John E. Baldacci, Governor
Brenda Harvey, Commissioner

ADVISORY COMMISSION ON RADIOACTIVE WASTE AND DECOMMISSIONING

Department of Health and Human Services
Maine Center for Disease Control and Prevention

May, 2006

Rep. Robert Daigle, Vice-Chair

2005 ANNUAL REPORT

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

John Elias Baldacci
Governor

Maine Department of Health and Human Services

Maine Center for Disease Control and Prevention
(Formerly Bureau of Health)
286 Water Street
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Brenda M. Harvey
Commissioner

Dora Anne Mills, MD, MPH
Public Health Director
Maine CDC Director

May 20, 2006

Senator Philip Bartlett, Chair
Representative Lawrence Bliss, Chair
Committee on Utilities and Energy
100 State House Station
Augusta, Maine 04333-0100

Subject: Advisory Commission on Radioactive Waste and Decommissioning Annual Report

Senator Bartlett and Representative Bliss:

I am submitting this Annual Report for the Advisory Commission on Radioactive Waste and Decommissioning pursuant to Title 38 Waters and Navigation, Chapter 14-A, Subchapter I: General Provisions, § 1453-A. Advisory Commission on Radioactive Waste and Decommissioning. This is being submitted on behalf of the Advisory Commission on Radioactive Waste and Decommissioning by the Department of Human Services' Radiation Control Program. This report includes events of 1999, total fees received from each generator, line item detail on expenditures including in-state and out-of-state travel, printing, mailings and hearings, personnel, general operating expenses, supplies and overhead for the department and transfer of funds.

Being the last Annual Report, it has been submitted later in order to include 2005 low-level radioactive waste producers. The commission will sunset in June 2006. I have attempted to include all information that is pertinent to the operation of the commission, but if you have any questions please contact me at 287-8401.

Respectfully yours,

Thomas C. Hillman
Staff, ACORWD
Low Level Waste Coordinator
Radiation Control Program

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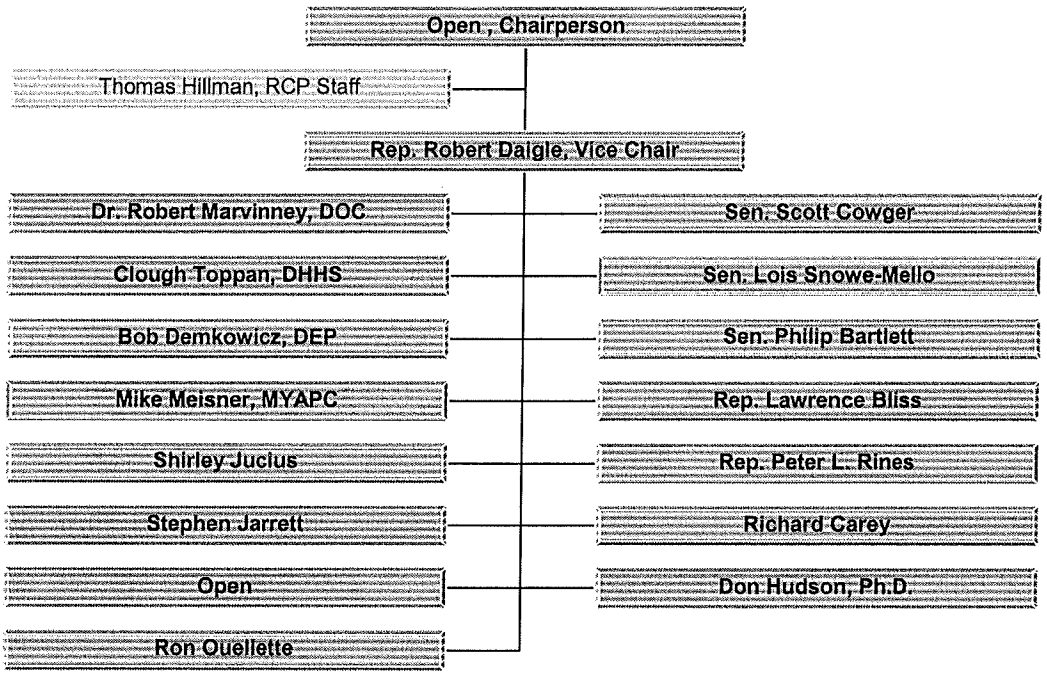
2005 Advisory Commission on Radioactive Waste and Decommissioning

