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ADVISORY COMMISSION ON RADIOACTIVE WASTE AND DECOMMISSIONING

Department of Human Services Bureau of Health

February, 2003

Senator Sharon A. Treat, Chair Rep. Robert Daigle, Vice-Chair

2002 ANNUAL REPORT

Prepared in accordance with 38 MSRA Chapter 14A § 1453A (4)



JOHN ELIAS BALDACCI GOVERNOR STATE OF MAINE DEPARTMENT OF HUMAN SERVICES Division of Health Engineering 11 STATE HOUSE STATION AUGUSTA, MAINE 04333-0011

Senator Christopher G.L. Hall and Representative Lawrence Bliss,

In accordance with TITLE 38: WATERS AND NAVIGATION, CHAPTER 14-A: NUCLEAR WASTE ACTIVITY, SUBCHAPTER I: GENERAL PROVISIONS, § 1453-A. Advisory Commission on Radioactive Waste and Decommissioning, Item 4: Meetings and Reports, the commission presents to you a copy of its Annual Report 2002.

Please, if you have any questions and comments, make them to Tom Hillman, 287-8401. Email: tom.hillman@maine.gov

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Tom Hillman Asst. Engineer Radiation Control Program



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Non-Discrimination Notice

In accordance with Title VI of the Civil Rights Act of 1964 (42 U.S.C. §1981, 2000d et seq.) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), the Age Discrimination Act of 1975, as amended (42 U.S.C. §6101 et seq.), Title II of the Americans with Disabilities Act of 1990 (42 U.S.C. §12131 et seq.), and Title IX of the Education Amendments of 1972, (34 C.F.R. Parts 100, 104, 106 and 110), the Maine Department of Human Services does not discriminate on the basis of sex, race, color, national origin, disability or age in admission or access to or treatment or employment in its programs and activities.

Kim Pierce, Civil Rights Compliance Coordinator, has been designated to coordinate our efforts to comply with the U.S. Department of Health and Human Services regulations (45 C.F.R. Parts 80, 84, and 91), the Department of Justice regulations (28 C.F.R. part 35), and the U.S. Department of Education regulations (34 C.F.R. Part 106) implementing these Federal laws. Inquiries concerning the application of these regulations and our grievance procedures for resolution of complaints alleging discrimination may be referred to Kim Pierce at 221 State Street, Augusta, ME 04333, telephone number: (207) 287-3488 (Voice) or (207) 287-4479 (TDD), or the Assistant Secretary

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of the Office of Civil Rights of the applicable department (e.g. the Department of Education), Washington, D.C.

2002 Advisory Commission on Radioactive Waste and Decommissioning

Senator Sharon Treat (Chair) Senator W. Tom Sawyer Senator Norman Ferguson Clough Toppan, P.E., DHS Mike Meisner, MYAPC Don Hudson, PhD, public member Ron Ouellette, public member Representative Robert Daigle, (vice-chair) Representative William R. Savage Representative Peter L. Rines Bob Demkowicz, DEP Robert Marvinney, PhD, DOC Richard Carey, public member James Mitchell, public member

Stephen Jarrett, public member

ESTABLISHING LAW

The Establishing Law is:

TITLE 38: WATERS AND NAVIGATION •CHAPTER 14-A: NUCLEAR WASTE ACTIVITY •SUBCHAPTER I: GENERAL PROVISIONS •§ 1453-A. Advisory Commission on Radioactive Waste and Decommissioning.

And can be seen in its entirety on the state website:

http://janus.state.me.us/legis/statutes/38/title38sec1453-a.html

The requirement for this report is in section 4. Meetings and Reports.

"The commission shall meet at least 4 times a year. The commission shall submit an annual report of activities to the Governor, the President of the Senate, the Speaker of the House of Representatives, the joint standing committee of the Legislature having jurisdiction over natural resource matters and the joint standing committee of the Legislature having jurisdiction over utility and energy matters by February 15th of each year." [1997, c. 700, §7 (amd).]

INTRODUCTION

The purpose of the Advisory Commission on Radioactive Waste and Decommissioning, referred to as the "Commission", is to advise the Governor, the Legislature and other pertinent state agencies and entities on matters relating to radioactive waste management and decommissioning of nuclear power plants and provide information to the public and provide opportunities for public input.

The Advisory Commission on Radioactive Waste and Decommissioning (ACORWD) remains the only State entity charged by the legislature to collect, analyze and disseminate information on all aspects of radioactive waste management. The Legislature created the Advisory Commission in 1985 as a successor to the Low-Level Waste Siting Commission. The Advisory Commission's purpose is "to advise the Governor and the Legislature on matters relating to radioactive waste management..."

Historically the Advisory Commission has taken leading roles in issues involving high and low level radioactive waste in Maine. Notably, the Commission took a leading role in fighting the siting of a high level radioactive waste repository in Maine. Later, the Commission was instrumental in establishing policy for dealing with low-level waste, leading to the creation of the Low-Level Waste Authority. Ultimately, with Commission endorsement, Maine negotiated a compact with the State of Texas for disposal of low-level waste and the Authority was dissolved. Currently the Commission is involved with issues dealing with the decommissioning of Maine's nuclear power plant, Maine Yankee. It has been closely involved in the decommissioning standards set by the Maine Legislature in 2000. The Commission is updated on the Independent Spent Fuel Storage Installation (ISFSI) and the reactor vessel segmentation projects under way at Maine Yankee as well as security concerns for the site since September 11.

