Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services
John E. Baldacci, Governor Brenda M. Harvey, Commissioner

Department of Health and Human Services
Maine Center for Disease Control and Prevention
286 Water Street
11 State House Station
Augusta, Maine 04333-0011
Tel: (207) 287-8016
Fax: (207) 287-9058; TTY: 1-800-606-0215

November 24, 2009

To: Honorable Ms. Elizabeth Mitchell, President of the Senate
Honorable Ms. Hannah Pingree, Speaker of the House

Subject: State Nuclear Safety Inspector Office's October 2009 Monthly Report to the Maine Legislature

New legislation was enacted in the second regular session of the 123rd and signed by Governor John Baldacci last spring requiring that the State Nuclear Safety Inspector prepare a monthly report on the oversight activities performed at the Maine Yankee Independent Spent Fuel Storage Installation facility located in Wiscasset, Maine.

Enclosed please find the Inspector's October 2009 monthly activities report. Should you have questions about its content, please feel free to contact me at 207-287-6721, or e-mail me at pat.dostie@maine.gov.

Patrick J. Dostie
State Nuclear Safety Inspector

Enclosure
cc:
Mr. E. William Brach, U.S. Nuclear Regulatory Commission
Ms. Nancy McNamara, U.S. Nuclear Regulatory Commission, Region I
Mr. James Connell, Site Vice President, Maine Yankee
Ms. Brenda Harvey, Commissioner, Department of Health and Human Services
Mr. Geoff Green, Deputy Commissioner, Department of Health and Human Services
Ms. Lucky Hollander, Director of Legislative Relations, Department of Health and Human Services
Dr. Dora Mills, Director, Maine Center for Disease Control and Prevention
Mr. Patrick Ende, Senior Policy Advisor, Governor's Office
Mr. David Littell, Commissioner, Department of Environmental Protection
Mr. Richard Davies, Maine Public Advocate
Lt. William Snedeker, Special Services Unit, Maine State Police
Ms. Nancy Beardsley, Director, Division of Environmental Health
Mr. Jay Hyland, PE, Manager, Radiation Control Program

State Nuclear Safety Inspector Office

October 2009 Monthly Report to the Legislature

Introduction

As part of the Department of Health and Human Services' responsibility under Title 22, Maine Revised Statutes Annotated (MRSA) §666 (2), as enacted under Public Law, Chapter 539 in the second regular session of the 123rd Legislature, the foregoing is the monthly report from the State Nuclear Safety Inspector under this new legislation.

The State Inspector's individual activities for the past month are highlighted under certain broad categories, as illustrated below. Since some activities are periodic and on-going, there may be some months when very little will be reported under that category. It is recommended for reviewers to examine previous reports to ensure connectivity with the information presented as it would be cumbersome to continuously repeat prior information in every report.

Since the footnotes are expanded definitions of some scientific terms, for simplicity they were placed in a glossary at the end of the report. In addition, to better understand some of the content of the topics, some effort was placed in providing some historical information. However, for the time being this historical context will be provided as an addendum to the report.

Independent Spent Fuel Storage Installation (ISFSI)

During October the general status of the ISFSI was normal. There were 2 instances of spurious alarms due to environmental conditions. All alarms were investigated and no further actions were warranted.

There were no fire or security related impairments in October. There were 8 security events logged in October. Each was associated with transient camera issues due to temporary environmental conditions.

There were no condition reports (CRs)[1] for the month of October.

Other ISFSI Related Activities

On October 14th Maine Yankee conducted its annual emergency plan training to state officials in preparation for its annual emergency exercise. The training was conducted at the Maine Emergency Management Agency offices in Augusta.

On October 19th Maine Yankee discontinued its maintenance of the vertical concrete casks (VCC 's) due to the onset of cold weather and will resume the VCC maintenance activities next spring when the weather is more suitable. As mentioned in last month's report the maintenance on 9 of the 64 VCC's was completed.

On October 28th Maine Yankee conducted its annual mandated emergency exercise. The Maine State Police and the State Nuclear Safety Inspector participated in the exercise. The exercise scenario focused on an earthquake moving and causing hairline crack on one VCC that resulted in a very slight increase in background radiation levels towards the Back River. The drill lasted two hours.

[1] Refer to page 4 in the Glossary.

Environmental

In addition to its periodic air sampling at the old Bailey Farm House, the State's Radiological Environmental Monitoring Program (REMP) quarterly sampling regimen of freshwater, saltwater, and seaweed took place on September 28th along with the field change-out of the thermoluminescent dosimeters (TLDs)[2] within the surrounding communities. The State Nuclear Safety Inspector performed his quarterly field replacement of the TLDs monitoring the ISFSI and Bailey Cove on October 2nd. The results of the TLD monitoring will be reported in the November report. The results from the REMP's third quarterly sampling will be reported as soon as the results are available from the State's Health and Environmental Testing Laboratory (HETL).

