2 candidate counties, will be investigated by the University of Rochester Earthquake Center for the Siting Commission.

The Siting Commission terminated its contract with Roy F. Weston on August 14, 1991 and at the same time selected 4 contractors, Battelle Memorial Institute for siting, Rogers & Associates Engineering Corporation for engineering, Ebasco Environmental for environmental studies, and Golder Associates of Colorado for mining techniques. The new arrangement should give the Commission greater expertise for each of the tasks.

Timing: DOE target - June 1988
Behind schedule - more than 3 years, 4 months

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Activity: 5. Characterize Disposal Sites

The Siting Commission is to select 4 candidate sites for detailed site characterization according to legislation.

Because of public opposition to siting activities, in April 1990, Governor Cuomo announced that he asked the Siting Commission to refrain temporarily from any further onsite pre-characterization work in Cortland and Allegheny Counties until he had the opportunity to discuss possible modifications and improvements in the siting program with State legislators and local citizens.

Consequently, new legislation was enacted in July 1990 as discussed in Activity 1.

The Site Characterization Plan is being completed with the resolution of all comments. However, the Siting Commission can proceed with site characterization only after the Department of Environmental Conservation has completed its review of the preferred disposal method. No date is given for completion.

Timing: DOE target - June 1989
Behind schedule - unknown, but more than 2 years, 4 months

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Activity: 6. Select Final Site

Department of Environmental Conservation makes final certification. Dates for decisionmaking are under review in light of the new legislation. The schedule is under revision.

Timing: DOE target - June 1989
Behind schedule - unknown, but more than 2 years, 4 months

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Activity: 7. Select Disposal Technology

By law, disposal using shallow land burial is prohibited. Pursuant to the July 1990 legislation, the Siting Commission shall evaluate all reasonable alternative disposal methods including but not limited to deep vertical shaft mined disposal and above ground monitored retrievable disposal. After opportunity for review and comment by the Citizen Advisory Committee and an independent technical and scientific evaluation panel, the Siting Commission shall issue a report and draft a generic, non-site specific, environmental impact statement selecting and justifying a preferred disposal method and any related method-specific site selection criteria.

The Siting Commission shall select as its preferred method that method which is projected best to meet applicable regulatory criteria and performance objectives and maintain exposure to the general public as low as reasonably achievable, taking into account engineering and economic feasibility compared to other available disposal methods. The preferred disposal method and accompanying draft generic environmental impact statement shall be submitted to the Department of Environmental Conservation (DEC) for decision.

STATUS OF STATES PROVIDING DISPOSAL CAPACITY FOR LLW - 10/11/91

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Final regulations for the selection of the disposal method were issued by the DEC in 1987. In October 1990, conceptual designs for each of four disposal methods were developed and are currently undergoing internal review by the Siting Commission. They include a vault, modular disposal unit, and a lined disposal unit - all placed either on or below the ground surface and covered with natural earthen material; and a line tunnel/drift mine concept.

No date is projected for technology selection at this time.

Timing: DOE target - September 1988
Behind schedule - unknown, but more than 3 years, 1
months

Activity: 8. Design Disposal Facility

By New York State Energy Research and Development Agency (NYS ERDA). No date is projected for this activity at this time.

The DEC has issued the preliminary draft regulations on design, construction, operation, and closure of the disposal facilities. The draft regulations and the draft generic environmental impact statement will be issued for public comment by early November 1991.

Timing: DOE target - September 1989
Behind schedule - unknown, but more than 2 years, 1
month

Activity: 9. Complete Environmental Assessment

By NYS ERDA. No date is projected for this activity at this time.

Timing: DOE target - January 1, 1990
Behind schedule - unknown, but more than 1 year, 10
months

Activity: 10. Submit License Application

By NYS ERDA. No date is projected for this activity at this time.

STATUS OF STATES PROVIDING DISPOSAL CAPACITY FOR LLW - 10/11/91

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Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind schedule - unknown, but more than 1 year, 10 months after first deadline
Congressional milestone met by Governor's certification.

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Activity: 11. License Disposal Facility

By New York Departments of Environmental Conservation (DEC) and Labor (DOL). The DEC is developing regulations to govern disposal facility construction, operation, environmental monitoring, safety plans and closure. Draft regulations on financial assurance requirements were released for public comment in October 1990. DOL is the agency responsible for protecting workers from radiation exposure. A DOL radioactive materials license will be required for operation of the disposal facility, that includes receipt, inspection, handling, storage and disposal. The 2 agencies are developing a Memorandum of Understanding for license application reviews, licensing and inspection of the disposal facility. No date is projected for licensing at this time.

The DEC promulgated draft Financial Assurance Requirements for LLW Disposal Facilities on September 26, 1990. A hearing on revised rulemaking was held on July 22, 1991.

Timing: DOE targets - January 1, 1992, or March 1993
Behind schedule - unknown

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Activity: 12. Construct Disposal Facility

By NYS ERDA. No date is projected for this activity at this time.

Timing: DOE targets - January 1, 1993, or January 1, 1995
Behind schedule - unknown

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Activity: 13. Provide Disposal

No date is projected for this activity but will be after 1993 based on the New York appropriation of \$800,000 for a study of existing capacity for on-site storage and expansion for ten years. For more see Storage Study below.

An in-house schedule has a target of 1998 for operation of the

disposal facility. The schedule needs contractor review before being made public.

Timing: Congressional milestones - January 1, 1993, or January 1, 1996
Behind schedule - unknown, maybe as much as 3 years with respect to the second deadline

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Developer/operator: New York State Energy and Research Development Authority

Public involvement: The July 1990 legislation broadens the membership of the Siting Commission from five to seven members, by adding a social scientist and an environmentalist who represents a non-profit environmental organization. New direction, authorization and membership is given to the advisory committee on siting and disposal method selection for permanent disposal facilities by changing the name of the committee to the Citizen Advisory Committee, making it independent of the Siting Commission, removing State agency representatives, including four private citizen members, fostering public participation, and giving it broader powers. Other provisions include that any computerized data from the Siting Commission be made available to the public in a format accessible for general use, and that copies of reports of the Citizen Advisory Committee be made public and submitted to the Governor and legislative leadership.

Funding: Before enactment of the July 1990 legislation, the New York State legislature adopted a FY 1990-91 budget that reduced funds to support the activities of the Siting Commission from the Governor's proposed request of \$19.3 million to \$4.87 million.

The State Act provides a specific and clear process for funding the costs of LLW management. It is based on the principle that the generators must bear the costs. From 1986 to January 1, 1991, New York has collected approximately \$40.8 million from generators, \$27.7 million of which will have been spent by the end of this calendar year. Additionally, New York has appropriated \$5.6 million to fund programs and activities directly related to the LLW management program.

The FY 92 budget (April 1, 1991-March 31, 1992) has funded the Siting Commission at \$15 million. In addition, the potential host counties of Cortland and Allegheny Counties are being funded at \$1.25 million. The budget also includes funding activities overseen by the Departments of Environmental Conservation and Energy Research and Development Authority.

New York State Lawsuit: Governor Cuomo filed a lawsuit on February 12, 1990, seeking to have the Low-Level Radioactive Waste Policy Amendments Act of 1985 (Act) declared unconstitutional. The suit names as defendants the U.S., NRC and several government officials, including Secretary of Energy Watkins. The suit focuses primarily on aspects of the Act; the provision requiring States to take title of LLW being unconstitutional, and the provision that States be responsible for Class C waste. The suit, which was filed in the U.S. District Court for the Northern District of New York, was joined by Allegany and Cortland Counties and the State's Attorney General. Governor Cuomo indicated that the State is continuing to pursue an agreement to dispose of its waste in another State and has not suspended siting activities in New York.

On December 7, 1990, Judge Cholakis ruled against New York State and upheld the constitutionality of the Act. He found that under the Commerce Clause only where there is a defect in the political process or where constitutional equality among the States is jeopardized, would there be judicial review of Congressional enactments. New York State appealed the case on January 31, 1991.