DUTIES AND PRIORITIES OF THE ADVISORY COMMISSION ON RADIOACTIVE WASTE AND DECOMMISSIONING

Duties of the ACORWD

- 1. Provide opportunities for public input and disseminate information to the general public and promote public understanding concerning the management of radioactive waste.
- 2. Study the management, transportation, treatment, storage and disposal of radioactive waste, including high-level and low-level radioactive waste and mixed waste, generated in this state.
- 3. Monitor the methods, criteria and federal timetables for siting and constructing high-level radioactive waste repositories or storage facilities.
- 4. Monitor the Texas siting effort and Texas low-level Radioactive Waste Disposal Compact Commission activities and, if events require, propose legislation to reinstate an in-state siting effort for the storage or disposal of low-level radioactive waste in the state.
- 5. Advise the Governor, the Legislature and the Department of Environmental Protection or their successors, the state's member of the Texas low-level Radioactive Waste Disposal Compact Commission and other pertinent state agencies and entities, as appropriate, on relevant findings and recommendations of the commission.
- 6. Receive a written report from the State's member of the Texas low-level Radioactive Waste Disposal Compact Commission within 60 days after a meeting of that Commission or an oral report from that member at the next scheduled meeting of the Advisory Commission on Radioactive Waste, whichever comes first.
- 7. Prepare a newsletter for the public recording developments relevant to radioactive waste issues.

The priorities of the ACORWD

- 1. The decommissioning of the Maine Yankee Atomic Power Plant.
- 2. Study the management, transportation, treatment, storage and disposal of radioactive waste.
- 3. Provide opportunities for public input and disseminate information to the general public.
- 4. Monitoring the Texas siting effort of the Texas Compact (Texas, Maine and Vermont).
- 5. All remaining duties are set as equal after the first four.

The siting effort was of high priority in the past, but has since diminished due to the negative results in Texas' effort to locate a site. Current legislation in Texas has stalled the effort until the year 2003 when their session reconvenes. Monitoring the Maine Yankee Decommissioning is

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currently the number one priority of the Commission. The events of September 11, 2001 have also created a focus on the security of radioactive waste in the state.

ACTIVITIES OF THE ACORWD TO SUPPORT ITS DUTIES

The Commission provides opportunities for public input at all its public meetings. Concerned citizens and organizations like Friends Of The Coast and the Citizen's Monitoring Network regularly voice their concerns on the issues concerning radioactive waste.

The Commission disseminates information to the general public by means of a newsletter and website.

The Commission currently has a website located on the Department of Human Services, Bureau of Health, Division of Health Engineering, Radiation Control Program's website. The website address is:

http://www.maineradiationcontrol.org

The website has a new domain name to get you to the same site as in the past. However, the new name allows individuals searching the net to locate the commission and Maine radiation topics. The website posts reports, meeting times and topics of concern. The website also serves to promote public understanding concerning the management of radioactive waste through links to the other government agencies and industry.

The Commission has also set up booths at Open House events in the state. The Commission staff sets up at the annual Bureau of Health Day held at the Augusta Civic Center during the winter. A quarterly newsletter providing informational updates on Radioactive Waste in Maine was sent out to 300+ addresses in the spring, summer and fall. During the winter the newsletter was also sent out to the entire mailing list for the Radiation Control Program. This new list included the ACORWD, radiation materials and radon mailing lists and went out to 800+ readers.

The Commission studies the management, transportation, treatment, storage and disposal of radioactive waste, including high-level and low-level radioactive waste and mixed waste, generated in this state by means of presentations at its meeting, site visits and attending information meetings.

The commission was updated on Maine Yankee's decommissioning and the planned disposal of low and high level waste by state on-site inspectors, Pat Dostie and Dale Randall, and by Maine Yankee's Eric Howes and Mike Meisner. These updates keep the commission informed on the status of work.

Some Commission members also regularly attend Maine Yankee's Community Advisory Panel (CAP) to hear presentations by Maine Yankee, the Nuclear Regulatory Agency, Environmental Protection Agency and the public. Two commission members are also members of that panel.

The commission monitors the methods, criteria and federal timetables for siting and constructing of a high-level radioactive waste repository and/or storage facilities by means of a report from the ACORWD staff, the State Public Advocate and State Nuclear Safety Office. This information is compiled in the appendix. The appendix describes the status and events in the Texas Compact, Barnwell Radioactive Waste Landfill in South Carolina, Yucca Mountain, Goshute Indians, etc.

The commission held one meeting during the year 2002. The meeting was held on 27 July. Other meetings were planned, but conflicted with Legislative meeting dates and an emergency session. The meeting was held in the Cross-Burton State Office and was open to the public.

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Meeting agendas follow a standard format with presentations giving updates on Low-Level Waste, High-Level Waste (HLW), Maine Yankee decommissioning activities, special issues and public comments.

SUMMARY OF MEETING

Meeting of 23 July.