Senator Scott Cowger
Senator Philip L. Barlett
Senator Lois Snowe-Mello
Clough Toppan, P.E., DHS
Mike Meisner, MYAPC
Don Hudson, Ph.D., public member
Ron Ouellette, public member
Stephen Jarrett, public member
Open, licensee member

Representative Robert Daigle, (Vice-Chair)
Representative Lawrence Bliss
Representative Peter L. Rines
Bob Demkowicz, DEP
Robert Marvinney, Ph.D., DOC
Richard Carey, public member
Open, public member
Shirley Jucius, licensee member

Note: No chair was appointed for 2005

ACORWD ORGANIZATIONAL CHART



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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, Legislature, and other pertinent State agencies and entities. The commission advises on matters relating to radioactive waste management, decommissioning of nuclear power plants, 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.

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. The Commission was involved with issues dealing with the decommissioning of Maine's nuclear power plant, Maine Yankee, completed in late 2005. It was closely involved with the decommissioning standards set by the Maine Legislature in 2000 as they pertained to Maine Yankee. The Commission was updated on the Independent Spent Fuel Storage Installation (ISFSI) and security concerns for the site since "September 11".

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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. [to be Delete] 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. [to be Deleted] Advise the Governor, 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. [to be Deleted] 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). [To be removed since Maine has left the "Compact"]
5. All remaining duties are set as equal after the first four.

ACTIVITIES OF THE ACORWD TO SUPPORT ITS DUTIES

Activities of the Commission were diminished in 2005 for two main reasons. First, the final stages of the Maine Yankee decommissioning did not warrant significant activity on the part of the Commission. The course had been set for the final stages of decommissioning and no concerns arose that required a meeting. Second, the War On Global Terrorism left the Radiation Program short its primary staff member handling Commission activities in support of its duties.

The Commission did not disseminate information to the general public by means of a newsletter due to the lack of staff; however, a website still covered this duty.

The Commission has a website located on the Department of Health and Human Services, Center for Disease Control and Prevention, Division of Environmental Health, Radiation Control Program's website. The website address is:

http://www.maineradiationcontrol.org

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

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 no meetings during the year 2005.

SUMMARY OF MEETING

No meetings were held in 2005, therefore this section of the report for 2005 is not applicable for this annual report.

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 resulting in the creation 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.

Definition of Low-Level Radioactive Waste- As mentioned above, low-level radioactive waste is defined as any radioactive waste that does not belong in one of the other three categories. Those three categories are (1) high-level waste (spent nuclear fuel or the highly radioactive waste produced if spent fuel is reprocessed), (2) uranium milling residues, and (3) waste with greater than specified quantities of elements heavier than uranium.

Spent nuclear fuel is used fuel from nuclear power plants. Spent fuel contains some reusable material that may be recovered. That recovery process is called reprocessing, and everything left over after the reusable material has been recovered is classified as high-level radioactive waste. The United States is not presently reprocessing spent nuclear fuel, but the Energy Policy Act of 2005 will study reprocessing.

Uranium milling residues are the rock and soil that remains after uranium has been removed from the ore that was mined from the earth. These milling residues are also known as mill tailings. Radioactive waste that contains more than a specified concentration of elements heavier than uranium, known as transuranics, is not classified as low-level radioactive waste. All other radioactive waste is low-level radioactive waste.

Classes of Commercial Low-Level Radioactive Waste - Three classes of commercial low-level radioactive waste are defined in the Code of Federal Regulations, Title 10, Part 61 (10 CFR 61) . Those classes are Class A, Class B, and Class C. CFR 10 Part 61.55 lists the limits on concentrations of specific radioactive materials allowed in each low-level waste class. Radioactive waste not meeting the criteria for these classes falls into a fourth class, known as Greater Than Class C.

Class A low-level radioactive waste contains the lowest concentration of radioactive materials, and most of those materials have half-lives of less than five years. Class B contains the next lowest concentration of radioactive materials, and it contains a higher proportion of materials with longer half-lives. Class C low-level waste has the highest concentration of radioactive material allowed to be buried in a low-level waste disposal facility. The concentration of radioactive materials in Greater Than Class C exceeds the limits for Class C waste specified in 10 CFR 61.55. All Greater Than Class C waste is the responsibility of the federal government and must be disposed of in a geologic repository such as the high-level waste repository planned for Nevada.

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 often 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.