On August 8, 1991, the U.S. Court of Appeals for the Second Circuit affirmed the decision of the federal district court dismissing the lawsuit brought by the State of New York and the counties of Allegany and Cortland against the federal government. Specifically, the appeals court affirmed the findings of the district court that:

- o the Act is "not an impermissible affront to state sovereign immunity protected under the Tenth Amendment...";
- o "absent unequal treatment accorded to the State of New York or a defect in the federal political process, Supreme Court precedent precludes further judicial review of the federal statute...";
- o the Act does not violate the Eleventh Amendment to the Constitution; and
- o the State and counties' remaining challenges are without merit.

The State of New York filed a petition for a writ of certiorari with the U.S. Supreme Court on September 27, 1991. The petition requests the Court to review the lower court's decision. The counties of Allegany and Cortland petitioned separately the Supreme Court. Connecticut, Michigan and Ohio each filed briefs as amici curiae. These briefs are written as "friends of the Court" in support of the State of New York. Alabama, Alaska, Arizona, Guam,

Illinois, Indiana, Maine, Nebraska, New Jersey, Pennsylvania, Rhode Island, and South Dakota joined Ohio in its amicus brief. The filing date for the U.S. Government et al and the amicus briefs was December 6, 1991. The Supreme Court decided to review the decision on January 10, 1992. The petitioner's brief is due February 14, 1992; and the Government's brief is due March 5, 1992. Oral arguments will be in the session beginning March 23 with the decision made before July 1, 1992.

Letter from sited States: The Congressional milestone was met by a Governor's certification. However, officials of the sited States of Nevada, South Carolina and Washington advised Governor Cuomo, in a letter dated October 1, 1990, of their concern that New York's efforts thus far to prepare to manage LLW generated within its borders were inadequate. They requested that New York submit by December 7, 1990 "persuasive evidence" that LLW will not become an involuntary burden on other States. On December 6, 1990, Governor Cuomo wrote to the three governors of the sited States assuring them of New York's good faith effort to meet the mandate of the Act and supplied them with a comprehensive response. The sited States replied in a letter dated January 28, 1991, that New York remains in compliance with the Act at this time. However, in view of the difficulties in New York State, the sited States urged strong leadership so that LLW in New York does not become an involuntary burden on other States.

LLW Storage Study: In early June, 1991, NYS ERDA selected 16 persons to serve on a Study Review Panel for the LLW Storage Study. The Panel will provide advice to NYS ERDA on all aspects of the Study and held its first meeting June 20, 1991. NYS ERDA is in the process of establishing an independent Technical Review Committee to assist in ensuring the scientific validity of the Study. The National Academy of Sciences was requested to identify and select qualifying individuals to serve on the Committee.

The study also will examine the economic viability of establishing a centralized storage facility for Class A LLW from medical and academic generators. The study is expected to be completed in 1992. Barry Lawson and Associates was chosen as the contractor.

An RFP for a technical support contractor for the storage study is being completed with the assistance of the Study Review Panel and Technical Review Committee. The RFP is expected to be issued in October.

NYSERDA agreed to cosponsor research on interim on-site storage of LLW with the Electric Power Research Institute (EPRI). EPRI intends to develop interim guidelines comprehensively addressing a broad range of storage issues and options for on-site storage of nuclear power plant LLW for periods exceeding 5 years. The tasks

should be completed in early 1992.

Government Accounting Office study: In July 1991, responding to a request by U.S. Senator Alfonse D'Amato, the U.S. Government Accounting Office (GAO) agreed to review the process used by the New York Siting Commission to select candidate sites. Charges of failure to provide sufficient information and failure to communicate were the most important issues raised.

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5.3.4

TEXAS
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

Texas is not in a compact. Legislation was enacted in June 1981 to establish the Texas Low-Level Radioactive Waste Disposal Authority (Authority) with the responsibility of developing a LLW disposal facility for Texas waste only. The Act was amended in 1985 to authorize Texas to accept out-of-State waste. In June 1991, legislation was enacted whereby one or more States could qualify for a compact with Texas provided their combined LLW generation did not exceed 20 percent of the annual Texas average for 50 years which means that decommissioning waste must be included. Also, other States must share in the full cost of construction. No action has been taken to date although Texas has held discussions recently with Maine, Vermont, Connecticut, New Jersey, New Hampshire and New Mexico.

Timing: Congressional milestone - July 1, 1986
On schedule

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Activity: 2. Select Host State

Texas is the host State.

Timing: DOE target - March 1987
Not applicable

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Activity: 3. Develop Siting Plan

In 1985, the Authority proceeded with site screening and qualification activities, concentrating on 3 candidate areas in western Texas. Two of these areas are located on State-owned lands in Culberson County, while the third is located on State-owned land in Hudspeth County.

Timing: Congressional milestone - January 1, 1988
On schedule
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Activity: 4. Select Candidate Sites

In December 1986, the Authority started to evaluate the three potential LLW disposal sites in west Texas. The Fort Hancock site in Hudspeth County appeared the most suitable. The site is 65,000 acres in size and located 40 miles east of El Paso. There are 9 inches of rain fall per year which is 2 inches more than in the California site. The evaporation rate is 73 inches per year. Ground water is 500 feet below the surface. The soil is sand and the site is located in an alluvial plain. The actual disposal will be within 200 acres.

Timing: DOE target - June 1988
On schedule

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Activity: 5. Characterize Disposal Sites

Authority actions have focused primarily on the site 11 miles northeast of Fort Hancock in Hudspeth County until new legislation was enacted in June 1991 as described in Activity 6. About \$2 million was spent on characterization. Flood plain and seismic issues were resolved during the summer of 1990 by the Authority. The results showed that the site design is well within specifications required by regulatory agencies.

Final site characterization of the alternative site as described below in Activity 6 is scheduled for November 1991.

Timing: DOE target - June 1989
Behind schedule - 2 years, 5 months

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Activity: 6. Select Final Site

In 1987, El Paso County filed a lawsuit that prevented the Authority from making a final decision with regard to the Fort Hancock site being the preferred one. The major issues are faults, fissures, and flooding. The trial began on September 6, 1990, and ended on September 23, 1990. The State presented evidence on the siting process and on the site itself.

On January 29, 1991, the 34th District Court in El Paso issued a sweeping decision which declared the Authority's site selection process and the Fort Hancock site to be illegal, and directed the Authority to abandon the site. On March 15, 1991, Governor Richards, responding to local concerns and the court decision,

directed the Authority to search for an alternate site. On April 2, 1991, the Authority's Board adopted a resolution honoring Governor Richards' request, but also called for Attorney General Dan Morales to file an expeditious appeal.

Texas enacted legislation in June 1991 that directs the Authority to find a site within a 350 square mile area which is 40 miles east of the Ft. Hancock site which is no longer under consideration. The Authority is granted access to public and private lands and is authorized to use the power of eminent domain to designate private property for public use. The legislation provides a deadline of 15 months after site characterization for licensing the facility.

The Authority identified a site within the 350 square mile area known as the Faskin Ranch in September 1991. The site is 16,000 acres with 900 feet to groundwater and has uniform sediment. Ironically, compared to the Ft. Hancock site, this site is closer to faults and water supply but is more acceptable to El Paso County. Most of the geological, hydrological and meteorological information developed for the Ft. Hancock site can be used for this site. Only some local topography needs to be completed, such as drilling several wells. The Authority believes that it can propose the site in November so that it can submit a license to the Texas Department of Health in December 1991 in order to meet the January 1, 1992 Congressional milestone. (Note: On November 6, 1991, the Board of the Authority tabled the staff recommendation. A new staff estimate for proposing the site and license submittal is March 1992.)

On July 9, 1991, the Court of Appeals for the Eighth District of Texas granted the request of the Authority to dismiss its appeal of the lawsuit brought by the Counties of El Paso and Hudspeth and by other parties. The Authority had requested dismissal because the above enacted State law had rendered the controversy moot.

Timing: DOE target - June 1989
Behind schedule - 2 years, 5 months

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Activity: 7. Select Disposal Technology

The legislation prohibits shallow land burial and requires containment in reinforced concrete or technologically superior material. The Authority has chosen concrete canisters for the disposal technology for Class A, B and C LLW. There will be a separate mixed waste unit. The final decision was made in September 1990.

