

# State Nuclear Safety Inspector Office

## May 2011 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 123<sup>rd</sup> Legislature, the foregoing is the monthly report from the State Nuclear Safety Inspector.

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. Past reports are available from the Radiation Control Program's web site at the following link: [www.maineradiationcontrol.org](http://www.maineradiationcontrol.org) and by clicking on the nuclear safety link in the left hand margin.

Commencing with the January 2010 report the glossary and the historical perspective addendum are no longer included in the report. Instead, this information is available at the Radiation Control Program's website noted above. In some situations the footnotes may include some basic information and may redirect the reviewer to the website.

### Independent Spent Fuel Storage Installation (ISFSI)

During May the general status of the ISFSI was normal. There were no instances of spurious alarms due to environmental conditions.

There were two fire related impairments in May. Both were associated with new cores bored through walls installing new conduits and wiring associated with security system upgrades. Both impairments were cleared when the penetrations were sealed and the conduit installation activities were completed.

There were no security related impairments for the month. However, four security events were logged. The first SEL involved a security alarm that was not responding as expected to a test condition. The equipment was adjusted and retested satisfactorily. The next two SELs were due to transient camera issues due to environmental conditions. The last SEL was written to document a temporary loss of the internet connection that lasted about twenty minutes.

There were three condition reports<sup>1</sup> (CR) for the month of May and they are described below.

- 1<sup>st</sup> CR: Documented the finding of the diesel transfer switch found in the manual rather than the automatic mode. The switch was moved to its proper position at the time of the discovery.
- 2<sup>nd</sup> CR: Documented a security test failure. The equipment was adjusted and retested satisfactorily the same day.
- 3<sup>rd</sup> CR: Documented some minor damage to a conduit that was bumped by construction equipment during a paving operation.

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<sup>1</sup> A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Program's website.

## *Other ISFSI Related Activities*

1. On May 9<sup>th</sup> Maine Yankee submitted to the Department of Environmental Protection a revision to its Cumulative Risk Report that was issued in March of 2008. The Report evaluated the chemical and radiological risks in soils and groundwater at the site. The conclusions stated then that the chemical hazards drove the cumulative risks with the radiological risks contributing a very small portion to the risks. At that time there was less than two years worth of information from the radiological groundwater monitoring program. The purpose of the revision was to update the risk information from the recently terminated five year radiological groundwater monitoring program. The conclusions remain the same with the chemical risk dominating the overall residual site risk with a very small contribution from the radiological portion.
2. On May 16<sup>th</sup> Maine Yankee electronically submitted to the Nuclear Regulatory Commission its 2010 occupational radiation exposure record of each individual monitored at the storage facility in Wiscasset.

## Environmental

As mentioned in the December 2010 report the State performed an assessment of its Radiological Environmental Monitoring Program around the Maine Yankee site. The purpose of the assessment was to consolidate the number of thermoluminescent dosimeters<sup>2</sup> (TLD) monitoring the ambient radiation levels near the ISFSI. Four of the fourteen Bailey Cove TLDs were reassigned as ISFSI TLDs to ensure coverage for the sixteen points of the compass. The four new stations were identified as N, O, P, and Q. Currently, only two stations remained as Bailey Cove stations. These stations were co-located with the State's solar powered environmental radiation monitors on the Maine Yankee site.

On May 19<sup>th</sup> the State received the first quarter results from the field replacement of its TLDs around the ISFSI and the Maine Yankee industrial site. The results from the quarterly TLD change out continued to illustrate three distinct exposure groups: elevated, slightly elevated and normal. The high stations identified were K and L and averaged 24.8 milliRoentgens<sup>3</sup> (mR). K is explainable due to its proximity to the storage casks. However, L is not near the casks and has usually been in the normal group, except that it was in the slightly elevated group last quarter. Although Station L is located on top of the hill south of the ISFSI, it is near a ledge outcrop which could explain a higher radiation background.

The moderately high group station is usually comprised of four stations. This quarter, however, there were three TLD stations that fell into that group. They were E, F and G with an average of 21.7 mR. Station G which has historically been in the elevated group was slightly lower with a value of 22.8 mR. It was observed that station F had one element in one TLD that was excluded from the results due to a higher than expected reading. When this occurs the dosimetry company that reads the TLDs employs a statistical test to see if the data point is an outlier. If it is, it will be rejected and not included in their report. Upon further examination of the affected TLD for station F, the element readings were 17, 15, 18, 18, and 17 with an outlier reading of 20.6. In performing the statistical test for the outlier, it was noted that the data should not have been rejected. Therefore, the State accepted the outlier and the TLD average increased from 17.0 to 17.7 for station F. The remaining stations, A, B, C, D, H, I, J, M, N, O, P, and Q averaged 17.9 mR.

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<sup>2</sup> Thermoluminescent Dosimeters (TLD) are very small, passive radiation monitors requiring laboratory analysis. For more information, refer to the glossary on the Radiation Program's website.

<sup>3</sup> A milliRoentgen (mR) is a measurement of radiation exposure. For a further explanation, refer to the glossary on the Radiation Program's website.

The Maine Yankee industrial site TLDs averaged 16.6 mR, which is comparable to the normally expected background radiation levels of 15 to 30 mR on the coast of Maine. The background levels are highly dependent upon seasonal fluctuations in Radon, tidal effects, and local geology. The control TLDs that are stored at the State's Radiation Control Program in Augusta averaged about 24.9 mR. The field controls at Ferry Landing on Westport Island, Edgecomb Fire Station and the roof of the State's Health and Environmental Testing Laboratory read 19.7, 17.0, and 18.7, respectively.

All the first quarter TLD results were lower when compared to the previous quarter's results. That is to be expected as there are seasonal fluctuations in the radiation background due to frozen ground conditions and snow cover, which primarily impede the out gassing of natural radioactive Radon gas in the soils. Considering the higher than expected snowfall amounts this past winter, localized snowfall totals could have greatly influenced the TLD stations and may be a factor as to why for the first time that station G was not in the elevated group.

For informational purposes Figure 1 on page 4 illustrates the locations of the State's 17 TLD locations in the vicinity of the ISFSI. The State's locations are identified by letters with the two highest locations being stations K and L.

### Maine Yankee Decommissioning

On May 27<sup>th</sup> the State Inspector performed his last survey of the East Access Road. A survey of the East Access Road abutting the bermed area of the ISFSI was the last outstanding item remaining for the State to complete its decommissioning activities. Initial surveys identified elevated radiation levels in excess of 30,000 counts per minute due to its proximity to the ISFSI. The elevated levels could potentially mask contaminated areas. Therefore, the State monitored the levels yearly to see how long it would take for the radiation levels to decrease to 20,000 counts per minute to perform a final survey. However, the State decided last fall that it would perform one final survey this spring, document its findings and issue a closure letter to Maine Yankee.

### Groundwater Monitoring Program

The State completed its review of the fifth and final groundwater report. Most of the comments were editorial in nature. Some comments may require some minor changes to the report and the Department of Environmental Protection's electronic data deliverable database. There were two questionable results for one well, MW-502. It appears that the tracer recoveries for two radiological tests were below the acceptable range agreed upon as denoted by an independent third party evaluation. Further discussions on this issue are expected. However, these discussions should not affect Maine Yankee's closure activities of the radiological monitoring wells on-site, except for possibly delaying the closure of well MW-502 should an additional sample and re-analysis be required.

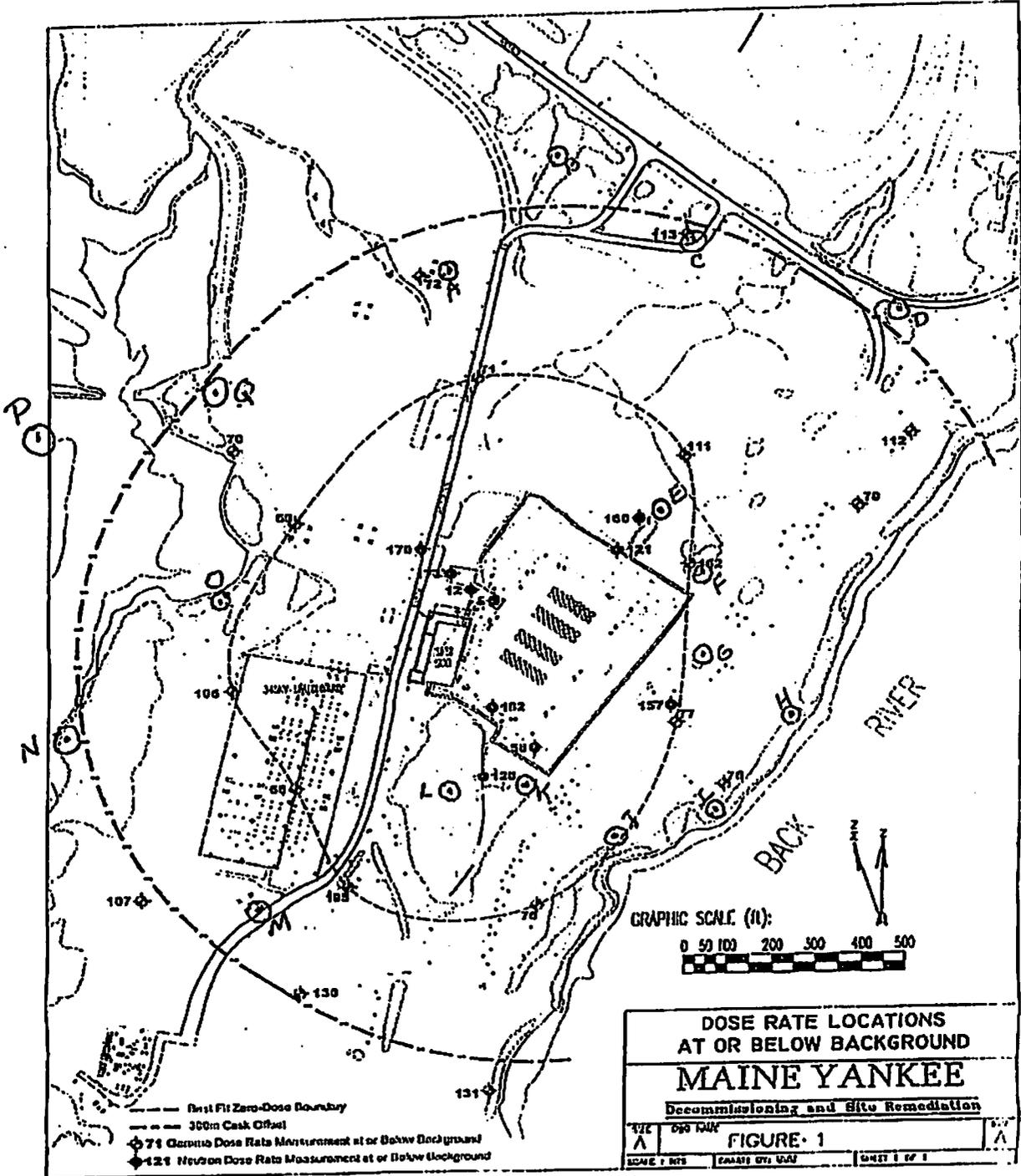
### Other Newsworthy Items

1. On May 2<sup>nd</sup> the Staff of the Nuclear Regulatory Commission (NRC) filed with the NRC's Atomic Safety and Licensing Board (ASLB) its response to the Department of Energy's (DOE) motion for clarification relative to their Yucca Mountain documents submittal to the NRC and status report regarding the ASLB's April 11<sup>th</sup> Order for the preservation of the Yucca Mountain documents in "PDF" format for the NRC. The NRC Staff opposed the DOE motion until its April 21<sup>st</sup> motion was resolved. However, the Staff was willing to accept documents provided DOE met the following three conditions. The documents were:

- “on high capacity external drives that can connect to Microsoft Windows computers with universal serial bus (USB) interfaces,
- the format and file system is compatible with Microsoft Windows, and
- the DOE’s portable document format (PDF) files are enabled for Fast Web Viewing.”

On the same day Nevada also filed with the NRC’s ASLB its response that it did not object to the DOE’s motion for clarification and status report regarding the ASLB Order.

Figure 1



2. On May 2<sup>nd</sup> the House Committee on Energy and Commerce issued a memorandum indicating that a joint hearing of the Subcommittees on Energy and Power and Environment and the Economy was held to discuss “The Role of the Nuclear Regulatory Commission (NRC) in America’s Energy Future”. Four of the five Nuclear Regulatory Commissioners would testify regarding four major topics of interest including the NRC’s review of the Department of Energy’s license to construct a geologic repository at Yucca Mountain. A copy of the memorandum is attached.
3. On May 2<sup>nd</sup> the State of Nevada also filed with the Nuclear Regulatory Commission’s (NRC) Atomic Safety and Licensing Board (ASLB) its response that it took no position and did not object to the NRC’s Staff April 21<sup>st</sup> request for leave to file a motion for reconsideration of the ASLB’s April 11<sup>th</sup> Order”.
4. On May 3<sup>rd</sup> the Energy Communities Alliance (ECA) sent a letter to Energy Secretary Chu requesting:
  - a review of the safety and security of defense-related high-level-waste and spent fuel storage due to the recent Fukushima event in Japan,
  - a review of the impacts on local communities of long term storage of high-level waste and spent fuel, and
  - an analysis of the costs and impacts on cleanup budgets of storing and securing waste at Department of Energy (DOE) sites.The ECA is an organization of local governments adjacent to and impacted by DOE activities. A copy of the letter is attached.
5. On May 3<sup>rd</sup> the Nuclear Waste Strategy Coalition sent a letter to the Co-Chairs of the Blue Ribbon Commission (BRC) on America’s Nuclear Future commenting further on the BRC’s “What We’ve Heard” Report. The letter raised a couple points of contentions with the BRC’s Report, such as Energy Secretary Chu’s termination of the Yucca Mountain Program was more for political rather than scientific considerations and that local Nevada communities where Yucca Mountain is located were more supportive than opposed to the project. A copy of the letter is attached.
6. On May 4<sup>th</sup> White Pine County, Nevada filed with the Nuclear Regulatory Commission’s (NRC) Atomic Safety and Licensing Board (ASLB) that it had not identified any additional party or other witnesses to the Yucca Mountain license proceedings.
7. On May 4<sup>th</sup> the Nuclear Waste Strategy Coalition held its bi-weekly conference call to update its membership on the Department of Energy’s May 13<sup>th</sup> Blue Ribbon Commission meeting, the reconfirmation of Nuclear Regulatory Commissioner Ostendorff, and congressional activities such as the May 4<sup>th</sup> hearings of the House Subcommittees on Energy and Power and Environment and the Economy on “The Role of the Nuclear Regulatory Commission (NRC) in America’s Energy Future”. Four of the Five NRC Commissioners were scheduled to testify before the Subcommittees. The discussions included the NRC’s responsibility and decision making process with regards to the Yucca Mountain license application. A copy of the hearing memo is attached.
8. On May 4<sup>th</sup> the House Subcommittees on Energy and Power and Environment and the Economy held a joint hearing on “The Role of the Nuclear Regulatory Commission in America’s Energy Future”. The opening statements of the Chair of the Subcommittee on Environment and Economy, Representative John Shimkus, and Ranking Member of the House Committee on Energy and Commerce, Representative Henry Waxman, are attached.