Speakers:

William Snedeker, Lieutenant, State Police, on the topic of Security. Tom Hillman, Maine Radiation Control Program, on LLW updates. Stephen Ward, Public Advocate, on the Texas Compact. Eric Howes, Maine Yankee, MY update Public Comments

The Chairperson Senator Sharon Treat called the meeting to order. Lieutenant Snedeker presented security status of Maine Yankee's decommissioning activities and the Independent Site Fuel Storage Installation. Lt. Snedeker was directed by the State Nuclear Safety Advisor in June 2001 to examine security at the site and report back to the advisor and Governor King. He indicated that while Maine Yankee was meeting the requirements of the Nuclear Regulatory Commission there were several areas that were lacking and needed enhancement. Maine Yankee's security posture was designed on NRC design basis models with room for improvement. The state sent a letter to Maine Yankee with security recommendations that have almost all been implemented by Maine Yankee.

Senator Treat asked if new NRC post 9/11 recommendations have been implemented at Maine Yankee. Lt. Snedeker answered that they had been. Discussion also included the issues of flights paths over the site and guard presence. Flight paths must be balanced with consideration of a commercial airfield and a nearby military air station. Guards employed by Maine Yankee have been increased. Coast Guard presence has also been incorporated into the security posture.

Tom Hillman then reported on the status of Low Level Radioactive Waste (LLW) in the State. The report included current producers of LLW and the status of disposal sites in the nation.

Stephen Ward reported to the commission on the current situation with Maine passing legislature to withdraw from the Texas Compact. The move would clear Maine of a 25 million dollar responsibility for the siting of a LLW disposal site in Texas. Since Maine's largest producer of LLW is decommissioning it makes no sense to remain in the compact under such a financial responsibility. Texas is considering keeping Maine as a partner with Maine financial portion being zero or near zero dollars, however it is difficult to do anything with the compact with out going back to congress. Steve Ward stated that Maine has no objection to being a member of the compact only the financial responsibility. There are three options for the compact:

- 1. Do nothing and let Maine withdraw,
- 2. Amend the compact in Congress,
- 3. Maine remains in compact with zero payment.

The third option gives some protection to Texas in handling its waste future by continuing with the compact and to Maine by being in a compact that may site a waste disposal facility in the future. Senator Treat asked if legislation was needed in this area and Mr. Ward replied none at this time was seen.

Eric Howes then gave an update of the decommissioning, which is at 64.2% complete. Major projects for the year were or will be unloading fuel into dry storage, removing the reactor vessel for shipment, demolishing structures and restoring the site. Security is at a heightened state since

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September 11th. The reactor vessel is the last major piece of equipment remaining at the site since the shipping of the steam generators some time ago. Greater than Class C (GTCC) waste material was removed from the vessel to be stored in four casks in the ISFSI until shipped to Yucca Mountain. The LTP (License Termination Plan) is expected to be approved later this year as well as the release of the "Back Lands". MEDEP was at the site for a (Natural Resource Protection Act) NRPA inspection and found in full compliance. Bailey Point was taken off the list for site re-use due to the fuel storage on-site security issues.

Ray Shadis of Friends of the Coast spoke to the commission in the public comments portion of the meeting. FOTC has filed a formal petition advising the NRC that they are in violation in permitting the fuel to be placed in dry casks. It is largely concerned with security. A preliminary hearing was scheduled for July 30. Three questions were asked by Senator Treat concerning the petition:

- 1. What is specifically 'unsafe' in terms of the petition?
- 2. What is the remedy?
- 3. Has the state taken a position?

Mr. Shadis stated FOTC believes a line-of-site exists to the casks and they cannot withstand explosions. The NRC relies on defense-in-depth for security. FOTC also feels the NRC has lesser security standards for an operating plant compared to a storage facility. The remedy Mr. Shadis stated is that FOTC has asked NRC to put fuel casks in the containment or moving the fuel to a military reservation.

The state, according to Paula Craighead, should praise the petition and is also interested in moving the fuel to a military installation.

APPENDIX A

LOW-LEVEL WASTE

Low-level Radioactive Waste (LLRW) is an inevitable by-product of beneficial uses of radioactive materials in the United States in the areas of medical research, diagnosis and treatment of diseases, industrial processes, and electric power generation. All these areas are deemed important to the interests of the nation. Today far less radioactive waste is produced than ten years ago. This is because of improved waste management practices and a large reduction in military defense related activity. Unfortunately, these practices will not reduce the amount to zero and waste will be with us for as long as we enjoy the benefits of the waste. The number of disposal sites needed to manage the quantity of waste now being generated is far less than formerly expected. Safe and effective methods and standards for transport and disposal of LLRW are well established.

The 1980 LLRW Policy Act, as amended in 1985, established a framework for the states to provide for safe disposal of LLRW, and encouraged the creation of regional compacts to develop an appropriate network of disposal sites. The deadlines established for the development of new sites have passed with no new sites being opened. Political, judicial, and administrative obstacles have blocked sites that were identified in California and Texas. Complex regulatory obstacles have thwarted other sites in North Carolina, Pennsylvania, Illinois, and Nebraska. Some states have simply stopped developing siting programs because there is no need for additional disposal capacity in the foreseeable future. Consequently, LLRW is now stored at or near the source of generation at thousands of sites nationwide. The effect of these obstacles and restrictions is to interfere with optimal beneficial uses of radioactive materials in medicine, research, and technology.

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The goal of managing LLRW is to ensure the safety of workers and the public and to protect the environment. To achieve this goal, disposal, <u>not</u> long-term storage, is the safest approach. Present knowledge and technology are sufficient to allow such disposal safely. However, Monitored Retrievable Storage is becoming widely accepted nationwide.