Maine Yankee Decommissioning

At present, there are eleven confirmatory reports that are essentially complete. Due to the extensive delays in on-going commitments and emerging issues, the confirmatory summary report is now expected to be drafted in December and finalized in January.

Groundwater Monitoring Program

The SNSI performed an extensive review of the June groundwater sampling results furnished by Maine Yankee and initiated a comment list for Maine Yankee to review and resolve. In October the SNSI also consulted on several occasions with the DEP on their review and compilation of the State comments on Maine Yankee's third annual groundwater report. On September 22nd the final year of the radiological groundwater monitoring at Maine Yankee commenced and will terminate in June of 2010.

Other Newsworthy Items

1. On October 1st the House of Representatives passed the Conference Report on the Energy and Water Development and Related Agencies Appropriations Act for FY 2010. The Conference Report states that $197 million was approved to continue current activities on nuclear waste disposal with $5 million of that amount to establish a Blue Ribbon Commission to consider all alternatives for nuclear waste disposal. A summary of the Committees on Appropriations is attached at the end of the report.

2. On October 7th 19 organizations, representing various interests, sent a letter to Energy Secretary Chu expressing their concern that "the Department of Energy will decline to seek funding in FY 2011 for continuation of the Yucca Mountain license application now pending before the Nuclear Regulatory Commission." The letter highlights 11 disadvantages from the potential defunding. A copy of the letter is attached at the end of the report.

3. On October 8th the Department of Energy (DOE) responded to the July 8th letter from the National Association of Regulatory Utility Commissioners (NARUC), of which the Maine Public Utilities Commission is a member. NARUC's letter requested suspension of the payments to the Nuclear Waste Fund (NWF). With a balance in the NWF exceeding $23 billion and interest amounting to over $1 billion annually, DOE's response was that the Obama Administration issued a policy directive stating the fee was necessary. The DOE issued the same response to the Nuclear Energy institute's July 8th letter requesting suspension of payments to the NWF. A copy of the DOE letter to NARUC is attached at the end of the report.

[2] Refer to page 5 in the Glossary.

4. On October 14th the Nuclear Waste Strategy Coalition held a conference call to discuss congressional activities relative to the FY 2010 budget for the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC) and a joint letter to Energy Secretary Chu from 19 organizations expressing concerns over the non-funding of the DOE Yucca Mountain license application pending before the NRC for FY 2011.

5. On October 14th the Nuclear Regulatory Commission (NRC) published a final rule establishing criminal penalties for bringing unauthorized weapons or explosives into certain NRC-licensed facilities. The rule applies to facilities that contain special nuclear material, by-product material or source material. The facilities include nuclear power plants, independent spent fuel storage installations, high-level waste storage and disposal facilities, and uranium enrichment, uranium conversion and fuel fabrication facilities,

6. On October 15th the Prairie Island Indian Community issued a press release calling "on President Obama to follow the law and deliver on the federal government's decades-old mandate and promise to establish a permanent repository for the nation's commercial nuclear waste." The Prairie Island Indian Community in Red Wing, Minnesota is among the closest communities in the nation, located less than 600 yards from twin nuclear reactors and a temporary spent fuel storage site.

7. On October 20th Washington State Representative Doc Hastings sent a letter to President Obama specifically requesting a response to six questions ranging from the scientific basis for rejecting Yucca Mountain to the membership of the Blue Ribbon Commission. Representative Hastings also asked for "a complete explanation of the federal government's legal liabilities and obligations regarding <u>both</u> defense and commercial nuclear spent fuel". A copy of his letter is attached at the end of the report.

8. On October 28th the Nuclear Waste Strategy Coalition held a second conference call to discuss the outcome of the Appropriations Act of FY 2010 that passed on October 1st. However, concern was expressed on the possibility of no funding for the Department of Energy (DOE) support for the Yucca Mountain license application currently before the Nuclear Regulatory Commission (NRC) and for the NRC review of the DOE license application in FY 2011 budget. Even though the Appropriations Act appropriated $5 million for the Blue Ribbon Commission (BRC), there is still no word on the composition of the BRC that will consider alternatives for nuclear waste disposal.

Glossary

Condition Report (CR): A report that promptly alerts management to potential conditions that may be adverse to quality or safety. The report is generally initiated by a worker at the ISFSI facility. The report prompts management to activate a process to identify causal factors and document corrective and preventative measures stemming from the initial report.

Decay Series: There are three naturally occurring decay series of heavy elements that transform into a series of various radioactive elements by releasing energy in the form of particles, (such as alpha or beta), and/or gamma rays to end in a stable form of non-radioactive Lead. All three decay series start with extremely long lived radioactive, heavy elements that can be measured in geologic time units. They are Uranium-238 with an approximate half-life of 4.5 billion years, Uranium -235 with a half-life of about 700 million years, and Thorium-232 with a half-life of 14 billion years. All three series contain some more well-known radioactive species, Radium and Radon.