9. On May 5<sup>th</sup> Representative Henry Waxman, Ranking Member of the House Committee on Energy and Commerce, sent a letter to Representative John Shimkus, Chair of the Subcommittee on Environment and Economy, that took issue with the Chairman's remarks about his line of questioning at the joint hearing with the Nuclear Regulatory Commission Chairman Jaczko's actions to terminate the Yucca Mountain license review. A copy of his letter is attached.
10. On May 9<sup>th</sup> the Chairs of the House Committee on Energy and Commerce and Subcommittee on Environment and Economy sent a letter to Chairman Jaczko of the Nuclear Regulatory Commission (NRC) requesting his immediate assistance with the Committee's investigation of the Department of Energy's license application before the NRC by ensuring that all NRC employees were notified "of their right to communicate with Congress". A copy of the letter is attached.
11. On May 9<sup>th</sup> the House Committee on Energy and Commerce issued a press release on the Government Accountability Office's report indicating that the Administration's haste to shutdown Yucca Mountain could set back disposal of spent nuclear fuel 20 years. The report also cited the decision to terminate the project as politically motivated. Additional information on the report is presented in number 12 below. A copy of the press release is attached.
12. On May 10<sup>th</sup> the Government Accountability Office (GAO) released its April 8<sup>th</sup> report: "COMMERCIAL NUCLEAR WASTE Effects of a Termination of the Yucca Mountain Repository Program and Lessons Learned". The report examined:
  - a) the reasoning for the Department of Energy's (DOE) decision to discontinue the Yucca Mountain program,
  - b) the shutdown steps DOE took and their effects,
  - c) the major impacts if the repository were shuttered, and
  - d) the principal lessons learned.

The GAO report recommended that "Congress consider whether a more predictable funding mechanism would enhance future efforts and whether an independent organization would be more effective". The GAO report also recommended that "DOE assess remaining risks of the shutdown; create a plan to resume licensing if necessary; and report on federal property and its disposition". The Nuclear Regulatory Commission (NRC) and the Department of Energy (DOE) were allowed to comment on a draft report. The NRC had no significant comments on the draft whereas the DOE had 14 pages of comments that strongly disagreed with the draft and its recommendations, and questioned the integrity of GAO's information. GAO maintained that its findings and recommendations were sound.

13. On May 10<sup>th</sup>-12<sup>th</sup> the Department of Energy (DOE) held its second annual National Transportation Stakeholders Forum in Denver. The meeting covered numerous topics including state regional and tribal groups and their interface with the DOE, DOE planned shipments and lessons learned, rail inspections and lessons learned, enhancements to shipment security, and emergency and medical preparedness training for states and tribes. DOE uses the Forum as a mechanism to communicate and collaborate with states and tribes at the national level about the Department's shipments of radioactive waste and materials. A copy of the agenda is attached.
14. On May 12<sup>th</sup> Chairman Jaczko of the Nuclear Regulatory Commission (NRC) sent a letter to Chair of the House Committee on Oversight and Government Reform responding to the Committee's investigation of Chairman Jaczko's decisions and actions to close down the Yucca Mountain license proceedings. Attempts were made to secure a copy of Chairman Issa's March 11, 2011 letter but were unsuccessful. A copy of the May 12<sup>th</sup> letter is attached.

15. On May 13<sup>th</sup> the Blue Ribbon Commission (BRC) on America's Nuclear Future held a meeting to discuss the Nuclear Regulatory Commission's recent actions involving spent nuclear fuel storage in light of Japan's Fukushima reactor accidents in addition to presentations from its three Subcommittees on their draft recommendations for managing the nation's nuclear waste stockpile. Each Subcommittee had several recommendations. Two of the Transportation and Storage Subcommittee recommendations resonated well with the State and the Northeast. They were the establishment of "one or more consolidated interim storage facilities" and that spent nuclear fuel from "decommissioned reactor sites" receive priority in shipping their wastes to an interim storage facility. Copies of the agenda and the Subcommittee recommendations are attached.
16. On May 18<sup>th</sup> the Nuclear Waste Strategy Coalition (NWSC) held its second bi-weekly conference call to update its membership on the current status of the FY 2012 Appropriations hearings and mark-up in the Senate and the House, the draft recommendations from the Blue Ribbon Commission's three Subcommittees, the status of Nuclear Regulatory Commissioner Ostendorff's reconfirmation, and the recent reports issued from the Government Accountability Office. The NWSC is an ad hoc group of state utility regulators, state attorneys general, electric utilities and associate members representing 45 stakeholders in 32 states, committed to ensuring that the Department of Energy and Congress carry out the principles outlined in the Nuclear Waste Policy Act, as amended.
17. On May 19<sup>th</sup> the Office of Inspector General (OIG) of the Nuclear Regulatory Commission (NRC) released its Audit Report: "Audit of the NRC's Oversight of Independent Spent Fuel Storage Installations Safety". With the termination of the Yucca Mountain repository program it was expected that by the year 2025 all commercial nuclear power plants in the United States will have operating ISFSIs. In addition, the NRC's Waste Confidence Rule, published on December 23, 2010, allowed for longer on-site storage of spent nuclear fuel. Consequently, the NRC has been reviewing the issues associated with long-term storage. The OIG found that inspection frequencies of ISFSIs were not clearly defined between the four NRC Regions, which resulted in inspections varying from one to almost six years. OIG also noted that there was no formalized agency wide training program, which resulted in safety inspectors having inconsistent understandings of agency requirements, of ISFSI inspection requirements, of ISFSI enforcement requirements and of the role of resident inspectors at operating sites with ISFSIs. Although there have been no significant issues at ISFSIs, without consistent "inspection requirements oversight can be compromised, which could result in an increased risk to public health and safety." Therefore, OIG identified ISFSI safety inspector training and frequency of routine inspections as improvement opportunities.
18. On May 31<sup>st</sup> the Blue Ribbon Commission (BRC) on America's Nuclear Future's Subcommittee on Transportation and Storage issued its draft report to the full Commission on its findings and recommendations. The seven recommendations are essentially the same as those presented at the May 13<sup>th</sup> BRC meeting but were expanded to better frame the recommendations. The report addressed five broad categories:
- Technical and Regulatory Considerations for Extended Interim Storage and Transport
  - Consolidated Interim Storage
  - Management and Financing Considerations
  - Existing Potential Interim Storage Sites: Process Issues
  - Transportation Issues

There were several key findings in each category. A copy of the recommendations from the executive summary is attached.

## *Other Related Topics*

1. On April 6<sup>th</sup> the Governor of Massachusetts, the Senate President and the Speaker of the House sent a letter to Chairman Jaczko of the Nuclear Regulatory Commission requesting assurances about the operational safety of the Pilgrim nuclear power station and its storage of spent nuclear fuel, an assessment of seismic vulnerabilities and providing information on relicensing activities. The letter also alluded to a list of specific questions from the Massachusetts Legislative leadership. A third of the twenty-two questions posed were on spent fuel management. Copies of both letters are attached.
2. On April 15<sup>th</sup> the U.S. Nuclear Waste Technical Review Board sent a letter to the Speaker of the House, Senate President Pro Tempore and Energy Secretary Chu submitting their report: "Experience Gained From Programs to Manage High-Level Radioactive Waste and Spent Nuclear Fuel in the United States and Other Countries" as part of their legislative directive to report their findings and recommendations to Congress and the Secretary of Energy. The report examined "the efforts of 13 countries to find a permanent solution for isolating" spent nuclear fuel and high-level waste from the biosphere. The report not only updated a previous report's findings but was timely considering the current deliberations and drafting of recommendations from the Blue Ribbon Commission on America's Nuclear Future. The report highlighted major summary points in eight broad categories such as:
  - Process Considerations
  - Development, Assessment, and Adoption of Waste Management Options
  - Institutional Arrangements for Executing Waste Management Programs
  - Technical Basis for Developing Disposal Concepts and Supporting a Safety Case
  - Substance and Adoption of Health and Safety Standards and Regulations
  - Strategies for Identifying Candidate Sites for a Deep-Mined Geologic Repository
  - Site Selection for a Deep-Mined Geologic Repository
  - Approval to Construct a Deep-Mined Geologic Repository

The report also included technical reviewers from Germany, Italy, United Kingdom, Sweden and France. The report had four general conclusions. Copies of the letter and the conclusion section are attached.

3. On April 28<sup>th</sup> Chairman Jaczko of the Nuclear Regulatory Commission (NRC) responded to the Chair of the House Committee on Science, Space, and Technology, Representative Hall, on his request for an unredacted copy of the NRC Staff's draft Volume III of the Safety Evaluation Report (SER) on the Yucca Mountain license application. Chairman Jaczko ordered the release of the draft SER with reservations. In addition, Chairman Jaczko provided specific responses to Representative Hall's questions on the SER Volume III and the shutting down of support activities for the Yucca Mountain license proceedings. A copy of the letter is attached.
4. On April 29<sup>th</sup> the House Committee on Energy and Commerce's Chair, Chair Emeritus and three Chairmen of its Subcommittees sent a letter to the Comptroller General of the Government Accountability Office (GAO) requesting that the GAO update its 2003 report on "Spent Nuclear Fuel: Options Exist to Further Enhance Security". With the termination of Yucca Mountain Project and Japan's Fukushima incident, the letter also requested that the update examine and include additional information from five areas. A copy of the letter is attached.



# THE COMMITTEE ON ENERGY AND COMMERCE

## INTERNAL MEMORANDUM

May 2, 2011

### MEMORANDUM

**To:** Subcommittee on Energy and Power and Subcommittee on Environment and the Economy

**From:** Committee Majority Staff

**Subject:** Hearing Entitled: "The Role of the Nuclear Regulatory Commission in America's Energy Future"

On Wednesday, May 4, 2011, at 9:30 a.m. in 2123 Rayburn House Office Building, the Subcommittee on Energy and Power and the Subcommittee on Environment and the Economy will conduct a joint hearing entitled: "The Role of the Nuclear Regulatory Commission in America's Energy Future." The hearing will focus on the critical role played by the U.S. Nuclear Regulatory Commission (NRC) in the development of nuclear power generation in the United States to help meet the nation's current and future electricity needs.

#### I. Witnesses

Four of the five commissioners of the NRC will present testimony on a single panel:<sup>1</sup>  
Gregory B. Jaczko, Chairman,  
Kristine L. Svinicki, Commissioner  
William D. Magwood, Commissioner  
William C. Ostendorff, Commissioner

#### II. Background

Nuclear energy represents a critical component of current and future U.S. electric power generation, in particular, for meeting demand for baseload-generation. The United States has 104 operating reactors at 65 nuclear power plants in 31 states. Since 1990, the share of the nation's electricity supply provided by nuclear power has averaged 20%, with increases in generation roughly tracking the growth in the nation's total electricity output, as new reactors were placed into service and generation capacity was increased at existing reactors. At present, license applications to build 26 new reactors have been submitted, and applications for an additional 11 reactors may be submitted over the next five years, according to the NRC.

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<sup>1</sup> Commissioner George Apostolakis has travel commitments and is unable to participate.

For the past decade, both Congress and the Executive Branch have instituted or promoted policies to encourage the development of nuclear power. The Energy Policy Act of 2005 provided incentives for building new commercial nuclear power plants, through tax credits, loan guarantees, and measures to address regulatory delays, among other provisions. The Obama Administration includes nuclear power as a necessary element of its clean energy policy vision for 2035, focusing research on advanced nuclear generation designs at the Department of Energy (DOE). In all cases, the successful maintenance of existing and development of new nuclear capacity depends in large part on the NRC.

The NRC is an independent agency, established by Congress in the Energy Reorganization Act of 1974 to oversee the commercial nuclear industry. NRC licenses and regulates the nation's civilian use of nuclear facilities and materials to ensure adequate protection of public health and safety. The NRC is headed by five Commissioners, appointed by the President and confirmed by the Senate for five-year terms. The President designates one of the Commissioners to serve as Chairman. The Commission is responsible for policy formation, rulemaking, adjudications, and adjudicatory orders. As established in Commission procedures, the authorities of the Commission are exercised in a collegial manner; each Commission member has equal authority in all Commission decisions and equal (prompt and full) access to all agency information pertaining to Commission responsibilities, according to the NRC. The Chairman is the official spokesman of the agency and is the principal executive officer for the Commission, responsible for administrative functions of the agency. The Chairman is governed by the general policies of the Commission and by such regulatory decisions, findings, and determinations as the Commission may by law be authorized to make.

In addition to its ongoing activities to license new and relicense existing nuclear power reactors, the NRC has confronted certain challenging issues over the past year that also may affect the future of nuclear energy in the United States.

The NRC played a central role in the U.S. government response to the Fukushima Daiichi nuclear power plant in Japan this past March. NRC provided technical assistance to Japan and the U.S. Ambassador. On April 1, it established a task force to provide a short term review of the incident to identify any issues of safety and security concerning U.S. nuclear power plants and the storage of spent nuclear fuel. Longer term assessments will also be performed.

The issue of spent nuclear fuel that has been highlighted in the Japan incident also underscores a major policy initiative of the Obama Administration, which has taken actions to terminate the development of a spent fuel and high-level radioactive waste repository at Yucca Mountain, adjacent to the Nevada Test Site.<sup>2</sup> The disposition of spent fuel is a critical element of nuclear power development; absence of a permanent repository to date has resulted in the need for continued storage of the waste onsite at nuclear facilities, which creates uncertainty regarding licensing of new nuclear power reactors, as well as on-going financial liabilities and legal challenges relating to existing facilities.

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<sup>2</sup> For additional background: see "Closing Yucca Mountain: Litigation Associated with Attempts to Abandon the Planned Nuclear Waste Repository" Congressional Research Service, March 4, 2011 ([R41675](#)).

Pursuant to the Nuclear Waste Policy Act of 1982 (NWPA), as amended, the NRC is responsible for reviewing the license application for the construction of the repository at Yucca Mountain. That application, filed by DOE in June 2008, was docketed by NRC in September 2008, which is directed by NWPA to conduct its review within four years. The NRC then commenced a two pronged review of the application: (1) a technical licensing review by the NRC staff to assess the technical merits of the repository design and formulate a position on whether to issue a construction authorization for the repository and (2) adjudicatory hearings by the NRC's Construction Authorization Board, to consider technical and legal challenges to the application. The Commission, based on a staff Safety Evaluation Report and the Board hearings, is to determine solely on the technical merits whether to authorize construction of the repository.

In March 2010, DOE filed a motion with the NRC's Construction Authorization Board to withdraw the license application. The Commission directed the Board to decide the motion by June 1, 2010. On June 29, 2010, the Board denied the DOE motion to withdraw the application. Full Commission review of the Board decision is pending. On October 1, the NRC began to terminate licensing review activities.

### **III. Issues**

Issues to be examined at the hearing may include:

- Functioning of Commission to ensure timely decision-making;
- Impact of Japan nuclear incident on nuclear safety policy;
- Status of licensing and re-licensing nuclear reactors; and
- Review of DOE's license for construction of a repository at Yucca Mountain.

### **IV. Staff Contacts**

If you have any questions regarding this hearing, please contact David McCarthy or Peter Spencer of the Majority Committee staff at (202) 225-2927.