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, not long-term storage, is believed to be the safest approach. Present knowledge and technology are sufficient to allow such disposal safely. However, Monitored Retrievable Storage is becoming widely accepted nationwide.

South Carolina

Schedule for Phasing Out Access

Total volumes of non-compact (Atlantic Compact) waste accepted at the Barnwell facility, run by the Columbia, Maryland based Duratek Inc., will be reduced each year. As the years progress volume will slowly diminish until the site accepts Atlantic Compact waste only.

Year (ending in June)	*Maximum allowable volume (cubic feet) of waste from all sources*
2003	*70,000*
2004	*60,000*
2005	*50,000*
2006	45,000
2007	40,000
2008	35,000

Source: SCDHEC and LLWForum

Maine Yankee Atomic Power Company

Maine Yankee Decommissioning Overview

Maine Yankee operated a nuclear power plant with a single-unit 900 megawatt Pressurized Water Reactor that generated about 119 billion kilowatt-hours of electricity from 1972 through 1996. Located in Wiscasset, Maine the plant was Maine's largest generator of electricity. Maine Yankee permanently shut-down in August 1997. The nuclear power plant underwent a successful decommissioning from 1997-2005 with all plant structures removed to three feet below grade and the site restored to stringent clean-up standards.

Maine Yankee was one of the first large commercial power reactors to complete decommissioning. The site was cleaned radiologically to standards required by the U.S. Nuclear Regulatory Commission and the State of Maine.

On October 3 2005 Maine Yankee was notified by the U.S. Nuclear Regulatory Commission that its former plant site had been successfully decommissioned in accordance with NRC procedures. The NRC amended Maine Yankee's license, reducing the land under the license from approximately 179-acres to the 12-acre Independent Spent Fuel Storage Installation, located on Bailey Point peninsula.

Major Accomplishments of Decommissioning in 2004 and 2005 were:

- Demolishing the containment building using explosives
- removal of approximately 400 million pounds of low-level radioactive waste from the site by rail, truck and barge

- movement of spent nuclear fuel from wet to dry storage in the ISFSI (see below)
- start of groundwater sampling by the DHHS in late 2005

Community Advisory Panel

Maine Yankee continues to have a community advisory panel whose purpose is to enhance open communication, public involvement and education on the interim storage of spent nuclear fuel at Maine Yankee and to advocate for its prompt removal. The panel re-established itself as The Community Advisory Panel on Spent Nuclear Fuel Storage and Removal and met October 20, 2005. The panel will continue until its meeting in March 2007.

Spent Fuel Storage

Maine Yankee Atomic Power Company operates an Independent Spent Fuel Storage Installation (ISFSI) located on Bailey Point Peninsula in Wiscasset, Maine to secure its spent nuclear fuel. The facility is staffed seven days a week, 24 hours a day. This will remain the case until the U.S. Department of Energy (DOE) fulfills its obligation to dispose of this material or another viable solution for removing the spent fuel from the site emerges.

By statue and contract DOE was to have begun removing spent nuclear fuel from Maine Yankee in 1998. To date, DOE has not removed any spent fuel from the site, and it is uncertain when it will. In the meantime, it is Maine Yankee's responsibility as the U.S. Nuclear Regulatory Commission (NRC) licensee to store the spent nuclear fuel in accordance with NRC regulations.

The plant's spent nuclear fuel as well as its Greater than Class C (GTCC) waste (irradiated steel removed from the plant's reactor vessel) is stored in dry cask storage units at Maine Yankee's ISFSI. The ISFSI was constructed during the decommissioning project. Like spent nuclear fuel, GTCC waste is the responsibility of the federal government to dispose.

Independent Spent Fuel Storage Installation

The NRC licenses and regulates two methods of spent fuel storage: spent fuel pools where water removes decay heat from the fuel assemblies and provides shielding from radioactivity; and dry cask storage containers where circulating air removes the decay heat and massive steel and concrete casks provide the radiological shielding. Both methods require an NRC approved security system, emergency plan, and monitoring.

During plant decommissioning Maine Yankee's 1434 spent fuel assemblies were moved from the plant's fuel pool to the newly constructed dry cask storage facility known as the ISFSI. Following final transfer of the spent fuel to the ISFSI in February 2004, the spent fuel pool was drained, demolished and removed along with the rest of the former power plant.