Dose is the amount of radiation that is absorbed by a person's body. In the radiation field the term dose is sometimes used interchangeably with dose equivalent, which is defined as the rem and described below.

fCi/m^3 is an acronym for a femto-curie per cubic meter, which is a concentration unit that defines how much radioactivity is present in a particular air volume, such as a cubic meter. A curie, named after its discoverers Pierre and Marie Curie, is defined as the rate at which a radioactive element transforms itself into another element that is most often another radioactive element. It is mathematically equivalent to 37 billion disintegrations or transformations per second. A "femto" is a scientific prefix for an exponential term that is equivalent to one quadrillionth (1/1,000,000,000,000,000).

Half-life is a measure of how fast half the mass of a radioactive element will transform itself into another element. Each radioactive element has its own unique rate of transformation. Consequently, if a radioactive element, such as Iodine-131 has a half-life of 8 days, then in 8 days half of the original amount of Iodine-131 will be gone; in another 8 days half of that half will be left and so on.

Gamma Spectroscopy is a scientific method used to analyze gamma rays emanating from radioactive elements. The analytical system determines the gamma ray energy which acts as a "fingerprint" for specific radioactive materials. For example, Potassium-40 (K-40) has a very, distinctive gamma energy at 1460 keV. This uniqueness allows the instrument to positively identify the K-40 1460 energy as its own unique fingerprint. A keV is an abbreviation for kilo electron volt, which is a measure of energy at the atomic level. A kilo is a scientific prefix for the multiplier 1,000.

Gross Beta is a simple screening technique employed to measure the total number of beta particles emanating from a potentially radioactive sample, with higher values usually indicating that the sample contains natural and/or man-made radioactive elements. High values would prompt further analyses to identify the radioactive species. A beta is a negatively charged particle that is emitted from the nucleus of an atom with a mass equal to that of an orbiting electron.

Liquid Scintillation is an analytical technique by which Tritium and many other radioactive contaminants in water are measured. A sample is placed in a special glass vial that already contains a special scintillation cocktail. The vial is sealed and the container vigorously shaken to create a homogeneous mix. When the tritium transforms or decays it emits a very low energy beta particle. The beta interacts with the scintillating medium and produces a light pulse that is counted by the instrument. Although a different scintillation cocktail is used, this is basically how radon in well water is measured.

mrem or millirem is one thousandth (1/1000) of a rem. The rem is defined below.

milliRoentgen (mR) is one thousandth (1/1000) of a Roentgen, which is defined below.

pCi/kg is an acronym for a pico-curie per kilogram, which is a concentration unit that defines how much radioactivity is present in a unit mass, such as a kilogram. A "pico" is a scientific prefix for an exponential term that is equivalent to one trillionth (1/1,000,000,000,000).

pCi/L is an acronym for a pico-curie per liter, which is a concentration unit that defines how much radioactivity is present in a unit volume, such as a liter.

Rem is an acronym for roentgen equivalent man. It is a conventional unit of dose equivalent that is based on how much of the radiation energy is absorbed by the body multiplied by a quality factor, which is a measure of the relative hazard of energy transfer by different particles, (alpha, beta, neutrons, protons, etc.), gamma rays or x-rays. In comparison the average natural background radiation dose equivalent to the United States population is estimated to be 292 millirems per year, or 0.8 millirem per day, with 68 % of that dose coming from radon. A millirem is one thousandth, (1/1000), of a rem.

Roentgen is a special unit of exposure named after the discoverer of X-Rays, Wilhelm Roentgen. It is a measure of how much ionization is produced in the air when it is bombarded with X-Rays or Gamma Rays. Ionization is described as the removal of an orbital electron from an atom.

Skyshine is radiation from a radioactive source that bounces off air molecules in the sky, much like a cue ball does off the banking of a billiard table, and is scattered/redirected back down to the earth.

Thermoluminescent Dosimeters (TLD) are very small plastic-like phosphors or crystals that are placed in a small plastic cage and mounted on trees, posts, etc. to absorb any radiation that impinges on the material. Special readers are then used to heat the plastic to release the energy that was stored when the radiation was absorbed by the plastic. The energy released is in the form of invisible light and that light is counted by the TLD reader. The intensity of the light emitted from the crystals is directly proportional to the amount of radiation that the TLD phosphor was exposed to.

Tritium (Hydrogen-3 or H-3) is a special name given to the radioactive form of Hydrogen usually found in nature. All radioactive elements are represented as a combination of their chemical symbol and their mass number. Therefore, Tritium, which is a heavy form of the Hydrogen molecule with one proton and two neutrons in the nucleus of its atom, is abbreviated and represented by its chemical symbol, H, for Hydrogen and 3 for the number of particles in its nucleus, or mass number. Similarly, other radioactive elements, such as Potassium-40, can be represented and abbreviated as K-40, and so on.