## **ENERGY COMMUNITIES ALLIANCE**

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May 3, 2011

The Honorable Steven Chu  
Secretary, U.S. Department of Energy  
1000 Independence Avenue  
Washington, DC 20585

**Subject: Department of Energy Should Review Defense-Related High-Level Waste and Spent Fuel Storage Practices**

Dear Secretary Chu:

In light of the Nuclear Regulatory Commission's (NRC) review of the safety of our domestic nuclear power facilities, including a review of spent nuclear fuel storage practices and regulations, Energy Communities Alliance (ECA), the organization of local communities adjacent to and impacted by Department of Energy (DOE) facilities, asks DOE to review safety issues at DOE nuclear defense sites. The issue of defense-related high-level waste and spent fuel storage – if safety and security issues are not regularly reviewed and addressed – can have an impact on local communities, as we were reminded by the tragic incident at the Fukushima Daiichi Nuclear Power Station.

Unlike private nuclear facilities, DOE has no independent regulator. ECA has been told by DOE that the storage of defense-related high-level waste and spent fuel are safe. While most communities do feel their waste does not pose any immediate threat, we ask that you review the safety and security of defense-related high-level waste and spent fuel storage and report your findings publicly. ECA feels that a review of these issues would help to build trust among DOE, local communities, and the public. As part of this review, we ask that you focus on how long-term, defense-related high-level waste and spent fuel storage would impact local communities.

We also ask that you analyze the cost and impact on cleanup budgets of storing and securing waste at DOE sites. The recent budget cuts to the office that is responsible for managing and overseeing the nation's defense-related high-level waste and spent fuel (DOE's Office of Environmental Management program) is concerning. Will these budget cuts impact DOE's ability to manage defense-related high-level waste and spent fuel or prevent DOE from carrying out programs that help to ensure the safety and security of defense-related high-level waste and spent fuel?

The costs associated with storing and securing this waste can be significant and the money to do so comes out of cleanup budgets. At Hanford and Savannah River, for example, facilities will need to be constructed to store vitrified waste that was originally destined for

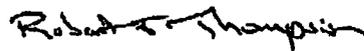
Yucca Mountain. The waste also needs to be guarded for security reasons, adding additional costs. Using cleanup funding to store and secure the waste may prevent other essential cleanup activities from being completed.

ECA has previously communicated with DOE on this matter. In December 2009, ECA wrote you to request that the department 1) Engage local communities and governments on defense-related high-level waste and spent fuel decisions; and 2) Analyze the impact of DOE's decision to leave defense-related high-level waste and spent fuel in communities.

After DOE filed a request to suspend the Yucca Mountain license application in February 2010 – eliminating the expected final disposition path for defense-related high-level waste and spent fuel – ECA again asked that the department address these issues with local communities.

Please evaluate these important issues and report your findings to the public. If you have any questions, please contact me or Seth Kirshenber, Executive Director, at Energy Communities Alliance at 202-828-2494.

Sincerely,



Robert Thompson, Chair  
Energy Communities Alliance,  
Council member, Richland, WA

cc: Energy Communities Alliance Board of Directors  
Deputy Secretary Poneman, DOE  
Administrator Thomas D'Agostino, National Nuclear Security Administration  
Assistant Secretary Inés Triay, Office of Environmental Management, DOE  
Assistant Secretary Peter Lyons, Office of Nuclear Energy, DOE  
National Governors Association  
National Conference of State Legislatures  
National Association of Attorneys General  
State and Tribal Government Working Group  
Environmental Council of the States  
Senator Dianne Feinstein, Chair, Senate Energy and Water Development Appropriations Subcommittee  
Senator Lamar Alexander, Ranking Member, Senate Energy and Water Development Appropriations Subcommittee  
Representative Rodney Frelinghuysen, Chair, House Energy and Water Development Appropriations Subcommittee  
Representative Peter Visclosky, Ranking Member, House Energy and Water Development Appropriations Subcommittee  
Blue Ribbon Commission on America's Nuclear Future

**Executive Committee Officers:**

**David Wright, Chairman**  
Commissioner, SC Public Service Commission

**Renzo Hoeksema, Vice Chairman**  
Director of Federal Affairs, DTE Energy

**David Boyd, Membership**  
Commissioner, MN Public Utilities Commission

**Robert Capstick, Finance**  
Director of Government Affairs, Yankee Atomic/Connecticut Yankee

**Greg White, Communications**  
Commissioner, MI Public Service Commission

# NWSC

## Nuclear Waste Strategy Coalition

May 3, 2011

Letter sent via email

The Honorable Lee Hamilton, Co-Chair  
Blue Ribbon Commission on America's Nuclear Future  
Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

The Honorable Brent Scowcroft, Co-Chair  
Blue Ribbon Commission on America's Nuclear Future  
Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Re: Comments Submitted to the Blue Ribbon Commission on the "What We've Heard" Report.

Dear Sirs:

We appreciate the Blue Ribbon Commission's (BRC) foresight to issue a report of what they have heard throughout the hearings process. The NWSC hopes that the BRC incorporates in its final recommendations the establishment of a quasi-government corporation to insulate the nuclear waste disposal program (Program) from future political whims to include the reform of the Nuclear Waste Fund (NWF) as an offsetting collection; thus, ensuring a continued stream of funding for the Program and that ratepayer's fees paid into the NWF are used for their intended purpose -- the removal of spent nuclear fuel (SNF) and high-level radioactive waste (HLRW) from commercial, and decommissioned sites; as well as all alternatives for interim storage, processing, and disposal of civilian and defense SNF and HLRW currently stranded at 121 sites in 39 states.

We are aware that Secretary of Energy Chu provided initial direction that Yucca Mountain is "off the table" -- despite the fact that your charter contains no such restriction. There is clearly no justification for Secretary Chu's admonition other than politics and the desire on the part of the current Administration to avoid further embarrassment over its actions. The intent to cancel the Yucca Mountain Project and the manner in which it was carried out have done considerable harm to our country and will continue to adversely affect us.

We find it ironic, that while Secretary Chu was a Director at Livermore Berkeley National Laboratory, he signed an August 2008 report which stated ... *"confidence can be achieved by continuing the licensing of a geologic repository at Yucca Mountain and enabling the continued interim storage of used nuclear fuel in dry casks and fuel pools."*

Therefore, the attempt to terminate the Yucca Mountain Project is over "political policy" rather than "scientific findings and the rule of law."

The merit of the Yucca Mountain site is an issue for the Nuclear Regulatory Commission, and it is not an issue the BRC should address; however, the way the Yucca Mountain Project was systematically dismantled by the Administration, and the way Congress failed to address its' own legislation, the implications on future project(s) involving SNF and HLRW is a fundamental issue that must be considered, and dealt with, by the BRC. Doing anything less would be an abrogation of your responsibility to the American people, who have paid \$5 million from the NWF for the BRC to ensure its' review is "comprehensive, open and inclusive."

NWSC Letter to the BRC  
Page Two – May 3, 2011

The report implies on page one that communities and stakeholders, particularly those in Nevada, oppose the Yucca Mountain project. To the contrary, this project is supported by Nye County and other local communities surrounding the Yucca Mountain Project in Nevada.

Given the energy challenges facing our nation and the important role nuclear energy plays in our nation's energy generation, a permanent repository will still be needed regardless of future fuel cycling technologies that the BRC might recommend in the interim.

Thank you for the opportunity to submit our comments on the future of the nuclear waste disposal program.

Respectfully yours,



David Wright  
Commissioner, South Carolina Public Service Commission, and  
Chairman, Nuclear Waste Strategy Coalition

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The Nuclear Waste Strategy Coalition (NWSC) is a diverse and an ad hoc group of state utility regulators, state attorneys general, electric utilities and associate members representing 45 member organizations in 32 states. The primary focus by the NWSC is to ensure that DOE and Congress carry out the principles outlined in the Nuclear Waste Policy Act, as amended – protect ratepayer payments made into the Nuclear Waste Fund NWF; ensure that the nuclear waste disposal program is appropriately funded on an annual basis; and the removal of spent nuclear fuel SNF and high-level radioactive waste HLRW currently stranded at commercial and decommissioned nuclear plant sites.

**Opening Statement Chairman John Shimkus**  
**The Role of the Nuclear Regulatory Commission in America's Energy Future**  
**May 4, 2011**  
**(As Prepared for Delivery)**

Nuclear power is vital to our economy, particularly in my home state of Illinois which boasts eleven operating nuclear reactors at six different locations. That's why the Nuclear Regulatory Commission plays a crucial role in ensuring that we meet our current and future energy needs without sacrificing safety or security.

Licensing of new plants and new reactor designs, re-licensing existing reactors, and considering the Department of Energy's application for a license to develop and operate a repository or storage site for spent fuel and high level waste that is away from reactor sites are all issues that the NRC Commissioners are called upon to weigh and decide using their best information, judgment, and expertise.

No one wants the NRC to rubberstamp any of these license applications. We want the NRC, instead to give each one the careful scrutiny that it deserves and only approve the applications that meet the rigorous safety and security standards that the Commission, itself, establishes.

But that means we expect the NRC to consider the applications and not just sit on them.

We also expect all Commissioners to be fully engaged in the policy decisions before the NRC. And right now we are not convinced Chairman Jazcko is respecting the roles of his fellow Commissioners as he should. This is deeply concerning to this Committee and should be to the Nation as a whole.

For any amateur mind-readers out there -- on or off the Commission -- I want to be clear: do not read into any of my remarks or questions a preference for a particular thumbs up or thumbs down on any adjudicatory matter before the Commission. You commissioners have the expertise. I only ask that the Commission follow its own established procedures, take up the work Federal law assigns you, and, when data are in, come to some explicit -- and timely -- resolution. I am not confident we are getting that today.

With that I want to welcome all the commissioners here with us today and look forward to hearing more details on their individual roles and the process for decision making at the commission.

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED TWELFTH CONGRESS  
**Congress of the United States**  
**House of Representatives**

COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
Minority (202) 225-3641

**Opening Statement of Rep. Henry A. Waxman**  
**Ranking Member, Committee on Energy and Commerce**  
**Hearing on "The Role of the Nuclear Regulatory Commission in America's Energy Future"**  
**Subcommittee on Energy and Power and the Subcommittee on**  
**Environment and the Economy**  
**May 4, 2011**

The mission of the Nuclear Regulatory Commission (NRC) is to license and regulate the nation's civilian use of nuclear materials to "ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment." Today, we will have the opportunity to hear from four of the five NRC Commissioners about their efforts to carry out this mission.

It is an important time for the NRC and for America's nuclear energy industry.

First, the nation's fleet of reactors is proposed to grow. Utilities have submitted license applications to NRC to build 26 new nuclear reactors.

Second, America's strategy for storing nuclear waste is at a crossroads. The President has determined that the Yucca Mountain facility is not workable and has created a Blue Ribbon Commission to review alternatives for storing, processing, and disposing of spent nuclear fuel and nuclear waste. The Commission's report, due out next summer, will help guide us in how to use 21<sup>st</sup> century technology to safely store the country's nuclear waste.

And third, the world is facing the most serious nuclear disaster in decades. NRC is continuing to review the safety of American nuclear reactors in light of what happened at the Fukushima power plant in Japan.

It is too soon to say with certainty what caused the accident in Japan and what role, if any, lax regulatory oversight of the industry played in the catastrophe. Here in the United States, we are not immune to catastrophic events resulting from regulatory failures, as we saw with the 2008 financial collapse and the BP oil spill. It is our duty to learn lessons from the Fukushima disaster and close any gaps in our oversight of America's nuclear fleet.

Mr. Chairman, I thank you for holding this hearing. The Committee needs to be performing regular oversight hearings such as this one.

I look forward to the testimony from today's witnesses.

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED TWELFTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
Minority (202) 225-3641

May 5, 2011

The Honorable John Shimkus  
Chairman  
Subcommittee on Environment and the Economy  
House Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515

Dear Chairman Shimkus:

I am writing in regards to inflammatory comments you made about my questions to the Nuclear Regulatory Commission (NRC) during yesterday's joint hearing before the Subcommittees on Energy and Power and Environment and the Economy.

You have publicly accused NRC Chairman Jaczko of "illegal" conduct and engaging in "politics at its worst" for halting the license processing of the Yucca Mountain nuclear waste depository. In yesterday's hearing, I asked Chairman Jaczko to respond to your allegations and to evidence bearing on them. I asked these questions because the Committee and the public should have the opportunity to weigh both the evidence and Chairman Jaczko's response.

Your objection to my questions appears to be based on a misunderstanding of your role as Chairman. As Chairman, you have many powers. You get to call hearings and invite witnesses. But your authority does not extend to censoring the content of Committee members' questions. Each member has the right to review the record before the Committee and ask any relevant questions.

On March 31, you and Chairman Upton requested documents from the NRC as well as the Department of Energy pertaining to the decision to close down the Yucca Mountain nuclear waste depository. Both agencies have produced thousands of pages of documents to the Committee in response to this request. My staff reviewed all of the documents produced by NRC and the Commissioners in advance of this hearing.

During review of these documents, my staff identified many documents that supported the actions of Chairman Jaczko. My staff also identified documents that showed that an NRC

The Honorable John Shimkus

May 5, 2011

Page 2

employee, who is responsible for administering one of the NRC's databases, had expressed concerns similar to yours about the legality and motivations of Chairman Jaczko's actions. Exercising my role as a member of the Committee, I asked Chairman Jaczko to respond to your allegations and two e-mails written by this employee.

You have stated that my questions undermined the investigation. I do not see how this could possibly be the case. My questions advanced the investigation by giving Chairman Jaczko the opportunity to respond to allegations that his actions were improper. Moreover, the documents in question were provided to the Committee by Chairman Jaczko and Chairman Jaczko confirmed in his answers yesterday that he was aware of the documents prior to my questioning.<sup>1</sup>

There is an irony in your comments objecting to my references to the two e-mails. These e-mails are part of the record of the NRC's actions. Just last year, you and other members requested that the NRC make public "all relevant documents" related to DOE's motion to withdraw the Yucca license application.<sup>2</sup> You stated: "Given the significant ramifications of DOE's actions, it is in the public's interest to be fully informed of the entire decision-making process."<sup>3</sup> If the NRC had complied with your request, the e-mails I discussed yesterday, as well as a large amount of other documents, would have already been made public.

I would also note that I believe you risk undermining the investigation by appearing to pre-judge its outcome. You stated yesterday that the Yucca investigation "only started last week."<sup>4</sup> But even though your investigation has just started, you've already announced your conclusions regarding Yucca on several occasions over the last four months. For example:

- On May 2, 2011, you called the decision to halt the NRC's review of the Yucca Mountain license application "politics at its worst at its highest levels." You also stated: "First of all, we think it is illegal for the NRC and for Obama through the secretary of energy to

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<sup>1</sup> I do recognize that there can be circumstances when it is appropriate to keep specific information confidential during a congressional investigation. But such circumstances are unusual and need far more justification than a generic assertion that the use of any documents in questioning would compromise an investigation. No such specific justification was provided – or could be provided – in this case.

<sup>2</sup> Letter to Chairman Gregory Jaczko, July 15, 2010.

<sup>3</sup> *Id.*

<sup>4</sup> *Waxman draws GOP fire for releasing NRC emails on Yucca Mountain*, E&E News (May 4, 2011).