The ISFSI is an approximately 12-acre open-air facility with an adjacent security and operations building. The facility contains 60 air-tight sealed steel canisters of spent nuclear fuel and 4 of GTCC waste. Maine Yankee uses NAC International's (NAC) UMS system to house its spent nuclear fuel and GTCC waste. The NAC UMS system is designed for both storage and transport. These air-tight steel canisters are housed inside massive concrete and steel casks on concrete pads. Vents at the base and top of each cask circulate air that removes decay heat from the spent nuclear fuel. The system is completely passive. Each cask is monitored remotely from the operations center. Technicians also make regular rounds to assure, among other things, that the air vents remain free of snow or debris.

When the time comes to move the spent nuclear fuel and GTCC waste from the Maine Yankee site, the sealed canisters containing the spent fuel and GTCC waste will be removed from the concrete casks and shipped in specially designed transport casks. The most likely mode of transport is via the rail line that serves the Maine Yankee site.

Department of Energy's Role in Removing the Spent Nuclear Fuel

Under a contract that the U.S. Department of Energy signed with all nuclear plant owners, as well as the Nuclear Waste Policy Act, the DOE was to have a disposal facility open and receiving spent fuel from Maine Yankee and other commercial plants by January 31, 1998. The DOE missed the 1998 schedule and has not removed any spent nuclear fuel. Maine Yankee must therefore store spent fuel on-site. As of 2005 DOE has indicated it will not begin removing spent fuel until 2012 or later.

In return for DOE removing the spent nuclear fuel, electric ratepayers who benefit from nuclear power pay for the disposal of the spent fuel. Nationally electric ratepayers have paid more than $24 billion into the federal Nuclear Waste Fund. Maine Yankee ratepayers have paid about $200 million for the disposal of Maine Yankee's spent nuclear fuel. The current DOE plan is to remove spent fuel to a site in Yucca Mountain.

Lawsuit Over DOE's Failure to Remove Spent Fuel

Maine Yankee and most other commercial nuclear power utilities in the United States have filed lawsuits against the DOE seeking monetary damages resulting from DOE's breach of its contract to begin removing spent nuclear fuel in 1998.

Maine Yankee sought approximately $160 million in damages through 2010 from the federal government for its failure to begin removing spent nuclear fuel as required in 1998. The case was tried in 2004 in the U.S. Court of Claims. In 2005, the U.S. Court of Appeals for Federal Claims ruled that plaintiffs could not recover future damages and limited recovery to those damages that have actually been incurred. Given that, Maine Yankee's trial judge asked Maine Yankee to file a new pleading setting forth the impact of this future damages decision on its claim. In December 2005 Maine Yankee filed a pleading with the trial court asking it to award damages incurred through 2002. This amounts to a claim of approximately $79 million. A decision by the judge on this new pleading and the trial is expected in 2006. Maine Yankee expects that it will need to file a separate claim(s) for damages incurred after 2002

Source: Maine Yankee website at Maineyankee.com

Envirocare of Utah

Envirocare currently disposes of Class A Low-Level Waste at its facility in Utah. Envirocare had been working on a Class B and C License Request until pulling it in 2004.

In early February 2006 Envirocare and Scientech D&D (which Envirocare purchased in October 2005) began operating as Energy*Solutions*. This new company soon after announced its merger with BNG America after the $89 million purchase by Energy*Solutions*. The new company will integrate technologies and services focused on decommissioning and decontamination, spent fuel handling, transportation, high-level waste management and disposal of nuclear waste.

Energy*Solutions*, headquartered in Salt Lake City, Utah, when the transaction is completed, will manage over 1000 employees in 14 states with operating support facilities in Virginia, South Carolina, Massachusetts, Tennessee, Washington State, Connecticut, Idaho, and Utah.

Envirocare's disposal site will not be impacted by this transaction and will continue to accept only Class A low-level radioactive waste. Higher levels of radioactive waste will not be handled or managed in the State of Utah at the present time.

Background

Envirocare of Utah, a private investor group led by Lindsay, Goldberg and Bessemer purchased Envirocare from its previous owner, Khosrow Semnani, in January 2005. Other investors in the group included local Utah firms Creamer Investments and Peterson Partners. The transaction included the purchase of the Cedar

Mountain Environmental facility, which is located on land adjacent to Envirocare and which was owned by former Envirocare President Charles Judd.