Addendum

Historical Perspectives

Independent Spent Fuel Storage Installation (ISFSI)

In 1998 the Department of Energy (DOE) was required to take title and possession of the nation's spent nuclear fuel as mandated by the Nuclear Waste Policy Act (NWPA) of 1982. When the NWPA was enacted, Congress assumed that a national repository would be available for the disposal of the spent fuel. Since the licensing and construction of the high level waste repository at Yucca Mountain in Nevada had experienced significant delays, DOE is currently projecting that the Yucca Mountain site will not be available until at least the year 2020 or later.

DOE's inaction prompted Maine Yankee to construct an ISFSI during decommissioning to store the more than 1434 spent fuel assemblies that were previously housed in the spent fuel pool in the plant, into 60 storage casks on-site. Another four casks contain some of the more radioactive components of the reactor internals that were cut up during decommissioning, since their radioactive concentrations were too high to dispose at a low level radioactive waste facility. These are expected to be shipped along with the spent fuel to the Yucca site should the repository open. Since then the Obama Administration and Energy Secretary Chu have advocated that the Yucca Mountain site is no longer a viable option for disposing of the nation's high level waste and spent nuclear fuel and plan to assemble a Blue Ribbon Panel of experts to review alternative strategies for managing these waste forms.

Environmental

Since 1970 the State has maintained an independent, radiological environmental monitoring program of the environs around Maine Yankee. Over the years there was an extensive quarterly sampling and analysis program that included such media as salt and fresh water, milk, crabs, lobsters, fish, fruits, vegetables, and air. Since the decommissioning the State's program has been reduced twice to accommodate decreased revenues for sample analyses at the State's Health and Environmental Testing Laboratory (HETL). Presently, the State monitors one freshwater location, one saltwater and seaweed location, and one air sample location. The State maintains a quarterly sampling regimen, except for the air sample, which is performed bi-weekly near the old Bailey Farm House. Besides the media sampling, over the years the State has maintained a robust thermoluminescent dosimeter (TLD) program to measure the radiation environment. The TLDs were placed within a 10 to 20 mile radius of the plant to measure the background radiation levels and later, when the plant was operating, any potential increases in background levels due to plant operations. Over time the number of TLDs nearly doubled to address public concerns over the clam flats in Bailey Cove and the construction of the ISFSI. After the plant's decommissioning the State reduced the number of TLDs around Bailey Cove, but maintained the same number for the environmental surveillance of the ISFSI. A further evaluation of reducing the State's radiological environmental monitoring program is planned for the fall of 2009.

Maine Yankee Decommissioning

Maine Yankee's decommissioning was completed in the fall of 2005. At that time the State Nuclear Safety Inspector (SNSI) also commenced his final walk down survey of the site. Certain areas such as the transportation routes exiting the plant site were surveyed after the plant industrial area was decommissioned. Due to the length of the egress routes, it took a considerable amount of time to complete both half-mile east and west access routes and the two thirds of a mile of the railroad track. In addition, seven specific areas, including the dirt road, were also examined as part of the final site survey. The State's final survey of the dirt road leading to the old softball field

was extended in the fall of 2007 when the State discovered three localized elevated areas on the road that were contaminated. At that time, extensive bounding samples were taken to determine the extent of the contamination.

Because of the State's findings the original Class III designation of little or no potential for small areas of elevated activity was deemed incorrect. Therefore, the Dirt Road systematic sampling was necessary to ensure that all the State's findings would still pass Maine Yankee's License Termination Plan (LTP) Class I criteria. The State and Maine Yankee findings both indicated that the random concentration of the Cesium-137 was low and comparable to what is normally found in nature from past weapons testing during the 1950's and 1960's. On October 31st the State issued a letter to Maine Yankee stating that, based on the recent systematic sampling and bounding efforts on the elevated areas, the results demonstrated that Maine Yankee had met its Class I LTP criteria. Therefore, the State concluded that there were no further outstanding issues relative to the Dirt Road and considered the issue closed. Even though some residual radioactivity remains, due to the localized nature of the contaminant and the restricted security access to the site, the contamination found does not present a public health hazard.

With the closure of the Dirt Road, the only remaining walk down survey left to be performed on-site is the portion of the East Access Road adjacent to the ISFSI bermed area. This area remains as the background radiation levels from the ISFSI were initially too high to survey, (greater than 30,000 counts per minute), and could mask potential elevated areas. Since then the State has been monitoring the levels every spring and has observed a steady decrease in the ambient radiation levels down to 25,000 counts per minute (cpm). When the levels reach about 20,000 cpm the area will be surveyed to close out all transportation routes at the Maine Yankee site.