The Honorable John Shimkus  
May 5, 2011  
Page 3

stop funding Yucca Mountain, and secondly, we really question the legality of the NRC delaying its vote.”<sup>5</sup>

- On April 11, 2011, you told *St. Louis Today*: “What I think has happened is that they have illegally closed Yucca Mountain.”<sup>6</sup>
- On January 19, 2011, you told *The Hill* that you intended to ask whether the decision to “pull the plug” on Yucca Mountain was “all politics.” You stated that you thought people already knew the answer, but “you should go through the process of asking the questions.”<sup>7</sup>

As members of Congress, we have a duty to review the documents provided to the Committee and to ask questions based on the documents. That is the approach I took yesterday and will take in future hearings. What we should avoid doing is drawing conclusions about an investigation without first reviewing those documents, which is apparently what you have done.

Sincerely,



Henry A. Waxman  
Ranking Member

cc: The Honorable Fred Upton  
Chairman  
Committee on Energy and Commerce

---

<sup>5</sup> *Congress expresses Concern about Yucca Mountain Closure*, The Daily Caller (May 2, 2011).

<sup>6</sup> *Shimkus says Yucca Mountain Trip a Go Despite Cost Warnings*, St. Louis Today (Apr. 11, 2011).

<sup>7</sup> *Energy Secretary faces new tests for agenda*, The Hill (Jan. 19, 2011).

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED TWELFTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
Minority (202) 225-3641

May 9, 2011

The Honorable Gregory B. Jaczko  
Chairman  
Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852

Dear Chairman Jaczko:

We request your immediate assistance in connection with our investigation, commenced March 31, 2011, relating to the pending license application for construction of a high-level waste repository at Yucca Mountain, Nevada.

In connection with this investigation, at our direction, Committee investigators may interview employees of the Nuclear Regulatory Commission (NRC) and other witnesses in preparation for potential hearings on this matter in the near future. We intend to conduct this investigation so as to cause minimal disruption to the orderly function of the NRC and the important work of its employees. At the outset of this phase of the investigation, however, we believe that added steps should be taken to ensure the full cooperation of all NRC employees who may have information critical to the inquiry.

Accordingly, we request that you immediately notify all NRC employees of their right to communicate with Congress and that it is against the law to deny or interfere with their rights to furnish information to Congress. Specifically, 5 U.S.C. § 7211, provides that:

The right of employees, individually or collectively, to petition Congress or a Member of Congress, or to furnish information to either House of Congress, or to a committee or Member thereof, may not be interfered with or denied.

We also request that you remind all Commission officials that, pursuant to 5 U.S.C. § 2302(b)(8), it is a violation of federal law to retaliate against whistleblowers. That law states:

Any employee who has authority to take, direct others to take, recommend, or approve any personnel action, shall not, with respect to such authority... take or fail to take, or threaten to take or fail to take, a personnel action with respect to any employee or applicant for employment because of....

(A) any disclosure of information by an employee or applicant which the employee or applicant reasonably believes evidences--

(i) a violation of any law, rule, or regulation, or

(ii) gross mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety, any disclosure to the Special Counsel, or to the Inspector General of an agency or another employee designated by the head of the agency to receive such disclosures, of information which the employee or applicant reasonably believes evidences a violation of any law, rule, or regulation..."

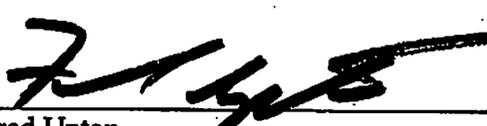
In addition, pursuant to 18 U.S.C. § 1505, it is against federal law to interfere with a Congressional inquiry:

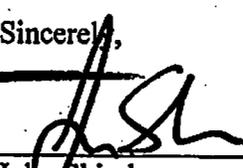
Whoever corruptly, or by threats or force, or by any threatening letter or communication influences, obstructs, or impedes or endeavors to influence, obstruct, or impede the due and proper administration of the law under which any pending proceeding is being had before any department or agency of the United States, or the due and proper exercise of the power of inquiry under which any inquiry or investigation is being had by either House, or any committee of either House or any joint committee of the Congress....

To demonstrate your good faith cooperation with our investigation and compliance with the aforementioned laws, we ask that you provide unedited and unredacted copies of this letter to all employees and contractors of the NRC. Further, we request that you confirm that these documents have been promptly transmitted to all Commission employees as we have requested.

Should you have any questions, please contact Todd Harrison, Chief Counsel of Oversight and Investigations, at (202) 225-2927.

Sincerely,

  
Fred Upton  
Chairman

  
John Shimkus  
Chairman  
Subcommittee on Environment and the Economy

cc: The Honorable Henry A. Waxman, Ranking Member

The Honorable Gene Green, Ranking Member  
Subcommittee on Environment and the Economy

Letter to the Honorable Gregory B. Jaczko  
Page 3

The Honorable Kristine L. Svinicki

The Honorable George Apostolakis

The Honorable William D. Magwood, IV

The Honorable William C. Ostendorff

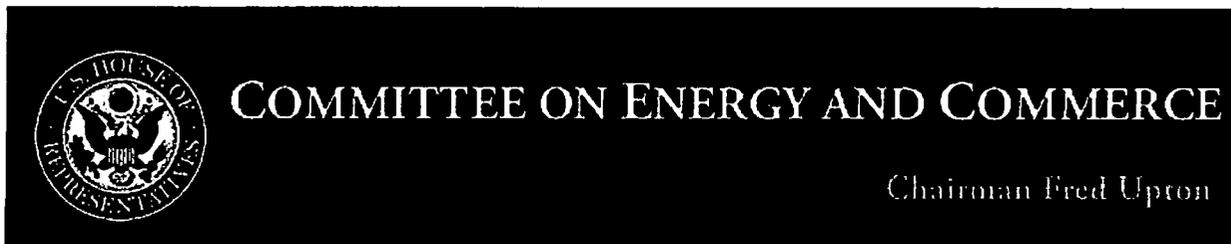
**Dostie, Pat**

**From:** Powaleny, Andrew [Andrew.Powaleny@mail.house.gov]  
**Sent:** Wednesday, May 11, 2011 12:29 PM  
**To:** Dostie, Pat  
**Subject:** FW: Government Report Finds Obama Administration's Haste to Terminate Yucca Mountain Nuclear Repository Could Set Back Effort 20 Years

**Andrew Powaleny · Press Assistant**  
Energy and Commerce Committee  
2125 Rayburn House Office Building  
202-226-4972 (Press Office)  
202-225-1840 (Direct)  
Energycommerce.house.gov



**From:** "Powaleny, Andrew" <energyandcommercenews@mail.house.gov>  
**Date:** Mon, 9 May 2011 19:16:45 -0400  
**Subject:** Government Report Finds Obama Administration's Haste to Terminate Yucca Mountain Nuclear Repository Could Set Back Effort 20 Years



**FOR IMMEDIATE RELEASE**  
May 9, 2011

**CONTACT:** Press Office  
(202) 226-4972

## **Government Report Finds Obama Administration's Haste to Terminate Yucca Mountain Nuclear Repository Could Set Back Effort 20 Years**

***Committee is Investigating the Termination of the Project – GAO Finds Political Opposition a Key Obstacle as DOE Did Not Cite Technical or Safety Issues***

**WASHINGTON, DC** – Energy and Commerce Committee Chairman Fred Upton (R-MI) today released an extensive report compiled by the Government Accountability Office examining the ramifications of the Obama administration and Energy Secretary Chu's decision to withdraw the license application for a high-level waste and spent nuclear fuel repository at Yucca Mountain, located adjacent to the Nevada Test Site. The report comes after an October 2009 request by Energy and Commerce Republican leaders for GAO to identify the consequences of the actions taken by DOE and the basis for DOE's decision to abandon Yucca Mountain.

Upton and Environment and the Economy Subcommittee Chairman John Shimkus (R-IL)

are conducting an investigation into the administration's decision to terminate the Yucca Mountain project. That investigation has already revealed significant internal legal and policy dissent from within the Nuclear Regulatory Commission about the administration's decision. The GAO estimates that nearly \$15 billion has been spent on the Yucca Mountain repository since 1983, \$9.5 billion of which has been directly collected from the public's electric bills.

"The ongoing situation in Japan further underscores that our national security demands a coherent nuclear policy to safely and permanently store spent nuclear fuel," said Chairman Upton. "It is alarming for this administration to discard 30 years of research and billions of taxpayer dollars spent, not for technical or safety reasons, but rather to satisfy temporary political calculations. Now, it appears the Obama administration's work to derail the Yucca repository over the last two years may have set back our bipartisan efforts by two decades. Our nuclear future requires visionary leadership as we seek a long-term solution to our spent nuclear fuel and high-level waste."

#### **Among GAO's key findings:**

- DOE actions to dismantle the Yucca Mountain program, after decades of effort and nearly \$15 billion in spending, were based on political reasons and not based on scientific or technical reasons. The justification provided GAO was that "the Secretary believes" there are better solutions that can achieve improved local support for a repository. **The report cites "social and political opposition to a permanent repository, not technical issues, is the key obstacle."**
- The methods of termination chosen by DOE will make the shutdown difficult to reverse if the agency reconsiders its decision or is compelled (e.g. by Courts or Congress) to resurrect the program and will thus deprive the public of valuable information.
  - The agency terminated the program without formally assessing the risks of shutting down, contrary to federal policy and guidance for planning and assessing risks of termination. "Several DOE officials told GAO they had never seen such a large program with so much pressure to close down so quickly."
  - DOE made minimal effort to preserve project staff. Reconstituting knowledgeable and experienced staff will be difficult, should the license application process resume. DOE elected not to proceed with the prime contractor's \$2.8 million proposal for "knowledge retention packages."
  - The NRC, meanwhile, took actions through budget decision-making that also could hinder resumption of license review – reassigning staff, closing down staff technical review and analysis of the repository license application, and closing out the review activities of the Atomic Safety and Licensing Board, which denied DOE's motion to withdraw the license.
  - Failure of NRC staff to provide findings on the technical merits of the Yucca license application – a result of NRC's improper actions to shutdown review – would deprive scientists and the public of valuable information that could be applied to future efforts, even if Yucca were not pursued as a repository.
  - An accurate accounting of property at the Yucca Mountain site was not maintained.
- GAO notes that "there is no guarantee that a more acceptable alternative [to Yucca Mountain] will be identified." **Moreover, termination could set back opening a**

**geologic repository twenty years. In the meantime:**

- o The \$9.5 billion dollars from the Nuclear Waste Fund spent on a terminated Yucca facility will mean there may not be enough funding in the Nuclear Waste Fund to site, license, and construct a replacement facility someplace else – and thus result in more taxpayer expenditures.
- o Termination would restart a time-consuming and costly process. Even temporary centralized storage would take 17 to 33 years to site, license, and construct, and cost billions of dollars, GAO estimates. Long term on-site storage, followed by eventual centralized or permanent disposal, could cost additional tens of billions more in taxpayer dollars.
- o Termination will add to taxpayer burdens, by increasing the substantial liability costs for DOE's failure to take custody of spent nuclear fuel. These costs presently amount to \$15.4 billion if Yucca were to open as planned in 2020 and will increase by an estimated \$500 million for each year delay after that.

Read the entire report [HERE](#).

###





# National Transportation Stakeholders Forum

## May 10 – 12, 2011

**THE CURTIS HOTEL  
DENVER, COLORADO**

### TUESDAY, MAY 10

<b>9:00 am – 5:00 pm</b>	<b>Registration</b>	<i>Marco Polo Foyer 3<sup>rd</sup> Floor</i>
<b>9:00 am – 5:30 pm</b>	<b><u>Western Governors' Association (WGA) Transportation Safety Technical Advisory Group Meeting (Click for Agenda)</u></b>	<i>Peek-a-Boo 2<sup>nd</sup> Floor</i>
<b>10:00 am – 5:00 pm</b>	<b><u>The Council of State Governments' (CSG) Northeast High-Level Radioactive Waste Transportation Task Force Meeting (Click for Agenda)</u></b>	<i>Red Rover 3<sup>rd</sup> Floor</i>
<b>10:00 am – 5:00 pm</b>	<b><u>CSG Midwestern Radioactive Materials Transportation Committee Meeting (Click for Agenda)</u></b>	<i>Patty-Cake 2<sup>nd</sup> Floor</i>
<b>10:00 am – 3:30 pm</b>	<b><u>Southern States Energy Board (SSEB) Radioactive Materials Transportation Committee Meeting (Click for Agenda)</u></b>	<i>Keep Away 2<sup>nd</sup> Floor</i>
<b>1:00 – 5:00 pm</b>	<b>Tribal Caucus</b> Please contact Scott Hendrick ( <a href="mailto:scott.hendrick@ncsl.org">scott.hendrick@ncsl.org</a> ) with any questions regarding the Tribal Caucus meeting	<i>Hopscotch 3<sup>rd</sup> Floor</i>

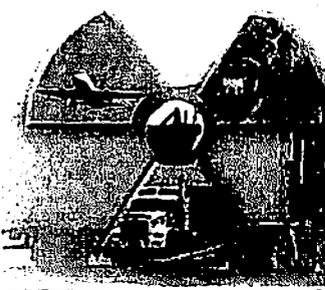


# National Transportation Stakeholders Forum

## May 10 - 12, 2011

### WEDNESDAY, MAY 11

<b>7:30 am - 5 pm</b>	<b>Registration</b>	<i>Marco Polo Ballroom</i>
<b>7:30 - 8:15 am</b>	<b>Breakfast Provided</b>	<i>3rd Floor - Foyer Area</i>
<b>8:30 am</b>	<b>DOE's National Transportation Stakeholders Forum (NTSF) Meeting Convenes</b>	
	<b>All NTSF sessions will be held in the Marco Polo Ballroom</b>	
<b>8:30 - 8:45 am</b>	<b>Welcome to Colorado</b>	
<b>8:45 - 9:30 am</b>	<p><b>Keynote Address: Cynthia Anderson - Chief Operating Officer, U.S. Department of Energy Office of Environmental Management</b>  <i>The keynote will include remarks on EM's recently released Journey to Excellence, which outlines cleanup goals between now and 2020 and discuss the implications that those goals will have on transportation. Ms. Anderson is also the EM lead on implementation of the American Reinvestment and Recovery Act (ARRA) and will be discussing the status of those efforts as well as lessons learned. Finally, the Department of Energy has recently released Environmental Impact Statements for Greater than Class C Waste and mercury storage, which will be discussed.</i></p>	
<b>9:30 - 9:45 am</b>	<p><b>National Transportation Stakeholders Forum Activities and Accomplishments</b>  <i>Progress made since the 2010 NTSF meeting in Chicago will be detailed including an overview of ad hoc working group activities, webinars, and new resources to promote the mission of the Forum.</i></p> <p><b>Steve O'Connor - Director of the Office of Packaging and Transportation, Office of Environmental Management</b>  <b>Lisa Janairo - Senior Policy Analyst, Council of State Governments-Midwest</b></p>	
<b>9:45 - 10:00 am</b>	<b>Break</b>	



## **National Transportation Stakeholders Forum May 10 – 12, 2011**

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**10:00 – 11:15 am**

### **DOE Planned Shipments**

*Officials from the U.S. Department of Energy will provide information to state and tribal participants on upcoming transportation campaigns, recently completed efforts, and other items that are pertinent to transportation and that may be of interest to states and tribes.*

**Steve O'Connor - Director of the DOE Office of Packaging and Transportation, Office of Environmental Management**  
**J.R. Stroble – Director National TRU Program, DOE Carlsbad Field Office**  
**Jeff Galan - Deputy Program Manager, U.S. Nuclear Remove**  
**Ahmad Al-Daouk - Manager, Nuclear Security Department, National Nuclear Security Administration**

**Steve O'Connor - DOE Office of Environmental Management, moderating**

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**11:15 am – 12:15 pm**

### **Update from Federal Partners**

*Federal agencies that have jurisdiction over activities leading to the safe and uneventful transportation of radioactive materials will provide updates on relevant issues and solicit input from the states and tribes where applicable.*

**Earl Easton - Division of Spent Fuel Storage and Transportation, U.S. Nuclear Regulatory Commission**  
**John Zabko - Assistant Director, U.S. Department of Homeland Security Domestic Nuclear Detection Office**  
**Tim Frazier - Designated Federal Officer to the Blue Ribbon Commission on America's Nuclear Future U.S. Department of Energy**

**Alex Schroeder - Western Governors' Association, moderating**

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**12:15 – 1:45 pm**

**Lunch (on your own)**

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## National Transportation Stakeholders Forum May 10 – 12, 2011

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### Afternoon Breakout Sessions

The breakout sessions are intended to provide an opportunity for facilitated and detailed discussions on topics important to safe transportation and for NTSF ad hoc working groups to meet and conduct business. With the exception of the ad hoc working groups, **breakout presenters and topics will be the same in the first and second sessions** and participants are encouraged to attend two different topics based on their interests.