Cedar Mountain had proposed to build a new low-level radioactive waste facility in Utah and was, at the time of the purchase, seeking the necessary permits to do so. Immediately after the purchase was completed, Envirocare's new owners withdrew the company's application to dispose of Class B and C waste in the state of Utah. The application, which had been approved by state regulators but not the legislature or Governor, was subject to considerable public opposition. Shortly thereafter, the Utah legislature passed legislation banning Class B and C waste disposal within the state. Envirocare subsequently submitted an amendment request to expand the company's operations onto the newly purchased land. The Utah Radiation Control Board unanimously granted final approval to the amendment request on January 26, 2006, despite a challenge filed by Healthy Environment Alliance of Utah (HEAL Utah), after which Envirocare announced that it would not at this time seek the required legislative and gubernatorial approval.

Since 1990 BNG America has operated as a U.S. environmental cleanup company that works on large-scale projects throughout the DOE complex and at commercial nuclear utility sites. It is being sold by its parent company, UK based British Nuclear Fuels. The sale includes BNG America's wholly-owned subsidiaries Manufacturing Services Corporation, BNG Fuel Solutions, and BNG America Savannah River Corporation. The company has its headquarters in Arlington, Virginia and has operations in Richland, Washington; Idaho Falls, Idaho; and Oak Ridge, Tennessee.

Scientech D&D, formerly NES, is a consulting and engineering firm offering a broad spectrum of services designed to assist clients in the management of both hazardous and radioactive materials. The company, which is based in Milford, Connecticut. Services offered by the company range from initial consultation to project management and execution of facility decontamination and decommissioning projects.

Energy*Solutions'* Purchase of Duratek

Soon after the forming of Energy*Solutions*, it bought Columbia, Maryland based Duratek Inc. for $396 million. With the deal, Energy*Solutions* achieves in one day on a national scale what it had tried unsuccessfully to accomplish in its home state for years, a large expansion and a license to dispose of hotter low-level radioactive waste.

Energy*Solutions* also will have assumed control over one of its two commercial rivals in the low-level radioactive waste business, the company that operates the Barnwell, S.C., disposal site for Classes A, B and C waste. The merger means that everything from radioactive cleanups and power plant maintenance, to shipping, packaging, waste minimization, recycling, treatment, and disposal can be handled by Energy*Solutions*.

Finalizing of the deal could take until the middle of 2006. Federal authorities will want to look at whether merging the two companies leaves competitors at a significant disadvantage, given that one company will control the entire commercial low-level disposal for 39 states.

Under a decades-old and rickety system established by Congress, there are only three landfills for low-level radioactive waste nationwide. A site in Hanford, WA, is open only to 11 states, while waste from the remaining states must go to the Utah site or to Duratek's South Carolina facility, which is slated for closure to all but three states in 2008.

Radionuclides in Drinking Water

There are approximately 40 relatively small public water systems (schools, trailer parks, campgrounds, condominium complexes) that have elevated levels of Uranium and/or Radium in their water. The Federal EPA and the State Drinking Water Program have adopted regulations that require treatment for these systems. The treatment systems vary but all generally concentrate the radioactive constituents prior to disposal and therefore will create low level radioactive wastes that have not previously been part of our

waste stream. Additionally as more systems go on line the Department of Environmental Protection will probably develop waste rules regarding these filters which may complicate the disposal options.

Orphaned/Unwanted Radioactive Materials

There are a significant number of facilities that have small amounts of unwanted or so called orphaned radioactive materials, generally schools, that don't have the funding for disposal. There have been at least two different national programs that Maine has taken advantage of over the last 5 years to gather and dispose of these materials. Though more materials still exist, the federal funding has dried up for the present time.

Additionally more radioactive materials show up in an assortment of waste and recycling streams due to increased monitoring. Twenty-six (26) times in 2005 the Radiation Control Programs (RCP) responded to radiation alarms at trash to energy plants, or recycling facilities. The majority of the time these alarms result in radioactive materials that can be held for a period of time before they decay away and are no longer radioactive. Unfortunately this isn't always the case and therefore the alarms are always responded to by a State radiation professional for identification of the radioactive materials and hazard analysis. There are a few times each year that the identified materials cannot be stored for decay to background and have to be impounded by the State to reduce the hazard and await proper disposal. These actions, while necessary, are expensive and the RCP is constantly on the look out for potential funding sources that could adequately reimburse us for this cost.

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.

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.

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.

Yucca Mountain

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 still planned as the nation's first long-term solution to a compelling environmental problem.