The State will publish its decommissioning findings in a confirmatory summary that is expected in October of 2009. As part of that process the State will condense over 40 major survey areas into eleven confirmatory reports that are being worked on by an outside consultant. The independent consultant has been collecting all the State's findings and summarizing them in confirmatory reports that the State Nuclear Safety Inspector will use to complete the State's confirmatory summary.

Groundwater Monitoring Program

In June of 2004, the State, through the Department of Environmental Protection's (DEP) authority under 38 MRSA §1455, signed an agreement with Maine Yankee for a five year, post decommissioning radiological groundwater monitoring program at the site. Presently, the program is in its fourth year. The details of how the agreement would be carried out relative to the quality assurance facets of the monitoring, sampling and analyses would be captured in Maine Yankee's Radiological Groundwater Monitoring Work Plan.

The normal sampling regimen for the groundwater monitoring program is March, June and September of each year. However, since the first sampling took place in September of 2005, the annual sampling constitutes the September sampling of the current calendar year and finishes with the June sampling of the following year.

It should be noted that the Agreement between the State and Maine Yankee set an administrative limit of 2 mrems per year per well as a demonstration that it has met the State's groundwater decommissioning standards of a 4 mrem dose per year above background values. If a well exceeds the 2 mrem value after the five year monitoring program ends, Maine Yankee would allow the State to continue monitoring that well. To-date fifteen of the sixteen wells sampled have not exceeded one tenth of the limit, or 0.2 mrems/yr. Only well number MW-502 has come close to exceeding the 2 mrems administrative limit and that was back in March of 2006 when the dose was *1.96 mrems*. Since then the Tritium in this well has been steadily decreasing. It is expected that this well will remain elevated for some time as the water infiltration rates are very low. Consequently, the decrease will be slow and steady.

COMMITTEES ON APPROPRIATIONS

Daniel K. Inouye (D-HI), Chairman
United States Senate

David R. Obey (D-WI), Chairman
U.S. House of Representatives

Wednesday, September 30, 2009

Contact: Rob Blumenthal / John Bray, w/Inouye (202) 224-7363
Ellis Brachman / Jenilee Keefe Singer, w/Obey (202) 225-2771

FY2010 CONFERENCE SUMMARY: ENERGY AND WATER APPROPRIATIONS

The Energy and Water Appropriations Bill is a key part of ongoing efforts to meet the infrastructure needs of the country and, after years of neglect, address the inadequacies of our national energy policies.

This bill invests in new technologies, scientific research, and conservation efforts that will provide long term solutions to our energy needs and create jobs. It provides funding for the Army Corps of Engineers and the Bureau of Reclamation to help meet our nation's water infrastructure needs; protecting American citizens and improving our economic strength. And it continues to invest in the development of a new "smart grid" to ensure electricity delivery and energy reliability. Finally, the bill provides for environmentally responsible cleanup of facilities and property contaminated by more than five decades of nuclear weapons and nuclear energy research and development.

The bill also continues ongoing nuclear nonproliferation efforts to help keep America safe and invests in the nation's nuclear weapons stockpile to ensure that it can continue to serve its intended deterrent function.

Bill Total	
2009 Enacted:	$ 33.3 billion
2010 President's Request:	$34.4 billion
2010 House Passed:	$33.3 billion
2010 Senate Passed:	$33.8 billion
2010 Conference:	**$33.5 billion**

KEY INVESTMENTS

ARMY CORPS OF ENGINEERS: $5.4 billion, $43 million above 2009 and $320 million above the request, to address the nation's water resource investment needs.

- **Operations and Maintenance:** $2.4 billion, $198 million above 2009, to address the over $1 billion backlog of operations and maintenance needs of navigation infrastructure critical to the U.S. economy.
- **Construction:** $2.0 billion, $313 million above the request for projects including on-going flood protection efforts.
- **Investigations:** $160 million, $60 million above the request, to plan and design America's next generation of water resource infrastructure.

DEPARTMENT OF ENERGY: $27.1 billion, $318 million above 2009 and $1.3 billion below the request, to fund the five primary mission areas for the Department: science, energy, environment, nuclear nonproliferation, and national security.

Energy Efficiency and Renewable Energy: $2.2 billion, $314 million above 2009, to increase investments in technologies that use energy more effectively and produce clean, inexpensive energy from domestic sources.

- **Solar Energy:** $225 million for research, development, and demonstration projects to make solar energy more affordable.
- **Biofuels:** $220 million for grants to improve production of alternative fuels such as cellulosic ethanol and biodiesel.
- **Vehicle Technology:** $311 million to collaborate with industry to improve fuel efficiency with better engines, better batteries and engines that burn clean, domestic fuel.
- **Hydrogen Technology:** $174 million to develop the next generation of hydrogen and fuel cell technologies.
- **Energy Efficient Buildings:** $200 million to research conservation technologies for buildings and industry to reduce energy demand.
- **Industrial Technologies:** $96 million to help businesses improve energy efficiency.
- **Weatherization Grants:** $210 million for insulation and energy conservation measures to reduce utility bills for low-income households.

