UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 26, 2014

The Honorable Ed Whitfield
Chairman, Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20510

Dear Mr. Chairman:

The U.S. Nuclear Regulatory Commission appeared before the Committee on Energy and Commerce, Subcommittee on Energy and Power and Subcommittee on Environment and the Economy, on December 12, 2013, at a hearing entitled, *"Oversight of NRC Management and the Need for Legislative Reform."* From that hearing, you forwarded questions to Chairman Macfarlane on behalf of the Commission, and questions specifically for Chairman Macfarlane for the hearing record. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Amy Powell, Acting Director
Office of Congressional Affairs

Enclosure:
As stated

cc: The Honorable Bobby L. Rush, Ranking Member
Subcommittee on Energy and Power

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The Honorable John Shimkus
Chairman, Subcommittee on Environment and the Economy
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20510

Dear Mr. Chairman:

The U.S. Nuclear Regulatory Commission appeared before the Committee on Energy and Commerce, Subcommittee on Energy and Power and Subcommittee on Environment and the Economy, on December 12, 2013, at a hearing entitled, *"Oversight of NRC Management and the Need for Legislative Reform."* From that hearing, you forwarded questions to Chairman Macfarlane on behalf of the Commission, and questions specifically for Chairman Macfarlane for the hearing record. The responses to those questions are enclosed. If I can be of further assistance, please do not hesitate to contact me.

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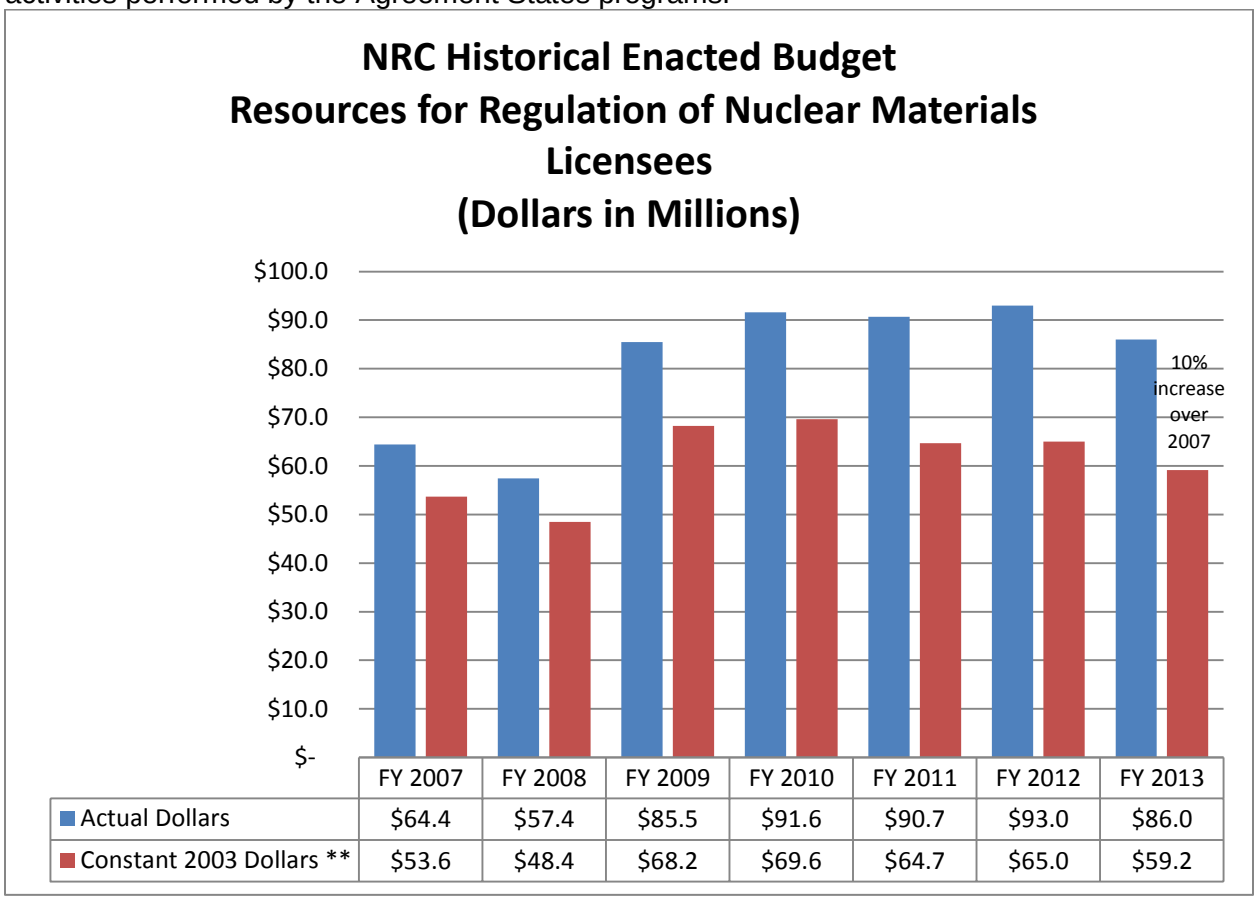
cc: The Honorable Paul Tonko, Ranking Member
Subcommittee on Environment and the Economy