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
- 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. This long period of time reflects a long list of sites storing fuel. 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. The department will then begin to build the repository.
- When the repository is near completion, 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. The department will begin operations upon receipt of this license, a date currently set at 2016.

The Senate recently voted to cut $127 million from the project. They allocated only $450 million to its FY06 budget. The Department of Energy (DOE) projected a $1.2 billion budget to continue as planned.[1] Legislation was dropped that would have supplemented the repository with interim waste storage sites until it was ready. Legislation also directed the Nuclear Regulatory Commission to assess risks for storing spent fuel at the power plants producing it. Maine Yankee now stores its spent fuel at the former site and given the federal trend, it will continue to do so for quite some time. Storage time was planned to be 20 years until the waste was taken by the government. State and federal officials against the project have thrown up obstacles causing delay.

[1] Nuclear Waste News, 23 November 2005, page 221.

Energy Policy Act of 2005 (Nuclear Energy Bill)

On August 8, 2005 President George Bush signed into law the Energy Policy Act of 2005, the first national energy plan in more than a decade. This landmark law includes powerful incentives that could result in the construction of the first nuclear power plants since the 1970s.

The act effectively subsidizes construction of the first few nuclear power plants; funds higher federal spending on R&D, demonstration and commercial application over the next five-years; will lower regulatory barriers to power plant construction; and renews protection cap for accidents, pursuant to the Price-Anderson Act. Industry sees it as a major event that will promote nuclear power comeback over the next decade.

Greater-Than-Class-C waste (GTCC) – In addition the law calls for the DOE to develop a plan, within one-year, to dispose of GTCC.

The industry has been contemplating alternatives and discussing spent fuel recycling. The recent Energy Act sets aside $50 million to fund a DOE initiative to develop a plan for recycling spent nuclear fuel. The agency is also required to set up a system of soliciting volunteer communities for hosting a fuel recycling plant.

The possibility of recycling spent fuel stored at Maine Yankee's ISFISI exists, barring laws signed by President Carter making such activities nationally unacceptable.

NRC Commissioner Edward McGaffigan in September 2005 announced that Yucca Mountain would not open until 2016. The commission will need 10 years to conduct reviews and hearing, this is assuming a license application is submitted in 2006.[2]

[2] Nuclear Waste News, 29 September 2005, page 182.

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APPENDIX B: FINANCIAL REPORT

Line items 3890, 4970 and 4980 are actual ACORWD expenses. Presented below is the Low-level Waste Section's budget as part of the Radiation Control Program, Division of Environmental Health, and Department of Health Human Services. Providing staff support for the ACORWD is an addition duty for the section and program. Therefore, the budget below reflects the yearly operation of the Low-level Waste Section in managing radioactive waste for the State of Maine, plus the ACORWD.

Radioactive Waste Fund and ACORWD Financial Report for Calendar Year (CY) 2005

014-10A-0143-03-2439

Income

Note: bills assessed annually by 1 Sept. Payments may be made during the state's Fiscal Year		FY2005 is from July June 05	CY2005 is from January December 05
Bills sent out based on 2004 generated waste will all be received April 2006			
Bills are based on the Radioactive Waste fund set At $135,000 minus budget remaining at end of FY.			
Note: Total FY2003 + FY Beginning Balance = $135,000			
Generators		Billed FY2005	Received CY2005
Maine Yankee Atomic Power Co.		$100,100.68	$114,082.28
	Total	$100,100.68	$114,082.28
		Beginning Balance	$34,899.32
		Amount	**$148,981.60**

Expenditures in CY2005

Expenses personnel		
3000 Personal services	$5139.13	
3890 ACORWD perdiem	$0.00	
	Total	($5139.13)
Expenses Overhead		
4100 In-State Admin Overhead	$100,284.24	
4200 Travel expenses in-state	$2,600.00	
4300 Travel expenses out-of-state	$152.90	
4600 Rents	$2,045.60	
4700 Maintenance agreement	$68.75	
4900 Printing, postage, shipping	$556.77	
4970 ACORWD mileage	$0.00	
4980 ACORWD travel expense	$0.00	
4983 Dues and membership	$0.00	
5000 Employee training expenditures	$0.00	
5300 Telephone and communications	$3,108.50	
5500 Servers	$0.00	
600 Other supplies	$15,363.50	
8000 Interest fee	$460.93	
8500 Transfers to general fund-STACAP	$(1562.74)	
	Total	**($123,078.45)**
Ending Balance		**$20,764.02**