Electricity Delivery and Energy Reliability: $172 million, $35 million over 2009, to modernize and secure the nation's electricity grid. The conference agreement provides funds for smart grid and clean energy transmission research and development to increase the efficiency of the grid and enable the widespread deployment of clean, domestic renewable energy. The conference agreement more than triples funding for grid-connected energy storage and for cyber security research and development, to secure the nation's electric power system as cyber attacks increase worldwide and the grid becomes increasingly network-connected.

Office of Science: $4.9 billion, $131 million above 2009, for scientific research critical to addressing long-term energy needs. This funding, in addition to the $4.8 billion appropriated in fiscal year 2009 and $1.6 billion in the Recovery Act, exceeds the goals in the America COMPETES Act.

- **Basic Energy Sciences:** $1.6 billion for basic research primarily on materials sciences and on chemical sciences, energy biosciences and geosciences. This work places heavy emphasis on advancing the frontiers of using ever-faster tools, including $394 million in the Advanced Scientific Computing Research program, to better understand ever-smaller and more detailed phenomena.
- **Applied Research:** $2.4 billion for Nuclear Physics, High Energy Physics, Biological and Environmental Research, and Fusion Energy Sciences.

Environmental Clean-up: A half-century of national security and civilian nuclear activity has resulted in the need to mitigate the environmental impacts of these operations on the workforce, affected communities and the environment.

- $5.6 billion to clean up contamination from historical nuclear weapons research and production activities.
- $245 million for non-defense clean-up associated with civilian nuclear energy activities.
- $574 million from the Uranium Enrichment Decontamination and Decommissioning Fund for clean-up at three uranium processing facilities.

Fossil Energy: $672 million for fossil energy research and development that aims to enhance our energy security and protect the environment by reducing carbon dioxide and pollutant emissions in the atmosphere and increase efficiency for power generation.

- Coal Research and Development: $404 million to continue research to increase carbon capture and sequestration and other coal-based activities.

- Oil and Gas Research and Development: $37.8 million to focus on natural gas and unconventional petroleum research activities that benefit academia and independent producers.

Nuclear Energy: $787 million to support ongoing research and development projects and to maintain the infrastructure supporting this work.

- $105 million for the Nuclear Power 2010 program.
- $220 million for Generation IV nuclear energy systems, including $169 million for the Next Generation Nuclear Plant (NGNP).
- $136 million for fuel cycle research and development.
- $245 million for Idaho National Laboratory and other Radiological Infrastructure.

Nuclear Nonproliferation: $2.1 billion for nonproliferation activities, supporting the President's commitment to secure vulnerable material. This funding will protect the American people by reducing the risk that more countries will acquire nuclear weapons and improve our ability to stop nuclear and radiological materials and weapons from being smuggled into the United States.

- **International Nuclear Material Protection and Cooperation:** $572 million, $172 million above 2009, to strengthen the security of nuclear materials in Russia and elsewhere, as well as to bolster border and port security worldwide against illicit nuclear trafficking.

Nuclear Weapons Programs: $6.4 billion to maintain and enhance the safety, security and reliability of the U.S. nuclear weapons stockpile, including $32.5 million, half of the request, for a study of the non-nuclear components of the proposed B61-12 bomb. Further, the conference agreement prohibits the use of any funds to study the nuclear components of this proposed weapon without prior approval by the Appropriations Committees of both the House and Senate.

Loan Programs: The bill continues to support the Title 17 Innovative Technology Loan Guarantee and the Advanced Technology Vehicle Manufacturing Loan programs to accelerate the implementation of renewable energy generation and to establish a domestic manufacturing base. Recognizing sufficient loan authority for these programs currently exits, the bill includes no additional loan authority. The bill does include statutory language on wage-rate requirements for this program.

DEPARTMENT OF THE INTERIOR: $1.13 billion, $67 million above the request and $12 million above 2009, to continue to support and improve the nation's water infrastructure, including $1.1 billion for the Bureau of Reclamation for dams, canals, water treatment and conservation, and rural water projects.

SIGNIFICANT CUT

Nuclear Waste Disposal: The Administration has terminated the Yucca Mountain nuclear waste repository. The conference agreement provides $197 million, $92 million below 2009, to continue activities to inform future policy decisions on national nuclear waste disposal and to establish a Blue Ribbon Commission to evaluate alternatives for nuclear waste disposal.

October 7, 2009

The Honorable Steven Chu
Secretary
United States Department of Energy
1000 Independence Avenue, Southwest
Washington, DC 20585

Dear Secretary Chu:

The undersigned organizations are writing to advise you of our growing concern over reports that the U.S. Department of Energy (DOE) will decline to seek funding in Fiscal Year 2011 for continuation of the Yucca Mountain license application now pending before the U.S. Nuclear Regulatory Commission (NRC).