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable Ed Whitfield

QUESTION 1. Chairman Macfarlane displayed a chart of NRC resources in "constant dollars since 2007 noting that the Yucca Mountain and post-Fukushima requirements were included in those resources. How much have resource expenditures declined in actual and constant dollars in regulating materials licensees since 2007?

Answer.
NRC resources for the regulation of materials licensees are budgeted and expended in the Nuclear Materials Users Business Line. These resources support the licensing; oversight; rulemaking; international activities; research; generic homeland security; event response; and State, Tribal, and Federal Program activities associated with the safe and secure possession, processing, handling, and use of nuclear materials.

In fiscal year (FY) 2007, the NRC's enacted budget for Nuclear Materials Users was $64.4 million in actual dollars. In FY 2013, the enacted budget was $86.0 million in actual dollars, a 34 percent increase over FY 2007. When converted to the constant 2003 dollars shown in the chart displayed by Chairman Macfarlane, the FY 2007 Enacted budget for Nuclear Materials Users was $53.6 million. In FY 2013, the Enacted budget was $59.2 million in constant 2003 dollars, a 10 percent increase over FY 2007. These dollars do not include the regulatory activities performed by the Agreement States programs.



	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Actual Dollars	$64.4	$57.4	$85.5	$91.6	$90.7	$93.0	$86.0
Constant 2003 Dollars **	$53.6	$48.4	$68.2	$69.6	$64.7	$65.0	$59.2

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QUESTION 2. How many permanently shut down plants have already undergone decommissioning?

ANSWER.
To date, 11 nuclear power plants licensed by the NRC have completed decommissioning. These are:

- Big Rock Point, Charlevoix, MI, Shutdown: 8/29/1997
- Fort St. Vrain, Platteville, CO, Shutdown: 8/18/1989
- Haddam Neck, Meriden, CT, Shutdown: 12/5/1996
- Maine Yankee, Wiscasset, ME, Shutdown: 12/6/1996
- Pathfinder, Sioux Falls, SD, Shutdown: 9/16/1967
- Rancho Seco, Herald, CA, Shutdown: 6/7/1989
- Saxton, Saxton, PA, Shutdown: 5/1/1972
- Shippingport, Shippingport, PA, Shutdown: 1982
- Shoreham, Wading River, NY, Shutdown: 6/28/1989
- Trojan, Rainier, OR, Shutdown: 11/9/1992
- Yankee-Rowe, Rowe, MA, Shutdown: 10/1/1991

a. Have they done so safely and in accordance with NRC requirements, regardless of whether the plant was decommissioned immediately or under the NRC's SAFSTOR program?

Answer.
Yes. To date, all of the commercial nuclear power plants that are shut down and radiologically decommissioned have done so safely and in accordance with NRC requirements, regardless of the decommissioning strategy program initially employed. In all cases, the plants have been decommissioned, met the radiological requirements for unrestricted use, and the reactor licenses terminated or reduced to the on-site Interim Spent Fuel Storage Installation. Most of these sites used the DECON or prompt remediation approach. In DECON, the licensee starts decommissioning shortly after permanent shutdown by dismantling the structures, systems and components (SSCs) that contain radioactive contamination. These SSCs are removed from the site and safely disposed of at a commercially operated low-level waste disposal facility, and the remaining structures are decontaminated to a level that permits the site to be released for unrestricted use. For these plants, DECON was the preferred method due in part to the availability of low-level waste disposal sites to accept the radioactive waste.