Timing: DOE target - September 1988

Behind schedule - 2 years

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Activity: 8. Design Disposal Facility

By the Authority. Sargent and Lundy Engineers and Rogers and Associates were contracted to do preliminary designs which were completed October 31, 1988, including a mixed waste disposal unit. The specific design documents were expected to be completed in August 1990. The final facility design is scheduled for approval by December 1991. The facility life cycle is 30 years.

Timing: DOE target - September 1989
Behind schedule - 1 years, 2 months

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Activity: 9. Complete Environmental Assessment

By the Authority. The documentation is scheduled for completion by December 1991.

Timing: DOE target - January 1, 1990
Behind schedule - 1 year, 11 months

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Activity: 10. Submit License Application

By the Authority. A board of directors must be established to order the Authority to prepare and present a license application. Authority staff predict that a license can be submitted to the Texas Department of Health in December 1991. (Note: On November 19, 1991 the Board of Directors of the Authority tabled a request by the staff to file the license application in December. Staff estimates the license will be filed in March.)

Timing: Congressional milestones - January 1, 1990; January 1, 1992
Behind schedule - 2 years but on schedule for second milestone (Note: 3 months late)
On time by Governor's certification

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Activity: 11. License Disposal Facility

By Texas Department of Health 15 months after license submittal but excluding public hearings, according to legislation. If the

Authority submits the license by end of December 1991, then the license could be issued by at the earliest March 1993. (Note: Revised estimate - June 1993.)

Timing: DOE targets - January 1, 1992; March 1993
Behind schedule - on schedule for second target

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Activity: 12. Construct Disposal Facility

By the Authority. The Authority has not announced a schedule but based on the legislation for completion of licensing by March 1993, excluding hearings, the facility might be constructed within 1 year, or March 1994 at the earliest. (Note: Revised estimate - June 1994.)

Based on the Ft. Hancock site experience, the total cost of the facility, including construction, is estimated at \$40 million, or \$170 per cubic foot. The life cycle cost is \$233 million based on a 30 year life. The payback time is 20 years. The unit disposal cost is \$200 per cubic foot. A more recent estimate in July 1991 is \$246 per cubic foot (1991 dollars). These estimates have a large error band.

Timing: DOE targets - January 1, 1993; January 1, 1995
Behind schedule - at least 1 year, 3 months after first target

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Activity: 13. Provide Disposal

Based on the assumptions above, the earliest that Texas may be able to provide disposal is March 1994. (Note: Revised estimate - June 1994.)

Timing: Congressional deadlines - January 1, 1993, or January 1, 1996
Behind schedule - at least 1 year, 3 months after first deadline

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Developer/operator: Texas Low-Level Radioactive Waste Disposal Authority

Public involvement: The Authority has an active public information program. A number of educational brochures have been prepared with regard to understanding the issues, site selection, disposal

methods, citizen participation, transportation and packaging, uses of radioactive materials, and frequent questions and their answers. The Authority has a Citizen's Advisory Panel and is sponsoring a Policymakers' Forum. The Forum evaluates, analyzes and develops local public policy related to the Authority's activities in west Texas. The Forum brings together influential citizens, elected officials, and recognized experts. The Authority had a field office and public reading room in Fort Hancock for Hudspeth County residents.

Funding: The Authority was funded by appropriations from the Texas legislature. In June 1991, a bond issuance bill was enacted that permits the Authority to issue bonds to provide for expenses incurred and paid by the Authority up through construction of a LLW facility. The bonds may be used both to pay expenses not covered by appropriations from the general revenue fund and to reimburse the fund for expenses previously paid. A private entity may be allowed to operate a facility for the Authority under contract. According to the same legislation the Authority is no longer on general revenue funding. Instead, the Authority will start assessing the State utilities in January 1992. The assessments must be designed to recover previous expenditures. Facility expenditures are estimated at \$42.5 million. The fees may be \$5 million per nuclear generating unit per year.

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5.3.5

VERMONT

As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

Vermont is not in a compact. The legislature passed a resolution indicating Vermont's intent to establish a disposal facility, if necessary. The Governor certified that the Vermont would develop a disposal facility. Consequently, the sited States and the Department of Energy determined Vermont to be in compliance with the Congressional milestone.

Timing: Congressional milestone - July 1, 1986
On schedule - Governor's certification

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Activity: 2. Select Host State

Vermont is the host State.

Timing: DOE target - March 1987
On schedule

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Activity: 3. Develop Siting Plan

Vermont did not submit documentation to the Department of Energy and sited States demonstrating its compliance with the Congressional milestone. Therefore, Vermont did not comply with the milestone. Vermont was denied access beginning January 1, 1990 and interim storage began.

Legislation has failed to be enacted which would have authorized Vermont to enter into a contract with the Rocky Mountain LLW Board to dispose of up to 40,000 cubic feet of LLW at the Beatty LLW disposal facility through 1992.

Legislation was enacted on June 29, 1990 which created a LLW authority to renew efforts to negotiate an agreement for out-of-State disposal, and establish a two-track siting process for a LLW disposal facility. The legislation directs the examination of the Vermont Yankee site, near the town of Vernon, as a potential host site, along with State-wide screening. Three members of the Authority were appointed when the Bill was signed.

At a March 5, 1990 town meeting, the Town of Vernon approved a nonbinding article, by a 123 to 27 vote, to support State legislation for designating Vermont Yankee property in Vernon as the preferred site for a LLW disposal facility.

Also, legislation was enacted on June 16, 1990 to require that radioactive waste, including BRC, from licensed activities only be treated, recycled, stored or disposed at licensed facilities.

A public hearing was held on October 23, 1990, on the siting plan. The plan was revised to incorporate comments received from the hearings and from other reviewers. The Vermont Low-Level Radioactive Waste Authority completed the site plan in December 1990.

Timing: Congressional milestone - January 1, 1988
Behind schedule - three years

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Activity: 4. Select Candidate Sites

According to the legislation, the Authority shall collect data for the screening of the town of Vernon and the rest of the State in order to identify potential alternative sites. The Agency of Natural Resources is charged with regulating the screening and siting processes. Three potential sites were to be chosen by March 1991.

In November 1990, the Authority negotiated a contract with Battelle Memorial Institute, Columbus, Ohio, for the characterization of the Vernon site and collection of data that will allow a State-wide screening for potential alternate sites.

Battelle reported in April 1991 that the data available for site characterization at the Vernon site may not be of sufficient quality and consequently, additional data will be necessary thus slowing down the site selection process. Battelle began gathering data for alternative sites.

The Authority voted on September 19, 1991 to terminate characterization of the Vernon site based on concerns about wetlands, groundwater flow, depth to groundwater, and other factors. Battelle had reported that the site contains both an area listed on the Vermont National Wetlands Inventory and another small area with properties that might meet wetlands criteria. The site has not been formally abandoned, however.

The Town of Vernon voted to support a site and the Authority will be looking there and in other places after guidelines for volunteer

sites are available.

The contract with Battelle Memorial Institute was terminated.

Public hearings were held on September 10-12, 1991 on the siting regulations developed by the Agency of Natural Resources.

Timing: DOE target - June 1988
Behind schedule - more than 3 years, 4 months

Activity: 5. Characterize Disposal Sites

The legislature must approve a petition to characterize an alternative site or sites. The Authority must complete characterization within 18 months of the legislative decision.

The NRC completed its review in June 1991 of the Site Characterization Plan for the Vernon/Vermont Yankee Site, March 1991. Among other comments, the NRC staff recommended that the identified fatal flaws be carefully considered. They include groundwater discharges, long-term stability of the site's depositional terrace and slope, the site's shallow water table; surface-water hydrologic considerations of flooding and upstream drainage; and the site's groundwater flow and transport system having limited capability to isolate the LLW.

In a June 24, 1991 letter from the Authority to NRC, questions were raised whether alternative sites should be a component of the site characterization plan. Earlier, a NRC April 23, 1991 letter from NRC's Office of General Counsel stated that NRC usually considers alternative sites when developing an environmental impact statement.

Another NRC letter of June 21, 1991 states as a general rule there is a need to consider alternative sites in environmental impact statements associated with issuance of a license for a LLW disposal facility.