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**1:45 – 3:20 pm**

#### **Breakout Session #1**

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##### **Communications Ad Hoc Working Group**

*Members of the NTSF communications ad hoc working group will meet to discuss any outstanding business.*

*Keep Away Room  
2<sup>nd</sup> Floor*

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**Ken Niles, Oregon Department of Energy, moderating**

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##### **Rail Topics: Rail Inspections, Lessons Learned from Rail Shipments and Implementation of Rail Routing Regulations**

*Representatives from DOE, the Federal Railroad Administration (FRA), and the states will discuss several related issues involving the management of radioactive waste shipments including a multi-regional initiative to standardize and coordinate rail inspections across the country, lessons learned from past rail shipment campaigns and the implications of rail routing regulations on current and future DOE shipments. After initial presentations and Q&A, the presenters will serve on a panel to field questions from the moderator and the audience concerning the future role of rail shipments for radioactive waste transportation given current national program priorities and uncertainties.*

*Red Rover  
3<sup>rd</sup> Floor*

**Kevin Blackwell - Radioactive Materials/Hazardous Materials Specialist ,  
Federal Railroad Administration**

**Mel Massaro - Region 2 RAM/HAZMAT Materials Inspector, Federal  
Railroad Administration**

**Dave Lojek – Team Leader, DOE Environmental Management Consolidated  
Business Center**

**Pat Edwards - Rail Safety Manager / FRA Program Manager, Pennsylvania  
Public Utility Commission, moderating**

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# National Transportation Stakeholders Forum

May 10 – 12, 2011

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## Using Technology to Dispatch and Monitor Shipments During Adverse Conditions

*Patty-Cake*  
2<sup>nd</sup> Floor

*Presentations will be made on technologies that facilitate weather and road condition forecasting and monitoring as well as other tools that can assist state, tribal, and federal officials in making decisions on the dispatch of radioactive waste shipments.*

**Ray Murphy - ITS Specialist, U.S. Department of Transportation**  
**Jeremy Smith - Transportation Manager, ESRI**

**Alex Schroeder, Western Governors' Association, moderating**

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## Enhancements to Shipment Security Requirements

*Peek-a-Boo*  
2<sup>nd</sup> Floor

*This breakout session will feature briefings on recent changes to the Nuclear Regulatory Commission's physical protection requirements for shipments of spent fuel and byproduct material; developments with regard to the security protocol for shipments of transuranic waste to WIPP; and the results of the Commercial Vehicle Safety Alliance's study of safety and security technologies for shipments.*

**Clyde Ragland - Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission**  
**Greg Sahd - Director of Security, DOE Carlsbad Field Office**  
**Captain Bill Reese - Commercial Vehicle Safety Division, Idaho State Patrol**

**Tim Runyon, Illinois Emergency Management Agency and Lisa Janairo, Council of State Governments-Midwest, moderating**

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## U.S. Department of Energy Training and Exercises: Naval Nuclear Propulsion Program, Transportation Emergency Preparedness Program, Waste Isolation Pilot Plant

*Hopscotch*  
3<sup>rd</sup> Floor

*Officials from the Department of Energy will discuss opportunities for states and tribes to receive emergency and medical preparedness training and participate in exercises designed to promote proper response to a radiological incident. The discussion will conclude with a short video by the Naval Nuclear Propulsion Program on its most recent exercise in Denver.*

**Ray English - Naval Nuclear Propulsion Program**  
**Tom Clawson - Consultant, DOE Transportation Emergency Preparedness Program**  
**Lynn Eaton - Manager External Emergency Management, Washington TRU Solutions**

**Ray English, Naval Nuclear Propulsion Program, moderating**

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**3:20 – 3:40 pm                      Break**

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**National Transportation Stakeholders Forum  
May 10 – 12, 2011**

**3:40 – 5:15 pm**

**Breakout Session #2**

**Notifications Ad Hoc Working Group**

*Members of the NTSF notifications ad hoc working group will meet to discuss any outstanding business.*

*Keep Away Room  
2<sup>nd</sup> Floor*

**Cort Richardson, Council of State Governments-Eastern Regional Conference, moderating**

**Rail Topics: Rail Inspections and Implementation of Routing Regulations**

*Red Rover  
3<sup>rd</sup> Floor*

**Using Technology to Dispatch and Monitor Shipments During Adverse Conditions**

*Patty-Cake  
2<sup>nd</sup> Floor*

**Enhancements to Shipment Security Requirements**

*Peek-a-Boo  
2<sup>nd</sup> Floor*

**U.S. Department of Energy Training Exercises: Naval Nuclear Propulsion Program, Transportation Emergency Preparedness Program, Waste Isolation Pilot Plant**

*Hopscotch  
3<sup>rd</sup> Floor*

**5:30 – 7:00 pm**

**No-Host Reception**

*Marco Polo Ballroom  
3<sup>rd</sup> Floor*



# National Transportation Stakeholders Forum

## May 10 – 12, 2011

### THURSDAY, MAY 12

<b>7:30 – 10 am</b>	<b>Registration</b>	<i>Marco Polo Foyer 3<sup>rd</sup> Floor</i>
<b>7:00 – 8:00 am</b>	<b>Breakfast Provided</b>	<i>3<sup>rd</sup> Floor – Foyer Area</i>
<b>8:00 – 8:30 am</b>	<p><b>Good Morning NTSF: Let's Hear From You</b> <span style="float: right;"><i>Marco Polo Ballroom</i></span></p> <p><i>The second day will start by engaging participants in an on-the-spot evaluation of the preceding day's events using the Turning Point technology employed at the May 2010 meeting. Following the short evaluation session, representatives of the May 11 breakout sessions will provide a brief recap of the discussions that took place and any action items resulting from the sessions. NTSF attendees will complete their evaluation of the meeting during the closing session on May 12.</i></p> <p><b>Steve O'Connor - Director of the DOE Office of Packaging and Transportation, Office of Environmental Management</b>  <b>Ken Niles - Assistant Director, Oregon Department of Energy</b></p>	
<b>8:30 – 9:00 am</b>	<p><b>Spotlight on U.S. Department of Energy Sites</b></p> <p><b>Rick Provencher - Manager, U.S. Department of Energy Idaho Operations Office</b></p> <p><i>U.S. Department of Energy facilities in Idaho have played a pivotal role in the nation's nuclear history. In operation since 1949, the sites have supported the U.S. Department of Energy's missions in nuclear and energy research, science, and national defense. The site is also host to several facilities that support active transportation campaigns across the country including shipments to the Waste Isolation Pilot Plant (WIPP), foreign research reactor shipments, and shipments in support of the Naval spent fuel program.</i></p>	
<b>9:00 – 10:00 am</b>	<p><b>Lessons Learned from DOE Shipments</b></p> <p><i>A moderated panel will be held on lessons learned by state, tribal, and federal officials in preparing for and conducting radioactive materials shipments. This panel will produce a written list of lessons learned that will be maintained on the NTSF wiki and seek to incorporate audience input to the extent possible.</i></p> <p><b>Bill Mackie - Institutional Affairs Manager, DOE Carlsbad Field Office</b>  <b>Willie Preacher - Shoshone Bannock Tribe</b>  <b>Del. Sally Jameson - Maryland Legislature</b>  <b>Paul Schmidt - Radiation Protection Section Chief, Wisconsin Department of Health Services</b>  <b>Lt. Jim Epperson - Commercial Vehicle Section, California Highway Patrol</b></p> <p><b>Jane Beetem, Missouri Department of Natural Resources, Moderating</b></p>	



## **National Transportation Stakeholders Forum May 10 – 12, 2011**

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**10:00 – 10:20 am**

**Break**

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**10:20 – 11:40 am**

**Panel on Transportation for Private Sector Shipments**

*A moderated panel will be held on radioactive materials shipments conducted by the private sector to include a discussion of what's being shipped, how shipments are routed and by what mode, and their interactions with states and tribes in conducting shipments.*

**Catherine Shelton - Director of Transportation Logistics, Areva Uranium Services and Products**

**Barb Englehart - Logistics Solutions Specialist, Nordion and Gamma Industry Processing Alliance (GIPA)**

**John Schrader - Vice President Operations and Logistics, REVISS and Gamma Industry Processing Alliance (GIPA)**

**Blake Williams - President, Secured Transportation Services**

**Chris Wells – Southern States Energy Board, moderating**

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**11:40 am – 12:00 pm**

**Meeting Evaluation and Next Steps Including New Ad Hoc Working Groups**

**Steve O'Connor - Director of the DOE Office of Packaging and Transportation, Office of Environmental Management**

**Ken Niles - Assistant Director, Oregon Department of Energy**

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**12:00 pm**

**Adjourn National Transportation Stakeholders Forum**

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**THURSDAY, MAY 12**

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**1:00 – 5:00 pm****TRANSCOM User's Group Meeting (Click for Agenda)***Peek-a-Boo  
2<sup>nd</sup> Floor*

*The TRANSCOM annual User's Group meeting will bring together state governor's representatives, local law enforcement, first responders, tribal governments, state regional groups, and shippers of transuranic waste and other high-visibility DOE shipments to participate in a working meeting. Staff will present a program review of the monitoring system to include enhancements made over the prior year and provide an update on the TRANSCOM System Upgrade to Version 3.0 planned in 2011/2012.*

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**FRIDAY, MAY 13**

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**8:00 am – 12:00 pm****TRANSCOM Super User Training***Patty-Cake  
2<sup>nd</sup> Floor*

Attendance at the Super User Training is limited to those individuals that have previously registered and have met the required pre-requisites. For more information on the User's Group Meeting or the Super User Training, please contact Della Murray (575-234-7651 or [Della.Murray@transcom.energy.gov](mailto:Della.Murray@transcom.energy.gov)); or Sharon Taylor (505-363-3057 or [Sharon.taylor@transcom.energy.gov](mailto:Sharon.taylor@transcom.energy.gov))

May 12, 2011

The Honorable Darrell E. Issa  
Chairman, Committee on Oversight  
and Government Reform  
United States House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

Pursuant to your March 11, 2011 request, the U.S. Nuclear Regulatory Commission (NRC) is providing this final submission of responsive documents generated by the NRC staff. The Commissioners have provided their documents separately to the Committee. If additional pertinent documents are identified, we will make supplemental submissions.

We are enclosing the timelines described in paragraphs 1 and 4 of your request, as well as a written certification, requested in Instruction 19 in the appendix to your letter. The response to paragraph 8 has been provided separately. Because of the Commission's adjudicatory role, the Commission has not reviewed that response. In addition, we are enclosing privilege logs, as requested in Instruction 12. Referenced in the privilege logs are responsive budget-related documents that were the subject of discussions with the Office of Management and Budget (OMB) because they fall within the parameters of OMB Circular No. A-11, "Preparation, Submission and Execution of the Budget."

The enclosed documents have not been released to the public, and we have marked them as "Not For Public Disclosure." We request that the Committee not release these documents beyond those people with a need to know within the Committee and its staff.

Sincerely,

*/RA/*

Gregory B. Jaczko

Enclosures:  
As stated

cc: Representative Elijah E. Cummings

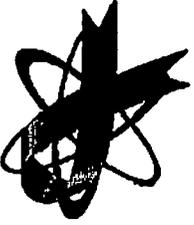
**Blue Ribbon Commission on America's Nuclear Future  
Agenda**

**May 13, 2011**

**Renaissance DuPont Circle  
1143 New Hampshire Avenue NW  
Washington, DC**

**Open Meeting – New Hampshire Room (Lower Level)**

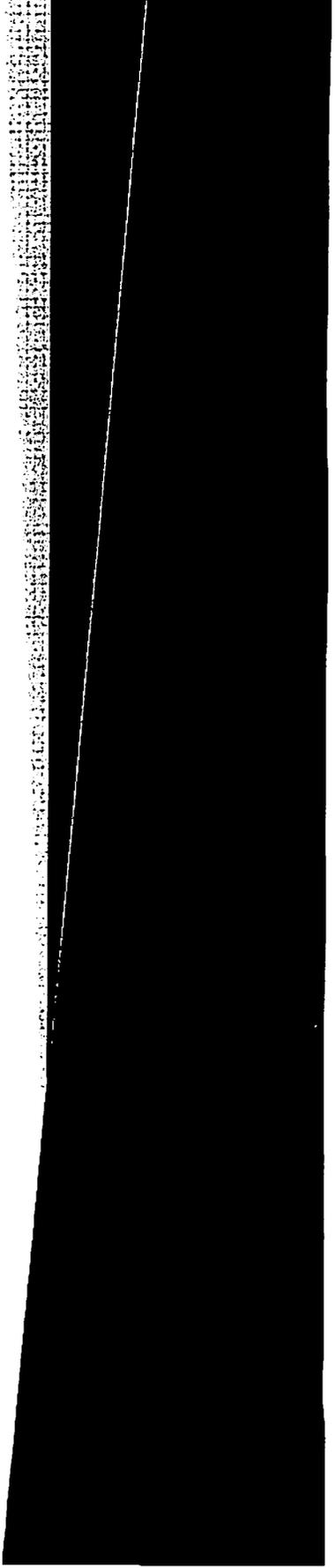
<b>9:00 a.m.</b>	<b>Open meeting/review agenda</b>	<b>Tim Frazier, DOE DFO</b>
<b>9:05 a.m.</b>	<b>Opening remarks</b>	<b>Honorable Lee Hamilton General Brent Scowcroft Commission members</b>
<b>9:15 a.m.</b>	<b>Briefing on Agency Task Force – Near-Term evaluation of the need for agency actions following the events in Japan</b>	<b>Lawrence Kokajko, Acting Deputy Director, Office of Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission</b>
<b>10:00 a.m.</b>	<b>Briefing on U.S. Department of Energy review of nuclear facility safety following the events in Japan</b>	<b>Glenn S. Podonsky, Chief Health, Safety and Security Officer, U.S. Department of Energy</b>
<b>10:45 a.m.</b>	<b>Break</b>	
<b>11:00 a.m.</b>	<b>Review of draft recommendations of the Transportation and Storage subcommittee</b>	<b>Commissioner Meserve Commissioner Sharp</b>
<b>12:00 noon</b>	<b>Lunch</b>	
<b>1:00 p.m.</b>	<b>Review of draft recommendations of the Disposal subcommittee</b>	<b>Commissioner Hagel Commissioner Lash</b>
<b>2:00 p.m.</b>	<b>Break</b>	
<b>2:15 p.m.</b>	<b>Review of draft recommendations of the Reactor &amp; Fuel Cycle subcommittee</b>	<b>Commissioner Domenici Commissioner Peterson</b>
<b>3:15 p.m.</b>	<b>Public Comment</b>	
<b>4:30 p.m.</b>	<b>Adjourn</b>	