TEXAS COMPACT

Background

The governing body for the Texas compact is the Texas low-level Radioactive Waste Disposal Compact Commission. Member states are Texas, Maine and Vermont. The compact was established in June of 1993 when the Governor of Texas signed into law legislation establishing a low-level radioactive waste compact with Maine and Vermont. Maine completed its approval process with the passage of a referendum on November 2, 1993 and Vermont in 1994. President Clinton signed the compact consent legislation into law on September 20, 1998. Under the terms of the contract Texas will host the site, while Maine and Vermont will each pay Texas 25 million dollars. Under a 1998 letter of agreement between the three state Governors, payments were suspended indefinitely

Regulatory Responsibility:Texas Natural Resource Conservation Commission (TNRCC)Program Responsibility:
(abolished)Texas Low-Level Radioactive Waste Disposal Authority (Authority)Siting Responsibility:
(abolished)Texas low-level Radioactive Waste Disposal Authority (Authority)Other Involvement:
Disposal Technology:Texas Department of Health
Below-ground concrete canisters, previously, and now working toward
Above ground long-term storage.

Events in 2002

The Texas Legislature met in 2001 and does not meet again until 2003.

On April 5, 2002 Governor Angus King signed into law a bill titled "An Act to Repeal Provisions Imposing Financial Obligations on Electric Consumers Resulting from the Texas Low-Level Radioactive Waste Disposal Compact". The law will withdraw Maine from the Texas Compact. Under the provisions of the compact the two non-host states, Maine and Vermont, may enact legislation withdrawing itself from the compact provided that the withdrawal does not take effect for two years. During that two-year period, the withdrawing state remains liable for costs of the Texas Compact Commission and for any payments that are due and payable to the host county. Currently, no compact commission has been formed and a host county has not been designated. The legislation states in part:

"Pursuant to Section 7.03, 7.04 and 7.05 of the Texas Low-Level Radioactive Waste Disposal Compact, the State of Maine hereby unilaterally and irrevocably withdraws from and terminates its agreements under the Compact. The State of Maine takes this step due to the closure of the State's largest generator of low-level radioactive waste in 1997, obviating the need for Maine[s membership in the Compact, and due to the failure of the host state to cause a facility to be built in a timely manner pursuant to Section 4.04 of the compact agreement."

Advisory Commission on Radioactive Waste and Decommissioning Page 7 of 17 At the time of entry into the compact, Maine Yankee was expected to begin decommissioning at the termination of its operating license in 2008. In 1997 the plant decided to terminate operations and start decommissioning.

SOUTH CAROLINA

Schedule Set for Phasing Out Access

Total volumes of non-compact (Atlantic Compact) waste accepted at the Barnwell facility will be reduced each year. The largest drop was from 2001 to 2002 where it went from 160,000 to 80,000. following years will slowly diminish the volume until it site is totally Atlantic Compact waste.

Year (ending in June) maximum allowable volume (cubic feet) of waste from all sources

80,000
70,000
60,000
50,000
45,000
40,000
35,000

The South Carolina budget and Control Board sent out letters in late 2002 informing users of the Barnwell facility that stating in July 2004 it may be hard to schedule disposal. The Board suggested to users that a multi-year commitments would be needed to guarantee disposal space. At present, the Board has set up commitments with utilities representing 24 nuclear power plant units and several large generators. The letter states that Barnwell believes it is on track this year to receive 70,000 cubic feet of waste, which is the statutory limit for 2003. The Board feels that demand in 2003 for disposal will approximate supply and that Barnwell will be able to continue accepting waste on a first-come, first-serve basis until the 2004.

The letter includes the following statement of future capacity.

"Given the volume caps in state law, and communication already in place and in the latter stages of discussion, we estimate that we have the volumes of uncommitted capacity below:

e ·

5,800 cf
29,500 cf
26,800 cf
23,800 cf
17,800 cf

From these available volumes we would like to set aside some small amount for acceptance of sealed sources in situations where other alternatives for disposition are not available."

• Disposal rates for the Barnwell facility are set by the State of South Carolina, as is the methodology for allocating the declining annual volumes among potential customers. Chem-

Nuclear is compensated for operating the site based on audited operating costs, with any excess disposal revenues going to the state for educational purposes.

- In the unlikely event that Chem-Nuclear determines to terminate its lease for the disposal facility, the company is required to give the state six months notice. In such an event, the South Carolina Budget and Control Board would take steps to minimize any disruption in disposal service.
- Waste, which is disposed of at the Barnwell facility is attributed to the original generator, regardless of whether its form has been changed by an intermediate processor.
- State policy is to provide equal pricing and access for waste from all generators no waste broker or processor is given special access privileges or pricing discounts.
- South Carolina discourages agreements between waste brokers, processors and decontamination service and their waste generator customers that do not separate out and itemize disposal prices for generators. Chem-Nuclear has been asked to separate out disposal contracts from other waste management contracts in the future.

MAINE YANKEE ATOMIC POWER COMPANY

In early 2002 work continued on the Independent Spent Fuel Storage Installation (ISFSI) and preparing Greater than Class C (GTCC) Transportation Storage Containers (TSC) and Spent Fuel (SF) TSC. Planning and preparations for dry runs and fuel loading continued throughout early 2002.