Timing: DOE target - June 1989
Behind schedule - more than 2 years, 4 months for alternate site

Activity: 6. Select Final Site

The legislature must approve by February 1992. For the alternate site the Authority is projected to decide by May 1994, after a social/economic study, report on site strengths, negotiations with

the town and public hearings and approval of the town. Legislative approval is needed by January 1995.

Timing: DOE target - June 1989
Behind schedule - 5 years, 7 months for alternate site

Activity: 7. Select Disposal Technology

The legislation prohibits the use of shallow land burial. The Authority shall, after public comment, initiate a study to determine the maximum appropriate separation of long-lived waste, the appropriate level of recoverability of such waste, and the appropriate permanent disposal technology and cost for that waste. In performing the study to determine the appropriate permanent disposal technology for long-lived waste, the Authority shall consider a deep-mined facility in-state, technologies not normally examined in the United States for disposal of LLW, and all other technologies reasonably available.

The Authority selected Rogers and Associates Engineering Corporation for segregating long- and short-lived radionuclides during disposal. The Authority hired Vance & Associates to determine the amount of iodine-129 and technetium-99 present in operational reactor waste from the Vermont Yankee plant. The inventory is part of the above study by Rogers and Associates. Another RFP was issued for the suitable disposal technology. A contractor should be selected soon.

The recommendation to the legislature must be completed by for the alternate sites by November 1994.

Timing: DOE target - September 1988
Behind schedule - 6 years, 2 months for the alternate site

Activity: 8. Design Disposal Facility

By the Authority. The Agency of Natural Resources is charged with regulating the facility design. The current estimate for disposal cost is \$345 per cubic foot.

STATUS OF STATES PROVIDING DISPOSAL CAPACITY FOR LLW - 10/11/91

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Timing: DOE target - September 1989
Behind schedule - more than 5 years, 2 months for the
alternate site.

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Activity: 9. Complete Environmental Assessment

By the Authority. For the alternate site, by July 1995.

Timing: DOE target - January 1, 1990
Behind schedule - 5 years, 7 months for the alternate
site.

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Activity: 10. Submit License Application

The Authority has projected to submit the license application to
NRC by October 1997 for the alternate site.

Governor's certification letter was submitted September 13, 1990.
The sited States determined in March and April 1991 that Vermont is
now in compliance.

Timing: Congressional milestones - January 1, 1990, or January 1,
1992
Behind schedule for license application by 5 years, 10
months for the alternate site with respect to the second
milestone.

Behind schedule for the Governor's certification by 9
months.

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Activity: 11. License Disposal Facility

By NRC by January 1999 for the alternate site.

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Timing: DOE targets - January 1992; March 1993
Behind schedule - 5 years, 9 months for the alternate site with respect to the second target

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Activity: 12. Construct Disposal Facility

By the Authority by August 1999 for the alternate site.

Timing: DOE targets - January 1, 1993, or January 1, 1995.
Behind schedule - 4 years, 10 months for the alternate site after the second target

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Activity: 13. Provide Disposal

Disposal operations scheduled to begin August 1999 for the alternate site.

Timing: Congressional milestones - January 1, 1993, or January 1, 1996.

Behind schedule - 3 years, 10 months after the second deadline for the alternate site

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Developer/operator: Vermont Low-Level Radioactive Waste Authority

Public involvement: The public is involved by means of public hearings and approval by the host town. The Legislature must also approve the site.

The Authority is hiring a public participation staff. The Agency of Natural Resources is working on rule for public participation.

Funding: Appropriations are as follows: \$430,000 to the Vermont Low-Level Radioactive Waste Authority; \$370,000 to the Agency of Natural Resources; \$60,000 to the Public Service Board; and \$60,000 to the Public Service Department. A LLW fund will be created from fees from the LLW generators to fund the actions required by the legislation. The Public Service Board will determine the necessary fees. An immediate assessment of \$1 million will be levied proportionately on all generators based on the volume of waste generated in the calendar years 1986-1989.

On August 13, 1991, the Authority, Vermont Yankee, and the Vermont

Public Service Department agreed on a proposed budget for the next two years. Under the agreement, the Vermont Public Service Board will spend approximately \$7 million on the program over the next two years. The budget does not include funding to implement draft State rules describing work that will be required at alternative site locations now that the Vermont Yankee site was eliminated.

Money for the program is provided by assessments on Vermont Yankee and on other generators of LLW. A decision on the budget by the Public Service Board is pending.

Below Regulatory Concern: Legislation was approved on June 16, 1990 which bans the disposal of BRC in facilities licensed for such disposal.

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5.4 PROGRESS IN UNAFFILIATED STATES WITHOUT PLANS FOR A DISPOSAL FACILITY

5.4.1 DISTRICT OF COLUMBIA
As of October 11, 1991

Activity: 1. Ratify Compact or Certify Independent

The District of Columbia enacted temporary enabling legislation for membership in the Northeast Compact, although the provision that names eligible party States, does not include it. Consequently, the sited States found the District in compliance with the Congressional milestone. However, the Department of Energy had determined that the District was not in compliance.

In 1987, the Northeast compact excluded the District from membership because of failure to enact permanent legislation.

Timing: Congressional milestone - July 1, 1986
On schedule - by legislation according to sited States
Behind schedule according to DOE

Activity: 2. Select Host State

There are no plans to establish a LLW facility in the District.

Timing: DOE target - March 1987
Behind schedule - more than 3 years, 8 months

Activity: 3. Develop Siting Plan

The District of Columbia did not submit a siting plan, but instead submitted a contract with the Rocky Mountain Compact for disposal through 1989. The sited States and the Department of Energy determined that the District of Columbia was in compliance with the Congressional milestone.

Timing: Congressional milestone - January 1, 1988
Behind schedule - more than 3 years
On schedule by contract

Activities 4-9. No action by the District of Columbia.

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Activity: 10. Submit License Application

The District of Columbia has taken no action.

The District of Columbia amended its contract with the Rocky Mountain Compact for disposal of its LLW through December 31, 1992. A Governor's Certification was submitted but was found out-of-compliance by the sited States because the contract did not cover the period beyond January 1, 1993 as required by the Act. However, the District was found to be in compliance by the Department of Energy.

Timing: Congressional milestones - January 1, 1990; January 1, 1992
Behind schedule - by more than 1 year, 10 months for license application and Governor's certification for sited States

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Activities 11-13. The District of Columbia has taken no action.

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Developer/operator: Not applicable

Public involvement: Not known

Funding: The "District of Columbia Low-Level Radioactive Waste Generator Regulatory Policy Act of 1990" was passed on December 27, 1990. However, this Act must be approved by Congress in order to take effect. The act requires a generator of LLW in the District of Columbia to reimburse the District government for costs associated with the disposal of LLW at a regional facility, to require a person who generates LLW to register with the Mayor, and to require a generator of LLW to submit a detailed annual report to the Mayor. A meeting to discuss draft regulations for recouping the costs of disposal of LLW was conducted on April 12, 1991. Final rules have not been promulgated. There is an issue of whether the District of Columbia can assess fees for certain federal generators. A task force led by the Department of Justice is investigating the associated legal issues.

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5.4.2

MICHIGAN
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

On July 29, 1991 the Midwest Compact filed a lawsuit in Minnesota Federal Court on the effective date of Michigan's revocation from the Compact. Earlier, as noted above under Midwest Compact, on July 24, 1991 the Compact Commission revoked Michigan's host State status because of failure to serve as host State. The outcome of the suit will also establish the suspension of all compact privileges for Michigan.

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Activity: 2. Select Host State

All siting activities have ceased in Michigan because the Michigan Low-Level Radioactive Waste Authority has been disbanded. All LLW in Michigan is being stored temporarily because the State lost access to the operating facilities in South Carolina, Washington and Nevada on November 10, 1990. According to the sited States, this action was taken in fulfillment of their duties under the Act. They claimed that Michigan had not taken action to correct problems related to siting its LLW disposal facility.

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Activities 3-13. Not applicable because Michigan has no intention at this time to develop a site for its waste.