**BLUE RIBBON COMMISSION**  
**ON AMERICA'S NUCLEAR FUTURE**

# **Draft Recommendations**

**Transportation and Storage Subcommittee**  
**May 13, 2011**



# Subcommittee Membership

- ▶ Richard Meserve (co-chair)
- ▶ Phil Sharp (co-chair)
- ▶ Mark Ayers
- ▶ Vicky Bailey
- ▶ Albert Carnesale
- ▶ Pete Domenici
- ▶ Ernest Moniz
- ▶ John Rowe
- ▶ BRC co-chairs Hamilton and Scowcroft (*ex officio*)



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

## **Key Question for the Subcommittee:**

**Should the United States change its approach to storing and transporting spent nuclear fuel (SNF) and high-level radioactive waste, while one or more permanent disposal facilities are established?**



**BLUE RIBBON COMMISSION**  
**ON AMERICA'S NUCLEAR FUTURE**

# Meetings / Study Approach

- ▶ Open meetings held August 10 (Wiscasset, ME); August 19 and September 23 (Washington, DC); November 2 (Chicago, IL)
- ▶ Deliberative meeting held January 3, 2011 (Washington, DC)
- ▶ Subcommittee has heard from dozens of witnesses and commenters
- ▶ Extensive materials and transcripts available on the Subcommittee web page



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

# Draft Recommendation #1

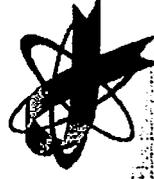
- ▶ The United States should proceed expeditiously to establish one or more consolidated interim storage facilities as part of an integrated, comprehensive plan for managing the back end of the nuclear fuel cycle.



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

# Draft Recommendation #2

- ▶ The Subcommittee has concluded there do not appear to be unmanageable safety or security risks associated with current methods of storage at existing sites. However, rigorous efforts will be needed to ensure this continues to be the case.



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

## Draft Recommendation #3

- ▶ Spent fuel currently being stored at decommissioned reactor sites should be “first in line” for transfer to a consolidated interim storage facility as soon as such a facility is available.



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

## Draft Recommendation #4

- ▶ A new integrated national approach is needed to revitalize the nation's nuclear waste program. A new organization charged with developing one or more permanent disposal facilities should also develop consolidated storage and transportation capabilities.



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

# Draft Recommendation #5

- ▶ Siting and development principles for disposal facilities should apply to interim storage facilities, and to planning for transportation needs. Processes should be science-based, consent-based, transparent, phased, adaptive, and standards-driven.



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

## Draft Recommendation #6

- ▶ The SNF transportation system is functioning well, and the safety record is excellent. However, planning and coordination for the transport of spent fuel and high-level waste is complex and should commence at the very start of any storage project.



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

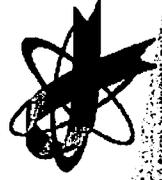
## Draft Recommendation #7

- ▶ Any new entity will need reliable access to financial resources. The Administration and Congress should provide full access to the Nuclear Waste Fund for the purposes for which it was intended, including funding consolidated interim storage.



**BLUE RIBBON COMMISSION**  
**ON AMERICA'S NUCLEAR FUTURE**

# Questions / Comments?



**BLUE RIBBON COMMISSION**  
ON AMERICA'S NUCLEAR FUTURE

**Transportation and Storage Subcommittee  
Report to the Full Commission**

**DRAFT**

**Blue Ribbon Commission on America's Nuclear Future (BRC)  
Washington, DC  
May 31, 2011**

## EXECUTIVE SUMMARY

The main question before the Transportation and Storage Subcommittee was whether the United States should change its approach to storing and transporting spent nuclear fuel (SNF) and high-level radioactive waste (HLW) while one or more permanent disposal facilities are established.

To answer this question and to develop specific recommendations and options for consideration by the full Commission, the Subcommittee held multiple meetings and deliberative sessions, visited several sites in the United States where SNF and HLW are being stored, and heard testimony from numerous experts and stakeholders. The Subcommittee also benefited from commissioned papers on several relevant topics; these papers are available on the BRC website at [www.brc.gov](http://www.brc.gov).

As this report was being prepared, on March 11, 2011, a massive earthquake occurred off the coast of the Tōhoku region of Japan. The earthquake triggered an immense tsunami that devastated the eastern coast of Japan. More than fifteen thousand people are known to have been killed, and approximately nine thousand remain unaccounted for. Damages are still being tallied but could amount to several hundreds of billions of dollars.

According to Japan's Nuclear and Industrial Safety Agency (NISA), the earthquake and subsequent tsunami affected nuclear reactors at four sites along the eastern coast.<sup>1</sup> The most serious impact occurred at the Fukushima Daiichi Nuclear Power Station, which sustained extensive damage to its reactors, spent fuel pools and other infrastructure. The station lost primary and backup power, and over several days suffered additional damage from hydrogen gas explosions and fires. Significant amounts of radiation were released, contamination has been detected offsite, and citizens were evacuated from a large area around the plant.

BRC members and staff are deeply saddened by this tragedy. Employees of the Fukushima Daiichi plant and officials of the Japanese government, with the help of military and civilian experts and assets from the U.S. and other nations, are continuing unprecedented efforts to prevent further damage to the plant and to deal with the aftermath of the disaster. As the emergency phase transitions to mitigation and cleanup, many questions have arisen about the specific events that occurred at the plant and what actions were taken. Some of these concern spent fuel in storage pools, and related design and safety issues that might have implications for storage in the U.S. The Subcommittee notes that the Nuclear Regulatory Commission (NRC), the U.S. Department of Energy (DOE), and industry have begun extensive investigations into these matters. In addition, we recommend that Congress request that the National Academy of Sciences (NAS) conduct its own separate assessment of lessons learned from Fukushima and their implications for conclusions reached in earlier NAS studies on the safety and security of SNF and HLW storage arrangements, once the necessary information from the Fukushima accident is available. We understand that such an assessment will take time and likely cannot be completed before the Commission is required to issue its final report. In the meantime, however, the Subcommittee will continue to monitor developments closely and, to the extent that preliminary assessments become available, we may offer additional or revised recommendations to the full BRC as warranted.

With that important prefatory note, we turn now to the Subcommittee's main conclusions and recommendations, summarized below.

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<sup>1</sup> Nuclear Regulatory Commission, presentation to the Advisory Committee on Reactor Safeguards, April 7, 2011 (hereinafter referred to as "NRC ACRS Briefing.")

***Recommendation #1: The United States should proceed expeditiously to establish one or more consolidated interim storage<sup>2</sup> facilities as part of an integrated, comprehensive plan for managing the back end of the nuclear fuel cycle. An effective integrated plan must also provide for the siting and development of one or more permanent disposal facilities.***

This is the Subcommittee's central and most important recommendation—without it, the other recommendations advanced here are unlikely to be meaningful or successful. We have concluded there are several compelling reasons to establish consolidated interim storage on a regional or national basis while progress is made toward implementing a permanent disposal solution.

First, consolidated interim storage preserves options while other aspects of an integrated waste management strategy can be developed. Given the long lead time needed to open a permanent disposal facility, consolidated storage would help reduce the cost and security burdens associated with storing spent nuclear fuel and high-level wastes at numerous dispersed sites. At the same time, a strategy that incorporates interim storage (i.e., storage for multiple decades up to a century or more) as a central element is consistent with preserving the option of recycling spent fuel if and when the circumstances make it advantageous.

Second, proceeding with consolidated storage would provide opportunities to build experience in many areas with direct relevance for the development, operation, and performance of other elements of an integrated management plan for both commercial and DOE spent fuel. For example, developing consolidated storage would help build experience with designing and executing a successful siting process; may lead to improved methods and technologies for the handling, packaging, and transportation of radioactive materials; and would provide a platform for R&D to better understand how the storage systems currently in use at both commercial and DOE sites perform over time.

Third, access to consolidated storage would make it possible for shutdown plant sites, which are serving no useful purpose (other than storing spent fuel), to be completely decommissioned and put to other beneficial uses.

Fourth, the merits of away-from-reactor storage for SNF may be enhanced in light of the events at Fukushima. A consolidated storage facility could be located where there is a very low probability of extreme events—unlike reactors, for example, it need not be near a large source of water, and could be located well away from densely populated areas. This observation should not be taken as a comment on the adequacy of current interim storage arrangements in the United States, which we continue to believe are generally safe and robust. The nuclear industry and the NRC are currently reexamining and re-analyzing SNF inventories, storage configurations, equipment, and procedures to ensure that current storage methods remain safe, and to improve system performance in the event of an emergency. Results from these assessments may strengthen the case for developing consolidated storage capacity. We believe consolidated storage capacity could be developed relatively quickly if the Administration and Congress made it a priority.

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<sup>2</sup> Throughout this report, the Subcommittee uses the terms “consolidated storage” or “consolidated interim storage” to mean storage of fuel at one or more facilities, away from the reactor sites of origin, for storage pending final disposal or other permanent waste disposition. We use these terms with some qualifications. “Centralized interim storage” is the term more commonly used, but “centralized” implies use of one facility at a centrally located site, and this may or may not be the preferred solution. “Interim storage” has a very specific meaning in a section of the NWPA that has since expired, but “interim” in common usage is preferable to other words such as “temporary” or “provisional,” since the time interval contemplated may last several decades or longer.

Finally, the Subcommittee believes it is essential that success in siting and developing one or more consolidated storage sites *support*, not detract from, the vigorous pursuit of a successful disposal solution. By taking a first tangible step toward meeting its longstanding commitment to manage SNF and HLW, the federal government would address a major source of political pressure, and legal and financial liability, which will otherwise complicate efforts to move beyond the current impasse in the nation's nuclear waste management program.

Decades of failed policies, missed deadlines, and a climate of distrust have seriously eroded confidence in the nation's ability to manage these materials responsibly. In this context, demonstrating that it is possible to muster the policy direction, technical expertise, and institutional competence needed to site and operate a consolidated storage facility (while also seeking final disposal capability) would by itself be enormously valuable. This is not a "new" recommendation; interim storage has been proposed by numerous expert panels going back over 30 years. The Subcommittee concurs and believes it is time, finally, to implement this long-awaited and sensible interim management solution.

In making this recommendation, we recognize that the broader challenge will be to establish appropriate linkages between interim storage and permanent disposal in which both objectives are seen as essential and complementary components of a comprehensive strategy for managing all aspects of the back end of the nuclear fuel cycle. In the Nuclear Waste Policy Act (NWPA), Congress recognized that both temporary storage and ultimate disposal are necessary. Certainly, efforts to develop consolidated storage must not hamper efforts to move forward with the development of permanent disposal capacity. Just as progress on consolidated storage is important for progress on permanent disposal, the reverse is also true: efforts to site one or more consolidated storage facilities will succeed only in the context of a corollary disposal program that is effective, focused, and sustains the trust and confidence of key stakeholders and the public.

***Recommendation #2: Recognizing the substantial lead-times that may be required in opening one or more consolidated storage facilities, dispersed interim storage of substantial quantities of spent fuel at existing reactor sites can be expected to continue for some time. The Subcommittee has concluded that there do not appear to be unmanageable safety or security risks associated with current methods of storage (dry or wet) at existing sites. However, to ensure that all near-term forms of storage meet high standards of safety and security for the multi-decade-long time periods that they are likely to be in use, active research should continue on issues such as degradation phenomena, vulnerability to sabotage and terrorism, full-scale cask testing, and other matters.***

Based on an extensive review of expert opinion and technical information, the Subcommittee has concluded that there do not appear to be unmanageable safety or security risks associated with current methods of storage at existing sites, whether at shutdown or operating plants. Further, we believe the United States has the technical and institutional capacity to provide for the safe and secure storage of SNF at existing or new reactors even for prolonged periods of interim storage (100 years or more). However, we emphasize that the ability to store spent fuel for an extended period does not lessen the requirement for a vibrant, high-priority repository program dedicated to establishing permanent disposal capability in a timely manner.

Assuring safe and secure storage of SNF and HLW over extended periods of time will require continued public and private efforts—including efforts by the Nuclear Regulatory Commission (NRC), DOE, and industry organizations such as the Electric Power Research Institute (EPRI) —to conduct rigorous

research and oversight and continuously incorporate lessons learned from new developments and from extraordinary or unexpected events such as the accident at Fukushima. For example, it will be important to continue exploring fuel degradation mechanisms, particularly since many current safety assessments are based on examinations of fuel with lower burnup than is now “standard” and do not account for storage times of the length now being contemplated. Further research may identify unanticipated problems with extended fuel storage (e.g., unexpected corrosion rates)—and ensure that problems are detected and appropriately mitigated if they emerge. In addition to efforts at consolidated storage facilities to better understand the behavior of dry storage systems and their contents over time (see Recommendation #1), it would be useful to explore the feasibility and utility of enhancing instrumentation in dry storage systems at existing dispersed sites to provide insights on the evolution of these systems as they age.

To provide effective oversight, regulatory authorities and nuclear plant operators, designers, and vendors must also be able to adapt quickly to new or unanticipated risks, such as emerged in the crisis at Fukushima. That crisis is still ongoing, and it may take many months before a thorough investigation is complete and potential safety implications are fully understood. However, as discussed more fully in Section 3, the NRC and industry have quickly implemented both near-term assessments and longer-term analyses to understand what happened and take any needed actions to address safety issues at U.S. plants. In addition, the Subcommittee is recommending that the NAS—which has undertaken a number of past assessments of these issues—be authorized to conduct an independent investigation of the events at Fukushima and their implications for safety and security requirements at SNF and HLW storage sites, once information about the accident is available. Recognizing that all of these initiatives will take some time, the BRC will continue to monitor information about Fukushima as it emerges and modify our final recommendations as appropriate.

Similarly, the NRC is reexamining its security requirements for storage sites and transportation and may conclude that enhanced security measures should be required in the future. As part of this process the NRC should examine the advantages and disadvantages of options such as “hardened” on-site storage (HOSS) that have been proposed to enhance security at existing storage sites. Obviously, any hardened system could be implemented more cost effectively at a consolidated storage facility than at existing sites due to economies of scale. Finally, continued vigilance and research is needed to stay abreast of evolving security risks and terrorism or sabotage threats, particularly as storage times increase and spent fuel becomes potentially more susceptible to theft or diversion.<sup>3</sup>

Subcommittee members with appropriate clearances have been briefed by officials from DOE, NRC, and other agencies regarding issues of fuel storage and transportation safety and security. These briefings have also covered related research efforts and the additional security measures that have been implemented at some sites. We are confident the NRC’s current analytical and regulatory processes, are adequate to make needed assessments, and to adapt as appropriate.