In April the last GTCC TSC was transferred to the ISFSI marking the completion of GTCC loading and transfer activities.

The railroad leading into the plant began extension work in April and was completed in July. The line was extended 600 feet through the turbine building area to the backyard. The extension significantly increased efficiency in radioactive waste railcar loading, resulting in less congestion and reduced cost.

June saw the demolition of the Information Building, which was once the plant's link to educating the public on nuclear power. The first loaded GTCC document package was delivered to Maine Yankee and the package was 'reviewed for understanding' by the State Nuclear Safety Advisor and the Radiation Control Program. At mid-year the plant was 64.26% complete in decommissioning and employed 470 people.

Over the summer months the Nuclear Regulatory Commission observed "Dry-Run" activities of future shipments of the SF from the Spent Fuel Pool to the ISFSI. A requirement before the SF can be moved.

In July consultants for the state of Maine and the Radiation Control Program performed confirmation surveys in several locations. Over the course of a week they independently evaluated the Maine Yankee Final Status Survey Plan, analyzed available data, and examined Maine Yankee surveying techniques. No major problems were found and the event had positive results for all involved.

The Reactor Pressure Vessel (RPV) was lifted and transferred to the shipping container on August 6. It was moved to the southwest corner of the backyard on September 18. The RPV will remain on-site until it can be shipped to Duratek in Barnwell, S.C. for burial. The steam generators and

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pressurizer were buried at Envirocare on September 13. The components had been stored by Duratek in Tennessee ever since they were shipped from Maine Yankee by barge in the spring of 2000.

Maine Yankee submitted Revision 3 of its License Termination Plan (LTP) to the NRC for review on October 15. Revision 3 includes changes to the plan that address the NRC's questions and stakeholder issues.

In August the first SF TSC was loaded and moved to the ISFSI. The process of loading and moving continued with a steady schedule. The sixth TSC was transferred in October. At the end of the year the eleventh was ready for transfer. A total of 60 SF TSC will be moved to the ISFSI when the transfer is complete.

Source: Maine Yankee's weekly newsletter "The Look INSIDE"

UTAH

Envirocare of Utah currently disposes of Class A Low-Level Waste. Envirocare has been working on a Class B and C License Request.

On July 9, 2001, the Executive Secretary of the Utah Radiation Control Board issued a final decision to approve, subject to specified limitations and conditions, an application by Envirocare of Utah to receive and dispose of containerized Class A, B, and C low-level radioactive waste at its facility in Tooele County, Utah. Shortly thereafter, Envirocare President Charles Judd determined that the company would not seek legislative or gubernatorial approval for its class B and C low-level radioactive waste proposal. Over the months Envirocare felt that the major differences between their proposal to dispose of Class B & C low-level radioactive waste and the Goshute Tribe's proposal for Private Fuel Storage (PFS) to accept high-level spent fuel rods from nuclear power plants had created a public perception problem that made pursuit of their proposal extremely difficult. In January 2002 Judd resigned as president and CEO of Envirocare.

On April 3, 2001 a statewide ballot was filed in Utah that seeks to impose substantial taxes on the disposal of out-of-state low-level radioactive waste and to prohibit the disposal of Class B and C waste within the state. Only Class A would be allowed to be disposed of and with added taxes. In the November 5, 2001 elections, Utah voters defeated a statewide ballot. The initiative failed by a vote of nearly 2 to 1.

The failure was attributed to an intense opposition campaign that included endorsements from state legislators and dozens of other elected officials. The campaign was labeled " the most expensive citizen's initiative ballot in state history. An estimated \$2.9 million versus \$700,000 spent by the proponents.

Envirocare's petition to receive and dispose of containerized Class A, B and C waste at its Clive, Utah site was affirmed by the Utah Radiation Control Board. The board affirmed on November 19, 2002 an earlier vote of 9 to 0 to approve their application.

The board determined that Envirocare needed to revise its emergency response and contingency plans, but allowed the company to make the changes at any point before it actually starts accepting Class B and C waste.

Envirocare stopped its licensing process short of the needed governor and state legislative approval due to controversy with the Goshute Indians Spent Fuel Storage Facility. Envirocare

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could reactivate its petition for the approval after the next legislative session begins on January 20, 2003.

HIGH LEVEL RADIOACTIVE WASTE

The Nuclear Waste Policy Act of 1982

An Act to provide for the development of repositories for the disposal of high-level radioactive waste and spent nuclear fuel, to establish a program of research, development, and demonstration regarding the disposal of high-level radioactive waste and spent nuclear fuel, and for other purposes. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

Background

High-level radioactive waste (HLW) consists primarily of nuclear fuel rods from commercial nuclear power plants and is called "spent nuclear fuel." Radioactive waste that results from the commercial reprocessing of spent nuclear fuel also falls under the NRC definition of HLW. Reprocessing extract isotopes from spent fuel that can be used again as reactor fuel. Commercial reprocessing is currently not practiced in the US although it has been allowed in the past. There are significant quantities of HLW from the defense reprocessing and commercial nuclear programs at Department of Energy (DOE) facilities. These facilities include sites at Hanford, Washington; Savannah River, South Carolina; and West Valley, New York and must also be included in any Federal HLW disposal plans.