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MICHRAD lawsuit: The Michigan generators, Michigan Coalition of Radioactive Material Users, Inc. (MICHRAD) filed suit against the sited States on November 13, 1990, in the U.S. District Court for the Western District of Michigan. On June 18, 1991 the district court granted partial summary judgment in favor of MICHRAD and declared that the sited States are required to make disposal capacity in their States available to Michigan generators. On June 27, 1991 the sited States filed their motion for a stay of judgment of the permanent injunction which would make their sites available to the generators in Michigan pending their appeal and filed an appeal in the U.S. Court of Appeals for the Sixth Circuit in Cincinnati, Ohio.

On July 10, 1991, the U.S. District Court for the Western District of Michigan denied a motion by the sited States to postpone enforcement of the court's June 18 order to make disposal capacity in their States available to Michigan generators based on the likelihood of success, irreparable injury, harm to other parties, and the public interest in the safe disposal of LLW which weighs heavily in favor of disposal at licensed disposal facilities rather than interim storage at numerous temporary on-site facilities.

On September 24, 1991 the U.S. Court of Appeals for the Sixth Circuit granted the sited States' motion for a stay of judgment and a stay of the permanent injunction imposed by the district court. The appeals court decided that the harm to MICHRAD if the stay were issued would be comparatively minor and that temporary storage does not put the public at greater risk than it would otherwise face when waste is kept at these facilities pending transport for disposal. The appeals court concluded that public safety is not adversely affected and that the public interest in development of long-term disposal sites is controlling. Thus, denial of access continues pending the appeal on the merits of the district court's ruling.

Finally, on September 19, 1991, the U.S. District Court for the District of Nevada stayed the Rocky Mountain LLW Board's motion for a preliminary injunction in its lawsuit against US Ecology, the State of Michigan, and the State of Nevada, pending disposition of the MICHRAD case. The Board is seeking to enjoin US Ecology and Nevada from accepting LLW from Michigan at the Beatty facility.

Michigan Challenges LLW Act: Governor Blanchard announced the State's intention to file a lawsuit on February 9, 1990. The State of Michigan filed a lawsuit on April 18, 1990, challenging the constitutionality of the Low-Level Radioactive Waste Policy Amendments Act of 1985. In particular, the challenge asserts that the Act, especially the take title provision, exceeds the limits imposed on federal action by the Constitution. In addition to challenging the constitutionality of the Act, the State included claims brought under the National Environmental Policy Act (NEPA), which among other things, directs Federal agencies to prepare an environmental impact statement for major Federal actions. In this case, the Environmental Impact Statement for 10 CFR Part 61 should be revised to account for the large number of sites (about 13) that are currently planned by the States.

On August 28, 1991, the U.S. District Court for the Western District of Michigan upheld the constitutionality of the Act and granted the federal government's motion to dismiss the lawsuit. Michigan filed on October 18, 1991 a notice of appeal to be heard in the U.S. Court of Appeals for the Sixth Circuit.

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5.4.2

NEW HAMPSHIRE
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

New Hampshire enacted compact legislation on May 20, 1986. The Northern New England Compact named Vermont and Maine as eligible party States. Although the Compact legislation has not been repealed, neither of the other States has taken action on the proposal.

The Department of Energy did not evaluate New Hampshire for compliance with the Congressional milestone because the State had no funds attributable to it for potential rebate. The sited States determined that New Hampshire was in compliance.

Timing: Congressional milestone - June 1, 1986
On schedule - legislation

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Activity: 2. Select Host State

In 1987-1990, New Hampshire continued to explore the contracting approach and possible membership with other compacts. A meeting was held June 28, 1990, between New Hampshire State officials and representatives of Northeast Utilities. Topics of discussion included approaches to joining or forming a compact, methods of entering into a waste disposal contract with an established compact, and the possibility of foreign export of the State's LLW. The New Hampshire Department of Environmental Services and the Attorney General's Office held follow-up meetings to discuss these issues.

In 1991, the State admitted that it had done little except to meet with some other New England States to seek options to dispose of the LLW generated by Seabrook Nuclear Power Station, which is the major generator, and the small number of other generators which produce about one to two cubic meters per year. Currently, the Seabrook Nuclear Power Station is self sufficient in storage to January 1, 1996.

Timing: DOE target - March 1987
Behind schedule - more than 4 years, 10 months

Activity: 3. Develop Siting Plan

New Hampshire did not submit a siting plan and, consequently, did not meet the Congressional milestone. Therefore, the sited States and the Department of Energy determined that New Hampshire was not in compliance.

In December 1988, New Hampshire was denied access to the Richland, Washington, LLW facility, effective January 1, 1989. The South Carolina Board of Health and Environmental Control voted to deny access to the Barnwell facility on January 19, 1989.

New Hampshire entered into a waste disposal contract for non-utility LLW (excludes the Seabrook Nuclear Power Station) with the Rocky Mountain Compact which is effective from October 1, 1989 through December 31, 1992. The contract does not satisfy the 1990 Governor's certification milestone requirement, but merely provides a place for New Hampshire to dispose of its waste for the specified period.

Timing: Congressional milestone - January 1, 1988
Behind schedule - more than 3 years, 10 months

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Activities 4-6. New Hampshire has taken no action.
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Activity: 7. Select Disposal Technology

The 1986 legislation bans shallow land burial. Otherwise, no action has been taken.

Timing: DOE target - September 1988
Behinds schedule - more than 1 year, 4 months

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Activities 8-9. New Hampshire has taken no action.
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Activity: 10. Submit License Application

New Hampshire has taken no action.

New Hampshire submitted a Governor's certification which included the disposal contract through December 31, 1992, to demonstrate compliance with the 1990 Congressional milestone. The sited States

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found New Hampshire out-of-compliance because the contract did not cover the period beyond January 1, 1993 as required by the Act. The Department of Energy did not evaluate the certification because there were no New Hampshire funds in the Department's surcharge escrow account.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind schedule - by more than 1 year, 10 months, for license application and Governor's certification

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Activities 11-13. New Hampshire has taken no action.
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Developer/operator: Not applicable

Public involvement: None

Funding: Not applicable
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5.4.3

PUERTO RICO
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

In 1986-1988, Puerto Rico held informal discussions with the Southeast Compact and Texas regarding compact membership. As of April 19, 1991, the Commonwealth was monitoring the development of disposal capacity in other States. Currently, Puerto Rico holds for decay all LLW which is medical waste from hospitals.

Because Puerto Rico did not submit to the sited States documentation showing its compliance with the Congressional milestone, the sited States determined that Puerto Rico was not in compliance and denied access to the operating facilities in January 1987. The Department of Energy made no determination because there was no surcharge funds for rebate.

Timing: Congressional milestone - July 1, 1986
Behind schedule - more than 5 years, 3 months

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Activity: 2. Select Host State

There are no plans to build a disposal facility in Puerto Rico.

Timing: DOE target - March 1987
Behind schedule - more than 3 years, 7 months

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Activity: 3. Develop Siting Plan

Because Puerto Rico did not submit to the sited States documentation showing its compliance with the Congressional milestone, the sited States determined that Puerto Rico was not in compliance and continued denial of access to the operating facilities. The Department of Energy made no determination because there was no surcharge funds for rebate.

Timing: Congressional milestone - January 1, 1988
Behind schedule - more than 3 years, 10 months
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Activities 4-9. Puerto Rico took no action.

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Activity 10. Submit License Application

Puerto Rico has taken no action.

A Governor's Certification was submitted to the NRC and sited States after the Congressional milestone date, but was found out-of-compliance by the sited States. The Department of Energy did not evaluate Puerto Rico because there were no surcharge funds available for rebate.

Timing: Congressional milestones - January 1, 1990; January 1, 1992
Behind schedule - by more than 1 year, 10 months, for license application and Governor's certification

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Activities 11-13. No action taken by Puerto Rico.

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Developer/operator: Not applicable

Public involvement: Not known

Funding: Not applicable

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5.4.4

RHODE ISLAND
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

In 1986, Rhode Island enacted a Massachusetts/Rhode Island Compact. This legislation is consistent with the revised compact bill developed by Massachusetts in 1985 except for a provision that bases the host selection on the volume and activity of the waste generated. Because of this provision, Rhode Island would be exempt from serving as the initial host State.