***Recommendation #3: Spent fuel currently being stored at decommissioned reactor sites should be “first in line” for transfer to a consolidated interim storage facility as soon as such a facility is available.***

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<sup>3</sup> Over time, spent fuel “cools” thermally and radioactively and requires less shielding to be handled directly. In this way it loses some of the characteristics that would make it difficult to remove and transport for unauthorized purposes. Depending on burnup, spent fuel may no longer be self-protecting after a century or so of storage.

Affected utilities and DOE or a new waste management organization should be given flexibility to make arrangements that will lead to the early acceptance of spent fuel from shutdown plants at a consolidated storage facility.

The rationale for giving priority to decommissioned reactor sites is straightforward: The benefits of removing spent fuel from these sites—in terms of reduced costs, management burdens, and security issues—are simply much larger than at still-operating reactors where an active on-site presence and various security measures must be maintained in any case. Continued interim storage at decommissioned sites also imposes a burden on local communities, since it delays the opportunity to develop those sites for other uses and requires ongoing maintenance of emergency response capabilities. While there are only nine commercial reactor facilities (plus the DOE-managed fuel storage site at the Fort St. Vrain reactor in Colorado) that are currently shut down and used for the sole purpose of storing spent fuel, that number will grow rapidly as reactor operating licenses (with extensions) expire.

More generally, future decisions about how to prioritize or sequence the transfer of spent fuel from commercial reactor sites to one or more consolidated storage facilities should be driven first by safety and risk considerations, and then by issues related to cost. The Subcommittee recognizes that existing contracts have created a “queue” in terms of federal commitments to accept materials from specific utilities. DOE has authority to modify this ordering in certain circumstances, but doing so may require the Department and current contract holders (i.e., utilities) to re-negotiate some of these commitments. The existing acceptance queue was not set up to maximize efficiencies or to minimize the risks of fuel handling and transportation, but DOE could modify the queue to do so. There may also be circumstances where expedited removal of fuel from an operating reactor might be needed. The Subcommittee believes a more flexible approach would benefit all parties involved.

***Recommendation #4: A new integrated national approach is needed to revitalize the nation’s nuclear waste program. A new organization charged with developing one or more permanent disposal facilities should also lead the development of consolidated storage and transportation capabilities.***

The BRC Disposal Subcommittee is developing options and recommendations for the formation of a new organization that would assume primary responsibility for the nation’s spent fuel and high-level nuclear waste program. Consolidating responsibility for storage and transportation capacities within the same organization, as is currently the case under the NWPA, makes sense in the context of pursuing an integrated strategy and improving overall prospects for success. The Transportation and Storage Subcommittee defers to the Disposal Subcommittee to make recommendations to the full Commission on specific aspects of a new organization, including options for the nature, contracting authority, governance, and financing of such an entity.

The Subcommittee notes, however, that efforts by any new governmental or quasi-governmental organization to renew progress on consolidated interim storage should not impede or discourage other private-sector fuel storage initiatives that may arise. Commercial entities and potential host communities should be free to engage in voluntary discussions to develop interim storage alternatives, if they wish to do so. A new waste management entity could contract with such parties to provide waste management services, if desired.

Finally, it is important to emphasize that efforts to move forward with developing consolidated interim storage capacity should not be delayed until a new waste management organization is up and running.

This is both because establishing a new organization will take time, and because DOE remains for now (and will likely remain for some time until the law is changed) the entity that is contractually liable for accepting spent fuel from commercial power plant operators. Several steps to implement this central Subcommittee recommendation could and should be taken in the near term. DOE and various expert panels over the years have developed a substantial body of design and planning work for an interim storage facility. Collecting and updating this material could be useful to a new entity if it is directed to establish such a facility. Specific steps the Department could take under existing authority include performing systems and design studies; providing information on fuel storage and transportation to states, tribes and communities that on their own initiative are investigating the possibility of hosting a spent fuel storage facility; and working with industry and the NRC to standardize dry cask storage systems. Utilities and the Department of Justice could easily arrange to expedite these discussions and plans in a manner that will not affect pending litigation.

***Recommendation #5: Although the regulatory standards may differ, the general principles that the BRC recommends for the siting and development of permanent disposal facilities should apply to the siting and development of interim storage facilities, and to planning for transportation needs. Processes used to develop and implement all aspects of the spent fuel and waste management system should be science-based, consent-based, transparent, phased, and adaptive. They should also include a properly designed and substantial incentive program.***

Past efforts to site a monitored retrievable storage facility for spent fuel and high-level radioactive waste have not been any more successful than efforts to site a permanent repository—and for some of the same reasons. Since local communities and other stakeholders will have many of the same concerns about a consolidated storage facility that they would have about a permanent disposal facility, attention to process and to the importance of establishing trust among affected constituencies will be critical to success in either case.

As with siting fixed facilities, planning for associated transportation needs has historically drawn intense interest. Transport operations typically also have the potential to affect a far larger number of communities. The Subcommittee believes that state, tribal and local officials should be extensively involved in transportation planning and should be given the resources necessary to discharge their roles and obligations in this arena. Accordingly, DOE should (1) finalize procedures and regulations for providing technical assistance and funds for training to local governments and tribes pursuant to Section 180(c) of the NWPA and (2) begin to provide such funding, independent from progress on facility siting. While it would be premature to fully fund a technical assistance program before knowing with some certainty where the destination sites for spent fuel are going to be, substantial benefits can be gained from a modest early investment—especially given that the current sites from which spent fuel will be shipped are known.

***Recommendation #6: The current system of standards and regulations governing the transport of spent fuel and other nuclear materials appears to be functioning well, and the safety record for past shipments of these types of materials is excellent. However, planning and coordination for the transport of spent fuel and high-level waste is complex and should commence at the very start of a project to develop consolidated storage capacity.***

Spent fuel has been transported safely and securely in the United States and elsewhere for many decades. While the current system appears to be functioning well, past performance does not guarantee that future transport operations will match the record to date, particularly as the logistics involved expand to accommodate a much larger number of shipments.

Planning and providing for adequate transportation capacity while simultaneously addressing related stakeholder concerns will take time and present logistical and technical challenges. Given that transportation represents a crucial link in the overall storage and disposal system, it will be important to allow substantial lead-time to assess and resolve transportation issues well in advance of when materials would be expected to actually begin shipping to a new facility. Historically, some programs have treated transportation planning as an afterthought. No successful programs have done so.

***Recommendation #7: To successfully implement a new strategy for managing the back end of the fuel cycle, a new organization will need reliable access to financial resources. The Subcommittee recommends that the Administration and Congress take action to provide full access to the Nuclear Waste Fund for the purposes for which it was intended, including funding consolidated interim storage and transportation as an integral part of broader waste management efforts. Ongoing litigation between DOE and the utilities regarding fuel acceptance should be resolved expeditiously.***

Despite the existence of a dedicated user-financed Nuclear Waste Fund created for the express purpose of covering future spent fuel management costs, a series of administrative and legislative actions have forced the DOE waste program to compete with other programs for funding through the regular year-to-year Congressional appropriations process. This has resulted in inconsistent and sometimes inadequate funding of the nation's nuclear waste program. To succeed, a new waste management organization must be able to access the Nuclear Waste Fund and must be in a position, subject to appropriate oversight, to exercise discretion over the use of those funds in advancing the nation's waste management objectives. As with the cross-cutting issue of establishing a new organization, the Disposal Subcommittee is addressing the question of funding more generally, including changes to the use of Nuclear Waste Fund, and will be making recommendations for consideration by the full Commission.

Meanwhile, this Subcommittee recognizes that DOE and utilities have been engaged in protracted litigation over the Department's failure to perform its obligations under the contracts to accept spent fuel beginning in 1998. Dozens of lawsuits have yet to be tried, some utilities have reached settlements with the government, and courts have reached judgments in other cases that find DOE in "partial breach" of its contracts. This means the U.S. government must pay damages incurred by utilities as a result of DOE's failure to begin accepting commercial spent fuel beginning in 1998. To date, damages in the amount of \$956 million have been paid from the taxpayer-funded Judgment Fund, which is overseen by the Department of Justice. In addition, the Department of Justice has spent \$168 million in litigation costs.<sup>4</sup> DOE currently estimates that total damages could amount to \$16.2 billion if DOE were to begin

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<sup>4</sup> Testimony of Assistant Attorney General Michael F. Hertz before the Blue Ribbon Commission, February 2, 2011.

accepting spent fuel in 2020.<sup>5</sup> DOE has previously estimated that liabilities will increase by roughly \$500 million annually if the schedule for starting spent fuel acceptance slips beyond 2020.<sup>6</sup>

Because most of the major recurring issues have been resolved in litigation, the Subcommittee recommends that the federal government pursue good faith settlement negotiations and minimize the continued use of taxpayer funds in litigation with outcomes that are now predictable. Mediation or arbitration, structured in accordance with precedents already set by the courts, might be a viable alternative approach.

Current provisions of the NWPA allow the use of the Nuclear Waste Fund for monitored retrievable storage. The Subcommittee recommends that any legislation to implement consolidated storage as an integral component of the federal waste management system, incidental to final disposal, ensure that these provisions remain applicable. Consolidated storage clearly would allow the government to begin meeting its contractual obligations to remove waste from commercial reactor sites.

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<sup>5</sup> Memorandum to Steve Isakowitz, Chief Financial Officer, U.S. Department of Energy, from David K. Zabransky, Director, Office of Standard Contract Management, Office of General Counsel, U.S. Department of Energy, October 29, 2010.

<sup>6</sup> "The Federal Government's Responsibilities and Liabilities Under the Nuclear Waste Policy Act," Statement for the Record by Kim Cawley, Chief, Natural and Physical Resources Cost Estimates Unit, Congressional Budget Office, for the Committee on the Budget, U.S. House of Representatives, July 27, 2010.



OFFICE OF THE GOVERNOR  
**COMMONWEALTH OF MASSACHUSETTS**  
STATE HOUSE • BOSTON, MA 02133  
(617) 725-4000

**DEVAL L. PATRICK**  
GOVERNOR

**TIMOTHY P. MURRAY**  
LIEUTENANT GOVERNOR

April 6, 2011

Chairman Gregory B. Jackzo  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

Dear Chairman Jackzo:

Thank you for the briefing last week. We share your heightened concern related to the recent incidents at the nuclear facilities in Japan. The NRC is under tremendous pressure as we address this continuing crisis while learning how to reduce the likelihood of a similar tragedy in the future. We hope to continue an open dialogue in the weeks and months ahead.

In the meantime, we write with three requests:

1. As your team offered, please provide a specific list of near term and longer term activities that will occur at Pilgrim to assure that we are continuing to operate the plant safely and learning as much as possible, as quickly as possible, as we can from the tragedy in Japan. As we understand, in the next few weeks this will include self assessments by Pilgrim and inspections from the NRC which MA officials will be invited to participate.

We know we all learned, changed our practices and made new investments to enhance safe operations after the experiences at Three Mile Island, Chernobyl and 9-11 and want to be sure that we learn and act on our new knowledge from the tragedy in Japan at Pilgrim.

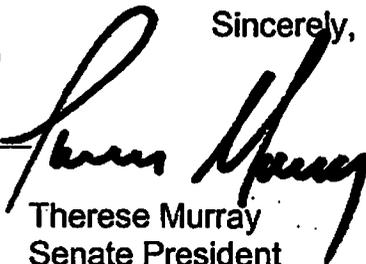
2. The Japan tragedy developments have identified two specific areas of vulnerability we want to make sure we are fully addressing:
  - i. Spent fuel – as we have all known, our temporary storing of spent fuel on site is a major concern. Japan's experiences have dramatically increased this concern. We want your team to look again at the vulnerabilities and alternatives to the current practices at Pilgrim.
  - ii. Seismic vulnerability – we appreciate that mistaken reporting by MSNBC incorrectly identified Pilgrim as the second most vulnerable nuclear core to be damaged in a seismic event and further, that the NRC public statement which excluded Pilgrim in the list of plants in need of further seismic assessment was also incorrect. Also, we understand that the NRC had already engaged the Electric Power Research Institute and the Department of Energy to re-assess nuclear facility specific seismic vulnerabilities and that this study will in fact include Pilgrim. As we understood from the briefing, this study as scheduled may take more than a year to complete. We request that you accelerate the study schedule and to make sure all relevant scientific and engineering input is included,
  
3. We request that you inform us of all Pilgrim relicensing actions (by all actions, we literally mean all actions, even minor procedural actions) and encourage you to not proceed with any steps towards relicensing until we can all be sure that we have learned what we need to from the experience in Japan.

We will also be forwarding under separate cover specific questions from Massachusetts's legislative leaders and look forward to your response to the above requests as well as the Legislature's questions. Thank you for your time and for your continued service.

Sincerely,



Deval Patrick  
Governor



Therese Murray  
Senate President



Robert DeLeo  
Speaker

cc: Bill Dean NRC region 1



OFFICE OF THE GOVERNOR  
**COMMONWEALTH OF MASSACHUSETTS**  
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**DEVAL L. PATRICK**  
GOVERNOR

**TIMOTHY P. MURRAY**  
LIEUTENANT GOVERNOR

April 6, 2011

Chairman Gregory B. Jackzo  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

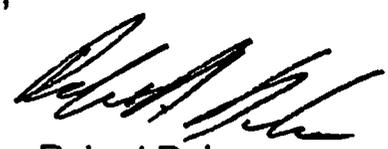
Dear Chairman Jackzo:

As referenced in our previous letter of April 6, 2011, please see the attached questions from Massachusetts's legislative leaders. We look forward to your response. Again, thank you for your time and attention to these concerns.

Sincerely,

  
Deval Patrick  
Governor

  
Therese Murray  
Senate President

  
Robert DeLeo  
Speaker

Enc.

## Questions:

1. Are there any plans for relocation of the spent nuclear material currently held at the plants, which are over-capacity? Will dry storage be considered? Why is dry storage not the preferred method considering its 'passive' maintenance requirement?
2. Will the NRC and DOE consider seeking changes to the law if necessary to allow for the use of the Nuclear Waste Fund for accelerated dry cask storage and or the licensing of an interim national repository?
3. Are there any plans for future spent nuclear material?
4. For how long does the NRC anticipate that spent fuel will be stored on-site at Pilgrim? What about the other New England facilities?
5. Are there plans for storing spent fuel generated by any of the New England plants off-site?
6. Current understanding is that all the spent material is in the upper levels of the Pilgrim plant and is very susceptible to an aerial attack; are their plans to strengthen/protect the structure from air or relocate the wet pool to a different, more secure location?
7. Japan reprocesses and reuses spent nuclear material, what are the pros and cons of this approach and are there any plans to implement it in the US?
8. The cables powering the Pilgrim plant are not made for a moist environment, though they have spent 40 years in such a situation; what inspection/repair/replacement system is in place to ensure the cables remain in working condition?
9. Will the NRC allow independent experts with security authorization to see studies they used to conclude further on-site spent material storage was safe?
10. Will the NRC provide access to documents it previously has refused to disclose regarding its analysis of the safety and security of our commercial nuclear reactors and spent fuel pools?
11. Pressure build-ups can cause explosions in the Mach 1 core design as was seen in Japan, what adjustments have been made to Seabrook and Vermont Yankee to deal with this design flaw? Germany uses a steam release which is then filtered, is this the best option?
12. What emergency planning adjustments will be made?