Legislative Requirements

US policies governing the permanent disposal of HLW are defined by the Nuclear Waste Policy Act of 1982 (NWPA), the Nuclear Waste Policy Amendments Act (NWPAA) of 1987, and the Energy Policy Act of 1992. These acts specify that HLW will be disposed of underground, in a deep geologic repository.

The NRC is one of three Federal agencies under the acts with a role in the disposal of spent fuel and other HLW. DOE is responsible for determining the suitability of the proposed disposal site as well as developing, building, and operating the geologic repository. The U.S. Environmental Protection Agency (EPA) will develop environmental standards to evaluate the safety of the geologic repository proposed by DOE. NRC will license the repository after determining whether DOE's proposed repository site and design comply with EPA's standards and with NRC's implementing regulations found in 10 CFR Part 60.

HLW Storage Problem

The American utility companies and their 65 million consumers have a spent fuel storage and disposal problem. The power plants were built with only limited spent fuel storage. Without a storage or disposal facility, the viability of many of these plants is seriously in question.

The management and disposal of increasing amounts of commercial spent nuclear fuel is being exercised in different ways worldwide including interim storage and reprocessing. Between 1996 and 2015, nuclear reactors worldwide are projected to discharge about 200 thousand metric tons of uranium (MTU). By 2015, cumulative discharges of spent fuel from U.S. nuclear reactors are

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expected to increase to about 75 thousand MTU, compared to a total of 32 thousand MTU discharged through the end of 1995.

1996 data showed that in the next 19 years, 46 of the 107 commercial nuclear power plants currently operating in the United States are scheduled to be closed after reaching the end of their operating license. However, several commercial reactors have been successfully decommissioned, demonstrating that decommissioning is well within the bounds of current technology. The greatest uncertainty, however, is the availability of spent fuel storage disposal sites.

Many factors enter into a nuclear utility's decision to choose one of the decommissioning options, depending primarily on the expected escalation in low-level waste (LLW) costs. Factors favoring the option of dismantlement and decontamination (DECON) include the availability of a highly skilled staff with experience at the plant, and the elimination of potential future cost uncertainties. Factors favoring an option where a facility is maintained until some decay of radioactivity, followed by dismantlement include the desire to reduce the radioactivity and quantity of LLW and the possibility that new, more efficient disposal technologies may emerge.

Currently, only three sites accept LLW: Envirocare in Clive, Utah (on aboriginal Goshute territory immediately next to the Reservation); Barnwell in South Carolina; and Hanford in Washington.

YUCCA MOUNTAIN

Background

The purpose of the Yucca Mountain Site Characterization Project was to determine if Yucca Mountain, Nevada, was a suitable site for a spent nuclear fuel and high-level radioactive waste repository. These materials are a result of nuclear power generation and national defense programs and will remain highly radioactive for thousands of years.

Experts throughout the world agree that the most feasible and safe method for disposing of highly radioactive materials is to store them deep underground. Based on this consensus, the United States Congress passed the Nuclear Waste Policy Act of 1982 that directs the Department of Energy to find a site and characterize it. If the site is found suitable and a license application is approved by the Nuclear Regulatory Commission, the Department of Energy is to build and operate an underground disposal facility.

The project involved extensive scientific study on Yucca Mountain's geology, hydrology, biology, and climate. Found suitable, Yucca Mountain is in the final stage to be part of the nation's first long-term solution to a compelling environmental problem.

Operation

Now that the Department of Energy has found Yucca Mountain a suitable site for a repository, it must obtain a license from the Nuclear Regulatory Commission before building and operating the repository. According to current project schedules, the earliest the department could start operating a repository at Yucca Mountain is 2010.

Repository operations will include all activities associated with:

- transporting and receiving highly radioactive materials
- preparing the materials for placement in the repository
- placing the materials in the repository

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• monitoring the repository over the long term

The department estimates that it will take 25 years to receive and place the materials in the repository. Experts will continually monitor the repository until the secretary of energy makes a decision to close it.

Licensing

The Nuclear Waste Policy Act, as amended, requires the Department of Energy to obtain a license from the Nuclear Regulatory Commission before it can build and operate a geologic repository for highly radioactive materials. The commission will base the license award on regulations designed to protect public health and safety for thousands of years. The following summarizes the repository licensing process.

- The department, having the Presidential and Congressional approval of the site recommendation from the secretary of Energy, planned to submit a license application to the commission in 2002.
- The commission will conduct extensive scientific reviews and hearings. If it concludes that the proposed repository meets requirements specified in the Code of Federal Regulations, the commission will grant authorization to begin construction in 2005. The department will then begin to build the repository.
- When the repository is near completion in 2008, the department will request authorization from the commission to begin operations.
- If the commission determines that the repository complies with all federal regulations, it will grant a repository operations license in 2010. The department will begin operations upon receipt of this license.

Site Recommendation

On February 15 President George W. Bush formally announced the proposed Yucca Mountain site to the U.S. Congress. The recommendation followed Energy Secretary Spencer Abraham's January 10 site recommendation. Nevada Governor Guinn vetoed the President recommendation. Under federal law the issue had to go to Congress for a vote to decide the issue. The resolution was referred to the Energy and Natural Resources Committee of the U.S. Senate, who in turn approved it by a 13 to 10 vote on June 5. The House approved the resolution on May 8 by a vote of 306 to 117.