Because Rhode Island had enacted legislation, the sited States declared that Rhode Island was in compliance with the Congressional milestone. However, the Department of Energy determined that, without corresponding action by the other eligible member State, the action was not a sufficient basis for compliance with the milestone.

Timing: Congressional milestone - July 1, 1986
On schedule - Compliance was granted by sited States because of the enacted legislation. However, the Department of Energy's view was different and did not determine that Rhode Island is in compliance.

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Activity: 2. Host State Selection

There are no plans to establish a site in Rhode Island.

Following discussions that began in June 1987, Rhode Island signed a contract with the Rocky Mountain Board in December 1987 for disposal of Rhode Island's waste through 1989. The disposal contract was amended to allow continued disposal at the Beatty facility in Nevada through December 31, 1992.

Timing: DOE target - March 1987
Behind schedule - more than 4 years, 7 months

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Activity: 3. Develop Siting Plan

Rhode Island did not submit a siting plan.

However, the contract that was signed with the Rocky Mountain

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Compact was determined by the Department of Energy to satisfy the Congressional milestone. Notwithstanding, the view of the sited States is that the contract does not satisfy the milestone requirement but merely provides a place for Rhode Island to dispose of its waste for a specified period.

State officials are watching the development of other States' facilities and hope to use another facility or join a compact.

Timing: Congressional milestone - January 1, 1988
Behind schedule - more than 3 years, 10 months

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Activities 4-9. Rhode Island has taken no action.
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Activity: 10. Submit License Application

Rhode Island has taken no action.

Rhode Island submitted a Governor's Certification to demonstrate compliance with the Congressional milestone. The sited States found that the provision of the governor's certification, for generators to store their own waste for 5 years, was insufficient. Periodic meetings were held with generators to assure communication of current waste data and to review the status of preparation for 5-year storage. The State is continuing to review alternatives to satisfy milestone requirements. The Department of Energy found that Rhode Island was in compliance because of its contract with the Rocky Mountain Compact for disposal through December 31, 1992.

Timing: Congressional milestones - January 1, 1990; January 1, 1992
Behind schedule - by more than 1 year, 10 months, for license application and Governor's certification from the sited States.

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Activities 11-13. Rhode Island has taken no action
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Developer/operator: Not applicable

Public involvement: None

Storage: The State launched in 1991 a major source reduction program and instructed generators to provide for storage for a minimum of 5 years starting in 1993. Through source reduction,

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storage for decay, and other techniques, Rhode Island expects to be an insignificant generator in 1993.

Funding: During 1988, Rhode Island enacted legislation and set up the necessary systems to collect from waste generators supplemental surcharges that the State pays to the Rocky Mountain Compact for disposal of LLW under the current contract.

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5.5 PROGRESS IN SITED COMPACTS

5.5.1 SOUTHEAST COMPACT
As of October 11, 1991

Activity: 1. Ratify Compact or Certify Independent

The Southeast Compact was granted Congressional consent January 15, 1986. The Southeast Compact was amended and consented to by Congress on November 22, 1989 with the following major provisions: no party State is to operate a compact regional facility longer than 20-years or dispose of more than 32 million cubic feet of LLW (whichever comes first); and no party State may withdraw from the Southeast Compact after the new regional disposal facility in North Carolina has operated 30 days. Thereafter, a party State may withdraw only with the unanimous approval of the Compact Commission and with the consent of Congress.

Timing: Congressional milestone - July 1, 1986
Not applicable to sited compacts.

Activity: 2. Select Host State

The currently operating disposal facility is located at Barnwell, South Carolina. The Southeast Compact Commission was officially notified by the Governor of South Carolina that the Barnwell facility will close on December 31, 1992. The Commission voted on September 10, 1986 to select North Carolina as the next host State.

The South Carolina Department of Health and Environmental Control conducted a hearing on September 17, 1991 in Barnwell County on keeping the Barnwell LLW facility open beyond January 1, 1993. Current law requires the facility to cease operating on that date. Over 70 persons testified that Barnwell should continue operations. Written comments are due until October 18, 1991. The closure is key to the compacting process. The issue, which is complicated, is further involved because North Carolina has not pursued an understanding to develop a chemical hazardous facility in addition to the LLW disposal facility as described above. The issue will be resolved in the next legislative session. In the meantime, the Southeast Compact Commission will make a recommendation on interim waste management options at the upcoming meeting October 24-25, 1991.

Timing: DOE target - March 1987
On schedule if applicable

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Activity: 3. Develop Siting Plan

The North Carolina Low-Level Radioactive Waste Management Authority was created by legislation on August 13, 1987. The Authority was given broad powers to site, design, construct, operate, finance, maintain, close, and permanently care for a disposal facility. Deadlines were set forth in the law for all major steps in the siting progress. For example, the Authority must have begun operation no later than November 1, 1987, and must have a completed disposal facility by December 31, 1992.

Timing: Congressional milestone - January 1, 1988
On schedule if applicable

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Activity: 4. Select Candidate Sites

The siting criteria were approved by the Authority on April 15, 1988. Beginning in 1988, a statewide screening process was conducted by Ebasco, Inc., a contractor for the Authority. In March 1989, Ebasco completed Phase II of the screening which had identified 5,000 square miles or about 10 percent of the State as having a higher probability of containing technically suited areas. The Authority signed a contract on July 28, 1989, with Chem-Nuclear Systems Inc. of Columbia, South Carolina, to site, design, develop, construct, operate and close the State's LLW disposal facility.

On November 8, 1989, after continuing Ebasco's work, Chem-Nuclear presented to the Authority four areas as favorably suited to host the disposal facility. On February 21, 1990, after two to three months of on-site precharacterization two designated sites were recommended to the Authority, located in Richmond and on the border of Wake/Chatham Counties. The other potential sites in Rowan and Union Counties were eliminated because perched water deposits were found in the clay substrata above the water table.

The site in Richmond County is comprised of 2,670 acres located in the southeastern corner of the county, about 4 miles southeast of Hamlet and 9 miles southeast of Rockingham. The site is approximately 3 miles north of the South Carolina border.

The Wake/Chatham site is approximately 1,380 acres about 20 miles southwest of Raleigh near the Shearon Harris nuclear power station. The selection of the location of the actual facility within these

site areas will be a factor for consideration during the detailed site characterization. The site will comprise approximately 500 acres.

Timing: DOE target - June 1988
Behind schedule - 1 year, 8 months if applicable

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Activity: 5. Characterize Disposal Sites

By the Authority. Chem-Nuclear is the contractor. Subcontractors include Law Engineering and Dames & Moore.

Richmond County sought an injunction prohibiting the Authority from making a decision as to whether to approve the Richmond County site for characterization in early March 1990. By consent of the parties the county's motion for preliminary injunction came up for hearing on March 28, 1990. At the conclusion of the hearing the judge issued an order which permits the Authority to go forward with its decisionmaking process on whether to select the Richmond County site for characterization. The Authority and its contractors were permitted to enter Richmond County to further inspect the site to facilitate preparation for a site-specific characterization plan. The order prohibits invasive testing or inspection, such as digging, drilling, or clearing until the judge has had an opportunity to review the site-specific characterization plan. The hearing has been continued until that plan is available.

On June 13, 1990, Chem-Nuclear submitted site characterization plans for Wake/Chatham and Richmond Counties sites to the North Carolina Division of Radiation Protection for review. Both plans were rejected and are currently being revised. Chem-Nuclear is expected to submit revised draft plans in February 1991. State geologists found that potentially, ground water could move out of the site into adjacent streams. Because of this fact, the projected facility completion date of January 1, 1995 has slipped to the spring of 1995.

On October 31, 1990, Chatham County filed a complaint in the county Superior Court against the Authority. The complaint alleges that the Authority failed to comply with State law with regard to the site selection process, such as developing site selection criteria, establishing rules and procedures for public participation, and seeking a volunteer community. On November 8, 1990, this case and the Richmond County lawsuit were designated as "exceptional" cases, meaning that each case will receive the concentrated attention of a single judge.

On September 21, 1991 the Superior Court denied Wake and Chatham

Counties' motion for a preliminary injunction. The motion requested that the Authority be preliminarily enjoined from further characterization activities at the site until an environmental impact statement, or at least an environmental assessment, is conducted.