We believe that termination of the Yucca Mountain license application would be premature and unwise, as well as deleterious in general to the Nation's energy independence, environmental progress, economic competitiveness, job creation and national security.

Among other things, this defunding action may:

- Leave the Nation with no path forward or "Plan B" for the Nation's nuclear waste management while conflicting with the Nuclear Waste Policy Act, as amended, as well as Public Law 107-200, which approved Yucca Mountain as the site for the national repository -- a measure that was adopted in 2002 by decisive, bipartisan majorities of the U.S. House and Senate. The recent deferral by the NRC with respect to the pending Waste Confidence Rule is but one manifestation of the serious repercussions inherent in this policy vacuum and a harbinger of things to come;

- Potentially strand up to140,000 metric tons or more of spent commercial fuel and defense waste at 121 sites in 39 states for the better part of a century;

- Exacerbate the current breach-of-contract with respect to the Government's longstanding failure to meet its legal obligation to begin collecting spent nuclear fuel -- resulting in damages estimated by some at in excess of $50 billion;

- Unravel the Nuclear Waste Fund now reflecting an aggregate electricity consumer investment of nearly $31 billion in receipts to date, including collections and interest;

- Disproportionately impact defense waste states and erode public confidence in the Department by undermining the DOE's own agreements with states and local governments to remove defense-related high-level waste, as well as agreements pertaining to the U.S. Navy's nuclear fuel management operations. The U.S. Navy has purportedly designed its entire fuel disposal system entirely for Yucca Mountain and any violation of the 'Batt Agreement" will create yet another complexity with respect to the Navy's program for de-fueling and refueling of the nuclear fleet;

- Re-open site investigations for a national geologic repository in up to 28 states, as identified by the DOE in its 2008 report to Congress;

- Unnecessarily abandon the pending Yucca Mountain license application as well as more than 40 years of scientific investigation and $10 billion of taxpayer funding toward development of a national repository while terminating up to 700 jobs and evaporating decades of institutional knowledge;

- Remove funding of cooperative agreements with regional transportation organizations which have worked effectively with DOE on transportation planning and other organizations representing stakeholders involved with nuclear waste disposal issues;

- Contradict the President's Memorandum on Scientific Integrity as issued on March 9, 2009, stating that "political officials should not suppress or alter scientific or technological findings and conclusions;"

- Needlessly undercut full trust and confidence in the independence of the proposed Blue Ribbon panel and any ensuing recommendations; and

- Create an unnecessary hurdle and uncertainty for new nuclear generation in the United States, which is diametrically opposed to the Administration's emphasis on reducing carbon emissions and stimulating jobs.

While we understand that it is the Administration's intent to charter a new strategy for nuclear waste disposal and form a Blue Ribbon commission to study and recommend alternative waste management strategies, as summarized by the U.S. Chamber of Commerce in a recent report, Yucca Mountain is currently the "safest and best option" for managing spent commercial fuel and high-level waste "given the parameters of U.S. law." Cancelling this program without providing a bona fide alternative path forward is troubling, particularly to future generations, which bear the full burden of this action.

Accordingly, we encourage you to continue with the current approach of providing "costs necessary to answer inquiries from the 'NRC', while the Administration "devises a new strategy toward nuclear waste disposal," as stipulated in the President's budget submission to Congress in February.

Please note that -- while these views represent the consensus viewpoints of the undersigned organizations -- they do not necessarily represent the specific views of every individual member of these organizations.

Sincerely,

Sustainable Fuel Cycle Task Force	National Association of Regulatory Utility Commissioners
United States Chamber of Commerce	United States Nuclear Infrastructure Council
Partnership for Science and Technology	Nuclear Waste Strategy Coalition
United States Nuclear Energy Foundation	Institute for 21st Century Energy
Idaho Chamber Alliance	South Carolina Chamber of Commerce
Tri-City Industrial Development Council	Coalition 21
Alliance for Nevada's Economic Prosperity	Economic Development Partnership of Aiken and Edgefield Counties
Citizens for Nuclear Technology Awareness	Greater Idaho Falls Chamber of Commerce
INL Retired Employees Association	Gary Hollis, Commissioner, Nye County
Fuel Cycle Science Panel	

QA: NA

Department of Energy
Washington, DC 20585
October 8, 2009

Mr. Frederick F. Butler
President
National Association of Regulatory
Utility Commissioners
1101 Vermont Avenue, NW
Suite 200
Washington, D.C. 20005

Dear Mr. Butler:

This letter is in response to your letter dated July 8, 2009, to Secretary Chu regarding your recommendation to suspend payments to the Nuclear Waste Fund. As Acting Director for the Office of Civilian Radioactive Waste Management, the Secretary has requested I respond to your letter.