Budget projections	**FY 2006**	**FY 2007**
Account carryover and Income	**$135,000.00**	**$135,000.00**
Salary/benefits	($60,200.00)	($62,000.00)
Admin overhead	($42,000.00)	($43,000.00)
ACORW&D per diem	($1,000.00)	($1,000.00)
Rent/power, telephone	($3,500.00)	($3,500.00)
Professional 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)	($3,700.00)
LLW Forum and dues	($5,000.00)	($5,000.00)
Ending balance	**$8,500.00**	**$5,500.00**

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APPENDIX C: GENERATORS

LOW-LEVEL WASTE GENERATORS IN MAINE FOR 2004

NAME (Class A unless noted)	LICENSE#	Activity Disposed (curies)	Isotopes	VOL (Cu. Ft.) Disposed	VOL. (Cu Ft.) In Storage
MYAPC (total)	DPR-36	107.8	Co-60, Ni-63, Fe-55, Cs-137	1,870,245.0	0.0
(Class A)		32.2	"	1,870,000.0	0.0
(Class B)		75.6	"	245.0	0.0
(Class C)		0.0	n/a	0.0	0.0
Bates College	01205	.000260	H-3, P-32, S-35, C-14	0.0	10.77
Bigelow Laboratory	15201	0.002	n/d	0.0	30
Bowdoin	05205	0.000003	C-14, H-3	7.35	0.0
Colby College	11219	<0.000021	n/d	0.0	12.5
Diamed, Inc.	05349	0.019	I-125	0.0	9.3
Idexx	05453	0.03	n/d	22.0	80.0
The Jackson Laboratory	09507-01	0.0719303	H-3, C-14	0.0	93.0
MDI Bio Lab	09623	0.0003	C-14, H-3, P-32	0.0	14.0
Maine Medical Center	05611	0.0038	H-3, Cs-137, Co-57, Co-60	0.0	18
University of Maine	19827-01	0.0025	n/d	0.0	10
University of New England	31815	0.16574	n/d	0.0	25.1
Portsmouth Naval Shipyard[3]	n/a	n/d	n/d	n/d	n/d

Note: information is a year behind the date of the annual report due to the survey results being return to the State after the publication date. Class A waste unless otherwise noted.

LOW-LEVEL WASTE GENERATORS IN MAINE FOR 2005

NAME (Class A unless noted)	LICENSE#	Activity Disposed (curies)	Isotopes	VOL (Cu. Ft.) Disposed	VOL. (Cu Ft.) In Storage
MYAPC (total)	DPR-36	5.85	Co-60, Ni-63, Fe-55, Cs-137	1,395,000.00	0.0
Bates College	01205	0.000004	H-3,P-32, S-35, C-14	0.0	10.7
Bigelow Laboratory	15201	0.00063	n/d	15.0	37.5
Colby College	11219	0.000021	n/d	0.0	9.6
Diamed, Inc.	05349	<0.000001	I-125	0.0	18.72
Idexx	05453	<0.000001	n/d	33.0	73.0
The Jackson Laboratory	09507-01	0.0617	H-3, C-14, S-35, Ca-45	95.55	102.9
Maine Medical Center	05611	0.0053	H-3, Cs-137, Co-57, Co-60	n/d	22.1
MDI Bio Lab	09623	0.024	H-3	36.0	2.0
Northeast Laboratory	11605	0.0023	n/d	47.72	0.0
University of Maine	19827-01	0.1004	H-3, C-14, Uranyl acetate	10.0	0.0
University of New England	31815	0.0161	n/d	25.1	0.0
Portsmouth Naval Shipyard	n/a	n/d	n/d	n/d	n/d

[3] Portsmouth Naval Shipyard is a Federal Facilities and not billed by the Radioactive Waste Fund. It does not have or is required to have a Maine license.