The site characterization plans were approved for the Richmond and Wake/Chatham sites in August by the Division of Radiation Protection. Contractors began characterization work immediately for the Wake/Chatham site and will begin work on the Richmond site in November 1991 if pending legal issues are resolved because the Authority is still under a restraining order issued by the court in March 1990.

Characterization is expected to be completed by May 1993 for the Wake/Chatham site and by July 1993 for the Richmond County site.

The Authority adopted a Quality Assurance Program Policy and Procedures document which establishes the framework within which the Authority staff will implement the Authority's quality assurance program.

Timing: DOE target - June 1989
Behind schedule - about 4 years, if applicable

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Activity: 6. Select Final Site

By the Authority. On July 13, 1990, the Authority announced a two-year delay in facility completion. The new date announced was January 1, 1995. Significant elements of delay included 6 months due to the selection of operating contractor; 3 months due to the more extensive precharacterization and public comment prior to designation of 2 sites for detailed characterization; 12 months due to the critical path work items not considered in the legislation schedule, e. g., preparation of the site specific characterization plan, review and approval of the site characterization plans and deployment of the site monitoring wells, environmental instrumentation, and surface water weirs; and 3 months delay due to the extended period for review and issuance of facility license. The new revised schedule was viewed as optimistic since it has no contingency for unplanned delays or disruptions. Shortly thereafter, an additional 3 month delay was anticipated. See activity 5.

The selection of a preferred site is scheduled for October 1993.

Timing: DOE target - June 1989
Behind schedule - 4 years, 4 months, if applicable

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Activity: 8. Select Disposal Technology

Shallow land burial is prohibited by law in North Carolina. On October 24, 1990, the Authority accepted the technology selection report from Chem-Nuclear and adopted a schedule for review of the recommendation. On March 22, 1991, the Authority fulfilled a statutory milestone when it selected the Integrated Vault Technology, as recommended by Chem-Nuclear. The technology chosen is an above-ground vault with a multiple layer earthen cap and is based on earth-mounded concrete bunker technology. All waste will be placed inside concrete overpacks and sealed with grout. The overpacks are placed in closed modules that are filled with sand and sealed with a concrete roof. A monitoring system will be used to detect the presence of water in the vaults or the leakage out of the vaults, should that ever occur. The technology is similar to the one proposed for Pennsylvania by Chem-Nuclear.

According to law, the Authority presented the information upon which it based its selection to site designation review committees in the counties in which the two designated sites are located. Each committee has 11 members appointed by the County Commissioners to advise them on site development activities. Committee members were chosen to represent industrial and institutional interests in the county, and the concerns of the general public.

Timing: DOE target - September 1988
Behind schedule - 2 years, 6 months, if applicable

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Activity: 8. Design Disposal Facility

By the Authority. MK-Ferguson Company under contract to Chem-Nuclear Systems, Inc. NUMATEC is providing technical support for the design of the engineered barriers.

The schedule is under revision.

Timing: DOE target - September 1989
Behind schedule - more than 2 years, 1 month, if applicable

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Activity: 9. Complete Environmental Assessment

By the Authority. Dames & Moore under contract to Chem-Nuclear Systems, Inc. The Authority approved and recommended legislation

for a comprehensive plan of host community benefits. The recommended package of benefits would generate an estimated \$3 million in revenues during each year of facility operation. The benefits package includes a 6 percent gross receipts tax, payments in lieu of property taxes, reimbursement for county expenses, and compensation for lost property values and property tax revenues.

Schedule is under revision.

Timing: DOE target - January 1, 1990
Behind schedule - more than 2 years, 10 months, if applicable

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Activity: 10. Submit License Application

By the Authority. Dames & Moore under contract to Chem-Nuclear Systems, Inc. The total estimated cost through submitting a license is estimated at \$60 million.

Submission of a license application to the North Carolina Division of Radiation, Department of Environmental Health and Natural Resources is scheduled for November 1993.

Timing: Congressional milestones - January 1, 1990, or January 1, 1992
Behind schedule - 1 year, 11 months after second milestone if applicable

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Activity: 11. License Disposal Facility

By the Division of Radiation Protection, North Carolina Department of Environmental Health and Natural Resources.

The Division expects to take about 15 months to review the application. On this basis, the license should be issued in February 1995.

Timing: DOE targets - January 1, 1992, or March 1993
Behind schedule - 1 year, 11 months after second target, if applicable

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Activity: 12. Construct Disposal Facility

By the Authority. MK-Ferguson Company under contract to Chem-

Nuclear Systems, Inc.

Construction is scheduled to begin in February 1995 and be completed in February 1996.

Timing: DOE targets - January 1, 1993, or January 1, 1995
Behind schedule - 1 year, 2 months after second target

=====

Activity: 13. Provide Disposal

Disposal operations are projected to begin in February 1996 if no litigation delays it.

Detailed schedule under revision.

Timing: Congressional deadlines - January 1, 1993; January 1, 1996
Behind schedule - two months, with respect to the second deadline, if applicable

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Developer/operator: Chem-Nuclear Systems, Inc.

Public Involvement: An integral part of the Authority's site selection process is public information and involvement. Several series of meetings were conducted during the precharacterization phase. These meetings provided an opportunity for the general public to obtain information about the site selection process and to present their concerns to the Authority. Smaller meetings were held with local and county officials, community and business leaders and landowners in the site areas. Open houses were held in the vicinity of the designated sites. After publication of the precharacterization reports open meetings were held near the two most favorable sites. They were attended by over 1,600 people. A comprehensive response document was prepared prior to the Authority's action of April 30, 1990, when the two sites for characterization were designated.

Funding: The funding of the prelicensing phase of the project has been provided from 4 sources: (1) Appropriations from the North Carolina General Fund; (2) Southeast Compact Host State Assistance Fund; (3) Capacity Assurance Charge; and (4) Access Fee on Waste Generators from the Southeast Compact Party States.

The North Carolina General Assembly appropriated \$18.5 million through the 1990-91 biennium. These public funds were loaned to the project to finance the pre-operational phases of the work. All

State monies will be repaid with interest through fees assessed on the waste generators once the facility is operational.

The Southeast Compact Host State Assistance Funds has contributed \$800,000 to support the prelicensing activities. A \$20 per cubic foot Capacity Assurance Surcharge on waste shipped by all Southeast Compact generators to the Barnwell Facility generated \$7 million since it took effect on January 1, 1990. The Access Fees were instituted on January 1, 1991 and are structured to generate \$12 million in 1991 and 1992.

Interim Storage: The Southeast Compact Commission is debating the interim solution of what to do with its LLW until the North Carolina facility starts to operate, currently forecast for early 1996. There are 3 alternatives -- 1) keep Barnwell open which has the advantage of generating funds of \$24 million necessary to complete the North Carolina disposal facility; 2) store at decentralized facilities; and there are no plans for a centralized facility; and 3) export - unlikely. After a white paper is developed on October 23, it will be discussed at a Compact Commission meeting on October 25, 1991.

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Timing: DOE target - March 1987
On schedule if applicable

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Activity: 3. Develop Siting Plan

To provide a framework for evaluation of proposals for disposal of LLW in Colorado and other alternatives for management and disposal of the region's LLW, the Department of Health began in late 1988 to develop a LLW management plan.

Timing: Congressional milestone - January 1, 1988
Behind schedule - more than 2 years, if applicable

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Activity: 4. Select Candidate Sites

In August 1988, the Colorado Department of Health submitted an application to the Compact Board asking the Board to designate a proposed disposal site near Uravan, Colorado, as the regional disposal facility to succeed the Beatty, Nevada, site. The disposal site, which was proposed by UMETCO Mineral Corporation, would have separate facilities for disposal of uranium mill tailings from the Denver area, and LLW from the Compact. In November 1988, after public hearings, Colorado withdrew the application pending further analysis of economic and licensing issues.

Timing: DOE target - June 1988
Behind schedule - 2 months, if applicable

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Activity: 5. Characterize Disposal Site

Unknown.