Section 302 of the Nuclear Waste Policy Act of 1982, as amended (NWPA), authorizes the Secretary of Energy to enter into a contract "with any person who generates or holds title to high-level radioactive waste or spent nuclear fuel of domestic origin for the acceptance of title and subsequent transportation and disposal of such waste or spent nuclear fuel"; that section further provides that in return for the payment of fees by the contract holder, the Federal Government will dispose of the contract holder's spent nuclear fuel and high-level radioactive waste. Additionally, that section requires that the fee and interest yield sufficient funds to offset the Government's expenditures in carrying out these responsibilities. These fees are deposited in the Nuclear Waste Fund in the U.S. Treasury. The current balance in the Nuclear Waste Fund is approximately $23 billion.

Section 302 of the NWPA also requires the Secretary of Energy to review annually the amount of the fee to determine whether projected fee collections will provide sufficient revenues to offset overall Program costs. The disposition of spent nuclear fuel is to be a full-cost recovery program. If the Secretary of Energy "determines that either insufficient or excess revenues are being collected" in order to cover the costs, the Secretary must "propose an adjustment to the Fee to ensure full cost recovery."

The Department of Energy has consistently determined that the current fee of 1/10-cent per kilowatt hour is adequate to cover the total system life cycle costs of disposing of the commercial spent nuclear fuel and high-level radioactive waste, using the assumptions in place at the time; and, in accordance with the Act, the fee will continue to be reviewed annually. On July 27, 2009, in response to Senate Energy and Water Appropriations language in H.R. 3183 related to suspension of collection of the fee, the Administration issued a Statement of Administration Policy stating that all of the fees collected in the

Nuclear Waste Fund are essential to meet the obligations of the Federal Government for managing and ultimately disposing of spent nuclear fuel and high-level radioactive waste.

We fully appreciate your perspective on this issue, and the Department will certainly take into consideration the views of the National Association of Regulatory Utility Commissioners as the policy process unfolds regarding how the Department should meet its contractual obligations to the nuclear industry for the management of spent nuclear fuel. If you have any questions and would like to discuss this matter further, please call me at 202-586-6850.

Sincerely,

Christopher A. Kouts
Acting Director
Office of Civilian Radioactive
Waste Management

DOC HASTINGS
4TH DISTRICT, WASHINGTON

COMMITTEE ON
NATURAL RESOURCES
RANKING REPUBLICAN MEMBER

1203 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5816

2715 SAINT ANDREWS LOOP, SUITE D
PASCO, WA 99301
(509) 543-8388

402 EAST YAKIMA AVENUE, SUITE 760
YAKIMA, WA 98901
(509) 452-3243

www.hastings.house.gov

Congress of the United States
House of Representatives

October 20, 2009

President Barack Obama
The White House
1600 Pennsylvania Ave., NW
Washington, DC 20500

Dear President Obama:

Under current law, Yucca Mountain is our nation's permanent high-level nuclear waste repository. Current law provides no alternative repository site to Yucca Mountain, and it does not authorize the Department of Energy to open temporary storage facilities without a permanent repository in operation. I fully support moving forward with ongoing efforts to complete Yucca Mountain. Recognizing, however, that the Administration has abandoned Yucca Mountain, I write to inquire about the status of your plan to develop a new option for our nation's defense waste and commercial high-level nuclear spent fuel.

My congressional district is home to the Department of Energy's Hanford site. Hanford was an integral part of our nation's nuclear weapons program for many years, and today is our largest and most complex Environmental Management cleanup site. High-level nuclear waste from Hanford is required to go to a national repository. My district is also home to the only operating nuclear power plant in the Pacific Northwest. Clearly, any decision about the disposition of commercial nuclear spent fuel and weapons complex high level waste will directly impact the communities I represent in Congress.

Given the importance of this issue to Central Washington state, I would appreciate an update on your efforts to address the federal government's nuclear waste storage obligations. Specifically: 1) what are the scientific reasons why Yucca Mountain is not a feasible option, 2) how long will the new studies take and how much will they cost, 3) what will be studied, 4) will the blue ribbon commission have the freedom to study any option they deem appropriate – including Yucca Mountain, 5) will sites that were previously considered, such as Hanford, be studied, and 6) how and when will members of the blue ribbon panel be selected?

I also request a complete explanation of the federal government's legal liabilities and obligations regarding <u>both</u> defense and commercial nuclear spent fuel given the additional delay in opening a national repository. To be complete, such a review must include defense waste at Hanford and similar cleanup sites, and not be limited to spent nuclear fuel from commercial reactors.

I am hopeful that as a blue ribbon panel is formed, this process will move forward in an open and transparent manner and that decisions will be based on science that covers all of the nuclear waste intended for Yucca Mountain. Thank you for your attention to this request. I look forward to learning more about plans for a blue ribbon panel from your response.

Sincerely,

Doc Hastings
Member of Congress