On July 9, 2002 the Senate voted to pass H.J. Res. 87, approving the site at Yucca Mountain. Nevada Governor Guinn, who has been fighting the Yucca Mountain project, said, "The US Senate vote today is the beginning of Nevada's legal and regulatory fight to stop the Yucca Mountain project. Despite flawed science, the lack of transportation planning, and now the lack of a clear consensus from the Senate, the Yucca Mountain project has barely survived another round."

APPENDIX B: FINANCIAL REPORT

Radioactive Waste Fund and ACORWD Financial Report for Calendar Year (CY) 2002

014-10A-0143-03-2439		•
Income		
Note: bills assessed annually by 1 Sept. Payments may	FY2002 is from July	CY2002 is from January
be made quarterly during the state's Fiscal Year	01 to June 02	to December
Bills sent out based on 2001 generated waste will all be		
received by 1 April 2003		
Bills are based on the Radioactive Waste fund set		
At \$135,000 minus budget remaining at end of FY.		
Note: Total FY2002 + FY Beginning Balance =		
\$135.000		
Generators	Billed FY2002	Received CY2002
Maine Medical	\$100.00	\$100.00
Northeast Labs	\$100.00	\$100.00
University of New England	\$100.00	\$100.00
University of Maine	\$100.00	\$100.00
Idexx Labs	\$100.00	\$100.00
Maine Yankee Atomic Power Co.	\$90.656.00	* \$93,774.00
Tota	1 \$91,156.00	<u>\$94,274,00</u>
Expenditures in CV2002	Beginning Balance	\$48 552 37
Expenses personnel	A mount	\$132.37 \$132.345.00
3000 Personal services	\$49.844.37	<u>9152,545.00</u>
3890 ACORWD perdiem	\$515.60	•
JUD ACON WD perdiem	<u>5515.00</u> Total	\$(50.350.07)
Expansion Quark and	Total	\$(30,339.97)
4100 In State Admin Querkand	¢21.022.77	
4100 In-State Admin Overnead	\$31,933.77	
4200 Travel expenses in-state	\$466.30	
4500 Travel expenses out-of-state	\$1,505.55	
4000 Renis	δ2,892.09 \$2,600	
4700 Repairs to equipment	\$2,500 \$877.67	
4900 Printing, postage, snipping	\$8//.0/ #85.80	
4970 ACORWD mileage	\$83.80 \$11.05	
4980 ACORWD travel expense	\$11.95 \$4.811.00	
4983 Dues and membership	\$4,811.00	
5000 Employee training expenditures	\$00.00 \$1.180.63	
5500 Telephone and communications	\$1,180.02	
Solo Other supplies	\$1,938.35	
8008 Interest	\$1.U3 #2.420.20	
8500 Transfers to general fund-STACAP	\$3,429.29	
	lotal	(\$51,/53.42)
Ending Balance		\$30,231.61
Budget projections	FY 2003	FY 2004
Account carryover and Income	\$135,000.00	\$135,000.00
Salary/benefits	(\$48,793.47)	(\$56,597.99)
Admin overhead	(\$30,043.65)	(\$31,000.00)
ACORW&D per diem	(\$1,000.00)	(\$1,000.00)
Rent/power, telephone	(\$3,500.00)	(\$3,500.00)
Protessional services	(\$3,500.00)	(\$3,500.00)
Computer hardware and service	(\$2,000.00)	(\$2,000.00)
Supplies, shipping, advertising	(\$4,500.00)	(\$4,500.00)
Sta. Cap	(\$1,300.00)	(\$1,300.00)
Training/travel	(\$3,500.00)	(\$3,500.00)
LLW Forum	(\$4,000.00)	(\$4,000.00)
Ending balance	32.826.88\$	\$24,102.01

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NAME (Class A unless noted)	LICENSE#	Activity Disposed (curies)	Principle Isotopes	VOL.(Cu. Ft.) Disposed	VOL. (Cu/Ft.) In Storage
IDEXX LABORATORIES, INC.	05453	0.000053	I-125, S-35, P-32	33.00	73.0
Northeast Lab	11605	.0058156	C-14	204.56	<1.0
Univ. New England	31815	.001036	H-3, C-14	7.35	18.4 ¹
Maine Medical	5611	.0118	H-3, C-14	89.6	4.9
Univ. of Maine Orono	19827-01	.03549	H-3, C-14	30.0	3.0
MYAPC (total)	DPR-36	(110,814.8)	Co-60, Ni-63, Fe-55, Cs-137	(97558)	(11715.4)
(Class A)		293.0	"	96,124.0	11,658.0
(Class B)		82.8	**	372.0	57.4
(Class C)		110,439	**	1062.0	0.0
Portsmouth Naval Shipyard ² (total)	N/a	(19.358.0)	N/a	(1258.2)	N/a
(Class A)		.558	N/a	1153.6	N/a
(Class B)		18.8	N/a	104.6	N/a

APPENDIX C: LOW-LEVEL WASTE GENERATORS IN MAINE FOR 2001

¹ UNE has compacted their waste so the total is actually less than the 18.4 CF of non-compacted. ² Portsmouth Naval Shipyard is a Federal Facilities and not billed by the Radioactive Waste Fund

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APPENDIX D: ACORWD LIST OF APPOINTMENTS