13. Is the 10 mile evacuation zone still accurate? Americans were recommended to evacuate any area within 50 miles of the Fukushima plant.
14. Any plans for dealing with people on Cape Cod in an emergency situation considering the prevailing winds travel in that direction?
15. Any potassium iodine pill stockpiling precautions planned?
16. Current evacuation reception centers can only deal with 20% of the intended population, are there plans for more/larger centers?
17. Are there any plans to ensure emergency workers have the proper equipment and communication devices (i.e. interoperable radios)?
18. Are there any plans to install air radiation monitors around plants to more accurately identify radiation plume direction in the case of a release? What about meteorological monitors?
19. What is the purpose of the President's 90 day review of our commercial facilities? Will there be an opportunity for the public or interested states to provide input?
20. With no solution to the long-term disposal of spent fuel and in light of the disaster in Japan, will the NRC commit to re-evaluating its current rules and regulations regarding the on-site storage of spent fuel with public input?
21. What assurances can the NRC provide to the Commonwealth that Pilgrim and VT Yankee not just meet current NRC rules and regulations for safety and security but that there are material differences in the way the plans were designed, upgraded and regulated that will reduce the risk of what is happening in Japan, as they are being re-licensed?
22. Can you provide us with an estimated yearly cost to Massachusetts consumers and taxpayers for the current on-site storage of this spent fuel instead of it being stored off-site?



**UNITED STATES  
NUCLEAR WASTE TECHNICAL REVIEW BOARD**  
2300 Clarendon Boulevard, Suite 1300  
Arlington, VA 22201-3367

April 15, 2011

The Honorable John A. Boehner  
Speaker of the House  
United States House of Representatives  
Washington, DC 20515

The Honorable Daniel K. Inouye  
President Pro Tempore  
United States Senate  
Washington, DC 20510

The Honorable Steven Chu  
Secretary  
U.S. Department of Energy  
Washington, DC 20585

Dear Speaker Boehner, Senator Inouye, and Secretary Chu:

The U.S. Nuclear Waste Technical Review Board submits this report, *Experience Gained From Programs to Manage High-Level Radioactive Waste and Spent Nuclear Fuel in the United States and Other Countries*, in accordance with provisions of the 1987 amendments to the Nuclear Waste Policy Act (NWPA), Public Law 100-203, which directs the Board to report its findings and recommendations to Congress and the Secretary of Energy at least two times each year. Congress created the Board to perform ongoing independent evaluation of the technical and scientific validity of activities undertaken by the Secretary of Energy related to implementing the NWPA.

This report explores the efforts of 13 nations to find a permanent solution for isolating high-level radioactive waste (HLW) and spent nuclear fuel (SNF) generated within their borders. It builds on information in the Board's 2009 *Survey of National Programs for Managing High-Level Radioactive Waste and Spent Nuclear Fuel*. Unlike the earlier document, however, this report describes the programs and their histories and discusses inferences that can be drawn from their experiences. We submit the report to provide contextual information for Congress and the Secretary as options are considered for managing HLW and SNF in the United States.

The Board looks forward to continuing to provide useful independent technical and scientific information to Congress and the Secretary that can be used to inform the decision-making process.

Sincerely,

{signed}

B. John Garrick  
Chairman

# CONCLUSION

In each of the 13 national programs considered in this report, the long-term management of HLW and SNF has proven more complicated and protracted than initially expected.

What was formerly viewed as a relatively simple technical task is now recognized as a complex socio-technical problem involving political negotiations and institutional design challenges as well as path-breaking scientific and technical analyses. Nonetheless, several national programs already have made considerable progress. Sites for a deep-mined geologic repository for HLW and SNF have been selected in four countries—Finland, France, Sweden, and the United States. License applications to construct such a facility have been submitted in two of those nations (the U.S. and Sweden). Applications are likely to be submitted in the other two within the next few years.

The information contained in this report suggests several important conclusions about processes used to develop a deep-mined geologic repository.

- *It is possible to elaborate a disposal concept and to advance a safety case, including quantitative performance assessments, that is widely credible not only to scientific and technical communities but also to broad segments of the general population and political leaders. It appears as if a deep-mined geologic repository can be developed in a number of different hydrogeologic environments. An open and transparent technical assessment process, including international peer reviews, increases public and political support.*
- *It is possible to find communities that are willing to host a deep-mined geologic repository. From the experience gained in countries where sites have been selected, it appears that some communities do so because of their familiarity with other nuclear activities; others do so because of the economic benefits that might accrue in the future. All of those communities, however, were given a meaningful say in the site-selection process. And all of those communities came to be convinced by the respective implementers that the facility could be operated safely.<sup>47</sup>*

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<sup>47</sup>In Federal systems, such as those found in Japan and the United States, it may be necessary to secure the approval of a politically superior state or prefecture. This requirement may complicate any voluntary process.

- *Although national programs differ in terms of what is considered an acceptable risk and how to demonstrate whether a deep-mined geologic repository satisfies those standards, international views on these matters are converging.* At least for the first few thousands of years after repository closure, dose constraints across countries are within a factor of three of each other and risk limits are within a factor of ten. Only for compliance periods on the order of 100,000 or 1,000,000 years has no international consensus yet been formed on dose constraints, risk limits, and methodology.
- *Organizational forms differ significantly across countries, but successful ones have several characteristics in common.* Nuclear industry-owned corporations have been successful in Sweden and Finland. A government agency has been successful in France. Rather than organizational form per se, what appears to be important are organizational behaviors, such as leadership continuity, funding stability, and the capacity to inspire public trust and confidence over long periods of time.

Today, more than a half-century after electricity was first produced by splitting the atom, the beneficiaries of that energy source have committed themselves to finding ways to manage the radioactive wastes thereby created in a technically defensible and socially acceptable way. That commitment should be a source for optimism, not only for the generation that produced the wastes, but for succeeding generations as well.



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

April 28, 2011

The Honorable Ralph M. Hall  
Chairman, Committee on Science, Space,  
and Technology  
United States House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

I am writing in response to your March 10, 20...  
the draft Volume III of the Safety Evaluation Report (SER) for the Yucca Mountain application.  
As I explained when I informed you of the public release of a redacted version, in my letter of  
March 4, 2011, the SER volume had not been through final agency review. Therefore, the  
findings and conclusions in the document are preliminary. The redacted portions represented  
the predecisional findings and conclusions we normally protect from public release consistent  
with the Freedom of Information Act.

Since that time, the Commission has received additional Congressional requests for the  
unredacted copy of the draft SER Volume III. In response, I have reiterated my belief that  
public release of preliminary staff findings and conclusions establishes a dangerous agency  
precedent. The staff's preliminary findings may turn out to be incorrect or incomplete. As such,  
they can mislead or confuse the public. Even my colleagues and I have not had access to the  
redacted portions of SER Volume III. As the appellate body for the agency, the Commission  
does not have access to predecisional, non-public information regarding the staff's substantive  
review of the Yucca Mountain application.

Notwithstanding my reservations, a majority of the Commission is willing to provide  
unredacted copies in response to Congressional Committee requests provided that they are  
held in confidence. I have accordingly directed our Office of Congressional Affairs to provide  
you with an unredacted copy today. I do so with the request that you and your staff will respect  
the potential adverse impact of public release and safeguard this information accordingly.

Regarding your specific questions about the close out of our Yucca Mountain support  
activities and SER Volume III, my responses are provided below:

*Call for  
Copy of 3/10/11  
letter, Committee  
202-225-6371  
202-225-6673 Hall  
MFB*

- 1) Is your decision to bring the HLW program to a close the only hindrance to timely review of SER Volume III? If not, please identify and explain the other barriers to timely review?

The transition to close out of Yucca Mountain licensing support activities prompted a number of agency initiatives, including the development of a technical evaluation report (TER) to document and preserve all of the staff's review conducted to date. This is distinguished from the SER, which would set forth the staff's regulatory findings that are subject to review by the Licensing Board in the hearing and the Commission on appeal. Since the TER will serve as the final agency documentation on the Yucca Mountain license application, further review activities to support the SER were no longer necessary.

- 2) What work was undertaken on SER Volume III between its delivery to the Director of the Office Nuclear Materials Safety and Safeguards in July 2010 and October 2010, when you unilaterally halted work on the HLW program?

As discussed above, because of the Commission's role as the appellate body for the agency, I have no specific knowledge of the technical work conducted by the staff during that time.

- 3) Please explain your reasoning behind your refusal to participate in Commissioner Ostendorff's proposal for the full Commission to consider your October decision to halt work on the HLW program?

My decision not to participate on the proposal was based on my judgment that it did not raise a policy matter warranting Commission action. Since a majority of the Commission did not participate in this matter, the proposal was rejected.

- 4) What specific communication did you or your staff have with NRC Staff relating to the schedule, review or approval of SER Volume III?

On June 11, 2010, I issued a memorandum directing the staff to stay on the established review schedule, which is attached. I also met with the staff of the Division of High Level Waste in the Office of Nuclear Materials Safety and Safeguard (NMSS) on June 24, 2009 and October 12, 2010, to discuss developments related to the future of the Yucca Mountain program.

- 5) What ongoing reviews of the draft SER Volume III were in progress at the time of the NRC Staff Notification Regarding SER Schedule on November 29, 2010 as described in the Staff's March 3, 2011 reply to the Board?

During that time, the staff transitioned from licensing support activities, including development of an SER, to close out activities.

- 6) In October, you noted "No specific actions have yet been taken to terminate the program." Since then, what specific actions have been taken or will be taken to terminate review of the license application, including all actions related to Staff review of the application?

As explained in my response to an earlier letter on the matter (attached), at the beginning of the new fiscal year, the staff began the process of transitioning to close-out of the Yucca Mountain program consistent with Commission policy, the general principles of appropriation law, and applicable guidance from the Office of Management and Budget and the Government Accountability office on expenditure of funds under continuing resolutions. At that time, the staff began the process of documenting and preserving the staff's review, including the development of a technical evaluation report (TER). The agency will continue and conclude these close-out activities consistent with the recently enacted Fiscal Year 2011 appropriations law.

You have also asked for documents and communications relating to the completion and release of SER Volume III. The Commission is currently identifying documents related to these matters. I understand that the Office of Congressional Affairs and your staff have regular discussions and will continue to update you on our progress on your document requests.

I appreciate your continuing interest in these matters and would be happy to discuss them with you directly, either by phone or in person as your schedule allows. Because neither I nor my fellow Commissioners have access to SER Volume III in unredacted form, I cannot discuss any the staff's preliminary findings or conclusions in the draft SER. Should you have any additional questions on the agency's processing of the document, however, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. B. Jaczko', with a long horizontal flourish extending to the right.

Gregory B. Jaczko

cc: Representative Eddie Bernice Johnson

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED TWELFTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
Minority (202) 225-3641

April 29, 2011

The Honorable Gene L. Dodaro  
Comptroller General  
Government Accountability Office  
441 G Street, N.W.  
Washington, D.C. 20548

Dear Mr. Dodaro:

Nuclear power is a key component of America's long-term energy strategy, but recent events in Japan have focused public attention on the safety and security issues related to the long-term storage of large quantities of spent fuel at nuclear power plants.

In 2003, the Government Accountability Office (GAO) completed an evaluation of spent nuclear fuel security for then Energy and Air Quality Subcommittee Chairman Joe Barton.<sup>1</sup> Given the time since that report, an update is warranted on spent fuel safety and security.

Moreover, recent actions by the Administration and Nuclear Regulatory Commission (NRC) have raised further questions regarding the plans to remove spent fuel from existing sites. The Nuclear Waste Policy Act of 1982, as amended, requires the Department of Energy (DOE) to take title to and dispose of the spent fuel accumulating at nuclear power plants. In 2002, following extensive evaluation of the site by DOE and its national laboratories, both the President and Congress approved the development of a deep underground repository for spent fuel at Yucca Mountain, adjacent to the Nevada Test Site. This law provides a location (Yucca Mountain) and sets in motion the removal over time of the spent fuel that is accumulating at nuclear power plants around the nation. Currently, nearly 65,000 tons of commercial spent nuclear fuel is stored at 75 sites in 33 states, and this amount increases by about 2,000 tons per year. Should the current Administration succeed in its attempt to abandon development of the Yucca Mountain repository, billions of dollars will be wasted and spent fuel will continue to accumulate at nuclear power plants around the country, with no clear path for final disposition.

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<sup>1</sup> "Spent Nuclear Fuel: Options Exist to Further Enhance Security," GAO-03-426, July 2003.

In light of safety concerns raised by the events in Japan and the uncertainty raised by the current Administration's plans for the permanent disposal of spent fuel, we request an update to your 2003 report. In particular, we seek more information about the intertwined safety and security issues surrounding spent fuel pools and ask that GAO, building on its earlier work, examine:

1. The current and year-by-year projected volume of accumulated spent fuel rods in spent fuel pools beyond the time frame when they could have been moved to away-from-reactor storage or repository sites, if such sites were available;
2. The findings of any recently completed assessments of spent fuel pool vulnerabilities and potential risk mitigation actions (including any NRC or DOE assessments) and the plans for ongoing and future studies and evaluations;
3. Safety and security systems and plans for spent fuel pools and dry cask storage currently in place at U.S. nuclear power plants, as well as any new safety measures under consideration by industry, DOE, and NRC;
4. The potential for, and challenges associated with, moving a larger percentage of U.S. spent fuel into interim dry cask storage, including the needed regulatory framework, costs, and funding sources; and,
5. Significant lessons learned from the practices and experiences of other major nuclear operators, such as Japan, regarding the safe and secure storage of spent fuel.

Thank you for your prompt attention to this request. Please work with Mr. Peter Spencer and Mr. David McCarthy of the Majority Committee staff at (202) 225-2927 on the specifics of your study.

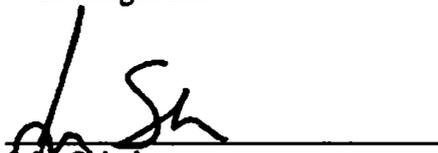
Sincerely,

  
Fred Upton  
Chairman

  
Joe Barton  
Chairman Emeritus

  
Cliff Stearns  
Chairman  
Subcommittee on Oversight and  
Investigations

  
Ed Whitfield  
Chairman  
Subcommittee on Energy and Power

  
John Shimkus  
Chairman  
Subcommittee on Environment and  
the Economy

**Letter to the Honorable Gene L. Dodaro**  
**Page 3**

**cc: The Honorable Henry A. Waxman, Ranking Member**

**The Honorable Diana DeGette, Ranking Member**  
**Subcommittee on Oversight and Investigations**

**The Honorable Bobby Rush, Ranking Member**  
**Subcommittee on Energy and Power**

**The Honorable Gene Green, Ranking Member**  
**Subcommittee on Environment and the Economy**