Timing: DOE target - June 1989
Behind schedule - more than 1 year, 7 months, if applicable

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Activity: 6. Select Final Site

On February 21, 1989 Colorado applied to the Board to designate a regional LLW facility at Uravan for the disposal of radium from

Denver. On May 8, 1989 the Board approved the Uravan site for disposal of radium-bearing naturally-occurring radioactive material (NORM) waste. Under the Compact definition and the rules of the Colorado Department of Health, radium bearing-waste is considered to be LLW.

Timing: DOE target - June 1989
On schedule if applicable

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Activity: 8. Select Disposal Technology

The disposal cell includes a liner, multi-layered cap, surface water control features, and additional ground water protection features. The Disposal Facility is specifically designed for the Superfund Denver Radium Site radium-bearing waste and will not be permitted for or accept non-NORM LLW, hazardous wastes as defined by the Resource Conservation and Recovery Act (RCRA), or mixed LLW. The site is licensed for the disposal of 200,000 cubic yards of Denver radium waste. Approved by the Board on May 8, 1989.

Timing: DOE target - September 1988
Behind schedule - 9 months, if applicable

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Activities 8-13. No further action was taken because the Denver radium-bearing waste is being exported to the Clive, Utah, site operated by Envirocare of Utah, Inc., which was licensed by the State of Utah in February 1988. Because of the different definition of LLW in the Northwest Compact, it has no jurisdiction over that site.

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Developer/operator: Not applicable

Public involvement: The Rocky Mountain Compact and the State of Colorado regularly hold public meetings on all subjects of concern.

Funding: On May 21, 1990, the Compact Board increased the compact surcharge on waste disposal at the facility in Beatty, Nevada, from \$2.50 to \$4.50 per cubic foot, effective August 1, 1990. In addition, the Compact Board has negotiated long-term disposal contracts through December 31, 1992, with the States of Rhode Island, District of Columbia, New Hampshire (for non-reactor LLW), and Vermont. However, the Vermont contract was not approved by the Vermont legislature during its 1990 session. The anticipated revenue, including accumulated interest, from these contracts

STATUS OF STATES PROVIDING DISPOSAL CAPACITY FOR LLW - 10/11/91

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(except for Vermont) is in excess of \$1.2 million. If the Vermont contract is consummated, another \$1.1 million is anticipated.

Below Regulatory Concern: Colorado enacted legislation on June 4, 1991 which requires State approval of disposal of BRC.

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5.5.3

NORTHWEST COMPACT
As of October 11, 1991

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Activity: 1. Ratify Compact or Certify Independent

The Northwest Compact was granted Congressional consent January 15, 1986.

Timing: Congressional milestone - July 1, 1986
Not applicable to sited compacts.

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Activity: 2. Host State Selection

Washington was determined to be the host State by the Compact with the operating disposal facility at Richland. There is no closing date for the operating facility.

Throughout 1990, the Washington Department of Ecology researched the development of mixed waste management options for the 7 States of the Northwest Compact. On September 6, 1991 Chemical Waste Management, Inc., announced plans to fund the construction and operation of a treatment facility for mixed waste in eastern Washington; possibly on the Hanford reservation. If approved by Washington, the facility could accept hazardous waste generated in the Pacific Northwest as well as the cleanup of DOE's Hanford facilities. The treatment facility might be acceptable for commercial mixed waste but no decision has been made.

The Northwest Compact Committee continues to scrutinize the Envirocare facility in Utah and believes it has jurisdiction over that facility. However, it has not exercised any authority pending developments at that facility. Currently, the Envirocare facility is licensed for radioactive waste other than LLW under the Act. However, Envirocare is seeking license amendments to accept bulk quantities of low specific activity LLW from outside the Northwest Compact.

Timing: DOE target - March 1987
On schedule if applicable

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Activities 3-13 are not applicable
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Developer/operator: US Ecology, Inc.

Public involvement: Washington State has a practice of conducting public meetings on all issues, such as the proposed agreement with the Rocky Mountain Compact to accept LLW post 1992. See Rocky Mountain Compact for details.

Funding: The Northwest Compact is funded primarily through surcharges. In May 1991, Washington enacted legislation to provide for regulation of the rates charged by the site operator of the Richland facility as of January 1, 1993. Regulation of the rates charged by US Ecology is contingent upon finding the facility to have a monopoly as defined by criteria specified in the legislation. The law also established a new fee of \$6.50 per cubic foot of LLW disposed at the facility as of January 1, 1993. The revenue will be divided between the host county and a regional economic development fund. The law sequentially lowers the current business and occupation tax on the site operator.

Leasehold rent paid by US Ecology will increase from \$6,000 per year to \$50,000 per year, effective January 1, 1993. These funds will be turned over to the host county.

Below Regulatory Concern: Oregon approved legislation on June 22, 1991 which requires State approval for recycling, incinerating or disposing of BRC.

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6. SUMMARY OF FORECAST DATES FOR SUBMITTAL OF LICENSE APPLICATIONS TO AGREEMENT STATES OR NRC
(As of October 11, 1991, updated early January 1992)

COMPACT/UNAFFILIATED STATE	LICENSE SUBMITTAL DATE	COMMENT
Appalachian Pennsylvania	Spring 1994	Agreement State
Central Nebraska	July 27, 1990	Agreement State
Central Midwest Illinois	May 15, 1991	Agreement State
Midwest Ohio	No date scheduled	NRC, Ohio may become an Agreement State
Northeast Connecticut	May/June 1994	NRC
New Jersey	January 1995	NRC
Southwestern California	December 1989	Agreement State
Maine	Late 1995- early 1996	NRC
Massachusetts	November 1994	NRC, or by MA if Agreement State
New York	Date unknown	Agreement State New legislation.
Texas	March 1992	Agreement State
Vermont	October 1997	NRC
Southeast North Carolina	November 1993	Agreement State

Note: Congressional milestones - January 1, 1990, or January 1, 1992.

Source: Office of State Programs, NRC

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7. SUMMARY OF FORECAST DATES FOR THE DISPOSAL OF LOW-LEVEL
 RADIOACTIVE WASTE FOR COMPACTS AND UNAFFILIATED STATES
 (As of October 11, 1991, updated early January 1992)

COMPACT/UNAFFILIATED STATE	FACILITY OPERATION DATE	COMMENT
Appalachian (11%) Pennsylvania (AS)	Fall 1996	10 months after second deadline - January 1, 1996
Central (5%) Nebraska (AS)	Fall 1995	2 years, 10 months after first deadline - January 1, 1993
Central Midwest (9%) Illinois	Late 1993	10 months after first deadline
Midwest (8%) Ohio (NRC)	No date scheduled	New host State Maybe new Agreement State
Northeast (8%) Connecticut (NRC)	Late 1996	Almost 3 years after first deadline, being revised
New Jersey (NRC)	Early 1997	More than 1 year after second deadline
Southwestern (7%) California (AS)	January-March 1993	Up to 3 months after first deadline
Maine (<1%) (NRC)	Late 1997/ early 1998	About 2 years after second deadline
Massachusetts (4%) (NRC)	December 1996	12 months after second deadline
New York (6%) (AS)	Target 1998	In house estimate. No date forecast because of new legislation. More than 2 years after second deadline.

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Texas (1%) (AS)	June 1994	Earliest. One year 6 months after first deadline
Vermont (<1%) (NRC)	August 1999	3 years, 10 months after second deadline.

STATES WITHOUT PLANS FOR FACILITIES

New Hampshire, Rhode Island, District of Columbia, and Puerto Rico (each <1%), and Michigan (3%)		These States do not intend to construct any disposal facilities.
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COMPACTS NOT SUBJECT TO CONGRESSIONAL MILESTONES

Northwestern (8%) Washington (AS)	Not applicable	Hanford LLW disposal facility will remain operating.
Rocky Mountain (<1%) Colorado (AS)	Doubtful	No site is needed if Rocky Mountain can send LLW to Northwest Compact after January 1, 1993 when Beatty is scheduled to close. Contract is ready for signatures.
Southeastern (29%) North Carolina (AS)	February 1996	3 years, 2 months after scheduled closure of Barnwell, December 31, 1992.

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Note: () after compact/State is percentage of National LLW for 1990 = 1.1 million cubic feet.
() after Host State: AS= Agreement State; NRC= NRC as licensing agency.

Source: Office of State Programs, NRC