Status/Name	Termination Date	Representing
Bob Demkowicz	Seat 1	Department of Environmental Protection
Dept. of Environmental Protection		Commissioner or Designee
State House Station # 17		_
Augusta, ME 04333		
hoh a demkowicz@state me us		
Clough Toppan, P.E., Director	Seat 2	Department of Human Services
Division of Health Engineering		Commissioner or Designee
10 State House Station		, s
Augusta, ME 04333-010		
e-mail: clough toppan@state me us		
Dr. Robert Marvinney	Seat 3	Maine State Geologist or Designee
State Geologist		mane sale Scologist of Designee
22 State House Station		
Augusta, ME 04333-0022		
Comment robert. marvinney@state.me.us	December 31, 2002	Representing a Maine Nuclear Dour
Maine Yankee Atomic Power Plant	Term expires Dec 31st of even	Plant
321 Old Ferry Road	numbered years.	
Wiscasset, ME 04578	,	
email: <u>meisnerm(<i>a</i>)myapc.com</u>	Seat 4	Appt. by Govemor
open	Term expires Dec 31 st of even	Representative
	numbered years.	Representative
	Seat 5	Appt. by Senate President
open	December 31, 2001	Radioactive Material Licensee
	Term expires Dec 31 st of odd	Representative.
	numbered years.	Representing Maine Medical Center
	Seat 6	Appt. by Speaker of the House
Senator Sharon Treat (Chair)	December 4, 2002	State of Maine
Senator, State of Maine	Term expires the first Wednesday in	
28 Kingsbury Street	December of even numbered years	Appt. by President of the Senate.
Gardiner, ME 04345	Sect 7	Belonging to Political Party holding the
e-mail: sensharon treat@state me.us	Seat 7	largest number of seats in the Senate
Senator W. Tom Sawyer, Jr.	December 4, 2002	State of Maine.
544 Valley Ave	Term expires the first Wednesday in	
Bangor, 04401	December of even numbered years	
H: (207) 942-1771		Appt. by President of the Senate.
amaile constances provide a lacon	Sect 9	Belonging to Political Party holding the
Senator Norman Farguson	December 4, 2002	State of Maine
Senator. State of Maine	Term expires the first Wednesday in	State of Malife
Box 36, Howard Pond Road	December of even numbered years	
Hanover, ME 04237		Appt. by President of the Senate.
		Belonging to Political Party holding the
email: sennorman.Ferguson@state.me.us	Seat 9	2 nd largest number of seats in the Senate
Rep. Robert Daigle (V. Chair)	December 4, 2002	State of Maine
197 Mountain Road	December of even numbered years	
Arundel, Maine 04046		
H: (207) 282-0761		Appt. by Speaker of the House.
State House Message Ph: (800) 423-2900		Belonging to Political Party holding the
email: rdaigle@gwi.net	Seat 10	2 ^{nu} largest number of seats in the House.
Rep. Peter L. Rines	December 4, 2002	State of Maine
Representative, State of Maine	December of even numbered vers	
Wiscasset, ME 04578	Determotion of even numbered years	Appt, by Speaker of the House.
H: (207) 882-9794		Belonging to Political Party holding the
Email: prines@wiscasset.net	Seat 11	largest number of seats in the House

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APPENDIX C: ACORWD LIST OF APPOINTMENTS (cont.)

0		
Status/Name	Termination Date	Representing
Rep. William R. Savage	December 4, 2002	State of Maine
Representative, State of Maine	Term expires the first Wednesday in	Appt. by Speaker of the House.
P. O. Box 417	December of even numbered years	Belonging to Political Party holding the
Buxton, ME 04093		largest number of seats in the House.
H: (207) 727-4516 B: (207) 774-3949		_
Email: RepBill.Savage@state.me.us	Seat 12	
Ron Ouellette	December 31, 2003 (reappointing)	Public Member with knowledge of and
Physics Consultants INC	Term expires Dec 31 st of odd	interest in the management of radioactive
P.O. Box 6749	numbered years.	materials and waste.
158 Woodford St.		
Portland, ME 04103		
Tel: (207) 773-1313 v-mail: 872-1453		
email: rono@suscom-maine.net	Seat 13	Appt. by Governor
Richard Carey	December 31, 2002	Public Member with knowledge of and
PO Box 474	Term expires Dec 31 st of even	interest in the management of radioactive
Belgrade MF 04917	numbered years	materials and waste
H· (207) 495-3333	numbered yeard	
	Seat 14	Appt. by Governor
Stephen Jarrett	December 31, 2003	Public member with Knowledge of and
P.O. Box 383	Term expires December 31 st of	interest in the management of radioactive
Wiscasset Maine 04578	odd numbered years	materials and waste
Wiscussel, Maine 04070	odd namoered years	materials and waste.
ernail: smj@ceimaine.org	Seat 15	Appt. by Senate President
James Mitchell	December 31, 2002 (reappointing)	Public Member with Knowledge of and
52 Birch Point Road	Term expires December 31 st of even	interest in the management of radioactive
Freeport, Maine 04332	numbered years	materials and waste
	ç	
email: jmitch8564@aol.com	Seat 16	Appt. by Speaker of the House
Don Hudson, Ph.D.	December 31, 2002	Representing Environmental Advocacy
Chewonki Foundation	Term expires December 31 st of even	Organization
485 Chewonki Neck Road	numbered years	5
Wiscasset, ME 04579		
e-mail: dhudson@chewonki.org	Seat 17	Appt. by Speaker of the House