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APPENDIX D: ACORWD LIST OF APPOINTMENTS

Status/Name	Termination Date	Representing
Bob Demkowicz Dept. of Environmental Protection State House Station # 17 Augusta, ME 04333 bob.a.demkowicz@maine.gov	Seat 1	Department of Environmental Protection Commissioner or Designee
Clough Toppan, P.E., Director Division of Health Engineering 10 State House Station Augusta, ME 04333-010 e-mail: clough.toppan@maine.gov	Seat 2	Department of Human Services Commissioner or Designee
Dr. Robert Marvinney State Geologist 22 State House Station Augusta, ME 04333-0022 e-mail: robert.marvinney@maine.gov	Seat 3	Maine State Geologist or Designee
Mike Meisner Maine Yankee Atomic Power Plant 321 Old Ferry Road Wiscasset, ME 04578 email: meisnerm@myapc.com	December 31, 2002 Term expires Dec 31st of even numbered years. Seat 4	Representing a Maine Nuclear Power Plant Appt. by Governor
Open	Term expires Dec 31st of even numbered years. Seat 5	Radioactive Material Licensee Representative Appt. by Senate President
Shirley Jucius 36 Griffin Ave. Hampden, Maine 04444	December 31, 2005 Term expires Dec 31st of odd numbered years. Seat 6	Radioactive Material Licensee Representative. Representing Maine Medical Center Appt. by Speaker of the House
Senator Scott Cowger (D) 11 Inn Road Hallowell, ME 04347 email: SenScott.Cowger@legislature.maine.gov	December 6, 2006 Term expires the first Wednesday in December of even numbered years Seat 7	State of Maine Appt. by President of the Senate. Belonging to Political Party holding the largest number of seats in the Senate
Senator Philip L. Bartlett (D) 141 South Street Gorham, ME 04038 email: SenPhilip.Bartlett@legislature.maine.gov	December 6, 2006 Term expires the first Wednesday in December of even numbered years Seat 8	State of Maine. Appt. by President of the Senate. Belonging to Political Party holding the largest number of seats in the Senate
Senator Lois Snowe-Mello (R) 177 Mechanic Falls Road Poland, ME 04274 email: Lois.SnowMello@legislature.maine.gov	December 6, 2006 Term expires the first Wednesday in December of even numbered years Seat 9	State of Maine Appt. by President of the Senate. Belonging to Political Party holding the 2nd largest number of seats in the Senate
Rep. Robert Daigle (R)(V. Chair) Representative, State of Maine 15 Talbot Drive Arundel, ME 04046 email: rdaigle@gwi.net RepRobert.Daigle@legislature.maine.gov	December 1, 2004 Term expires the first Wednesday in December of even numbered years Seat 10	State of Maine Appt. by Speaker of the House. Belonging to Political Party holding the 2nd largest number of seats in the House.
Rep. Peter L. Rines (D) Representative, State of Maine 334 Bradford Road, Wiscasset, ME 04578 Email: prines@wiscasset.net RepPeter.Rines@legislature.maine.gov	December 1, 2004 Term expires the first Wednesday in December of even numbered years Seat 11	State of Maine Appt. by Speaker of the House. Belonging to Political Party holding the largest number of seats in the House

APPENDIX D: ACORWD LIST OF APPOINTMENTS (cont.)

Status/Name	Termination Date	Representing
Rep. Lawerence Bliss (D) Representative, State of Maine 504 Cottage Road South Portland, ME 0410 email: Lawerence.Bliss@legislature.maine.gov	December 1, 2004 Term expires the first Wednesday in December of even numbered years Seat 12	State of Maine Appt. by Speaker of the House. Belonging to Political Party holding the largest number of seats in the House.
Ron Ouellette Physics Consultants INC P.O. Box 6749 158 Woodford St. Portland, ME 04103 email: rono@suscom-maine.net	December 31, 2003 Term expires Dec 31st of odd numbered years. Seat 13	Public Member with knowledge of and interest in the management of radioactive materials and waste. Appt. by Governor
Richard Carey PO Box 77 Belgrade, ME 04917	December 31, 2002 Term expires Dec 31st of even numbered years. Seat 14	Public Member with knowledge of and interest in the management of radioactive materials and waste. Appt. by Governor
Stephen Jarrett P.O. Box 383 Wiscasset, Maine 04578 email: smj@ceimaine.org	December 31, 2003 Term expires December 31st of odd numbered years Seat 15	Public member with Knowledge of and interest in the management of radioactive materials and waste. Appt. by Senate President
open	December 31, 2002 Term expires December 31st of even numbered years Seat 16	Public Member with Knowledge of and interest in the management of radioactive materials and waste Appt. by Speaker of the House
Don Hudson, Ph.D. Chewonki Foundation 485 Chewonki Neck Road Wiscasset, ME 04579 e-mail: dhudson@chewonki.org	December 31, 2002 Term expires December 31st of even numbered years Seat 17	Representing Environmental Advocacy Organization Appt. by Speaker of the House