Presently, there are 11 nuclear power plants in SAFSTOR, in which the plant is placed in a safe stable condition to allow future decommissioning. Eight of these plants are located at multi-unit sites that have operating nuclear power plants. Regardless of the decommissioning strategy chosen by the licensee, the NRC continues to inspect the plants to verify the site is maintained in a safe and secure condition.

b. Have shortfalls in decommissioning funds created any legitimate safety issues at of these plants?

Answer.
No. To date, the status of the decommissioning funds have not created any safety or security concerns at any of the 11 NRC-licensed decommissioned nuclear power plants. All nuclear power reactor licensees must provide decommissioning financial assurance. This financial assurance may be in the form of funds set aside by the licensee or a guarantee that funds will be available when needed. The minimum amount of financial assurance for reactors to radiologically decommission is defined in 10 CFR 50.75.

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QUESTION 3. Since decommissioning plants don't pay as much in NRC fees as operating plants, how is the NRC going to handle the decrease in fees due to the increased numbers of reactors permanently shutting down?

Answer.
Annually, the NRC submits a budget request based on its anticipated workload in that year and receives an appropriation enacted by Congress that establishes the NRC's operating budget independent of agency fees. NRC's collection of fees is governed by two laws: the Independent Office Appropriations Act of 1952 (IOAA) and the Omnibus Budget Reconciliation Act of 1990 (OBRA-90), as amended. The IOAA requires NRC to recover its costs for services rendered to applicants and licensees which is accomplished through the collection of user fees (hourly fees) in accordance with 10 CFR Part 170. The OBRA-90, as amended, requires NRC to collect approximately 90 percent of its budget from user fees (hourly fees) and annual charges (annual fees) in the year appropriated, less amounts appropriated from the Nuclear Waste Fund, for Waste Incidental to Reprocessing, and for Generic Homeland Security activities. The NRC meets the requirements of OBRA-90, as amended, through the collection of hourly and annual fees assessed to licensees in accordance with 10 CFR Parts 170 and 171, respectively. The NRC fees for operating reactors are computed based on an established fee methodology published annually in the Federal Register with revisions to NRC fee regulations, 10 CFR Parts 170 and 171. With fewer operating reactors, the agency costs allocated to the operating reactor program would be distributed among fewer licensees, resulting in higher annual fees per licensee.

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QUESTION 1. Please provide a detailed schedule and estimates of the itemized cost for completing each of the individual SERs for the Yucca Mountain license application.

ANSWER.
In response to the Commission's August 30, 2013, Order seeking comment from the participants in the Yucca Mountain adjudication as to how the agency should continue with the licensing process, the staff estimated that, absent any unforeseen issues and with sufficient staff resources, it could complete and issue the remaining volumes of the Yucca Mountain Safety Evaluation Report (SER) approximately 12 months after initiating work. This estimate was based on inclusion of a start-up period to replace key technical reviewers who no longer work for the agency, to reassemble technical staff assigned to other tasks, and to enable reviewers to regain familiarity with licensing issues and docketed correspondence due to the break in the application review and the shift in staff focus to other agency activities.

In its November 18, 2013, Memorandum and Order, the Commission directed the staff to complete all remaining SER volumes concurrently, but issue each SER volume upon its completion. The Commission directed that the project be given a high priority so that appropriate technical staff and resources are available. The target to complete all volumes of the SER is January 2015, with an estimated cost of $8.3 million. The NRC staff is moving forward with SER development.

We will provide additional details as they become available through our monthly reports.

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Question 2. The Commission's response to our November 21, 2013, letter stated that the staff would present a plan for implementing the Commission's decision to resume Yucca Mountain license review by the end of "this month" (December 2013). The Commission response also committed to keep the Committee fully and currently informed.

a. If the staff has completed its plan, when will it be provided to the Committee?

ANSWER.
The Commission recently provided the plan to the Committee on Energy and Commerce (and others) as an attachment to the December 2013 monthly status report on the U.S. Nuclear Regulatory Commission activities and utilization of unobligated carryover funds appropriated from the Nuclear Waste Fund. A copy of the plan is included here as an attachment.

PROJECT PLAN
YUCCA MOUNTAIN REVIEW ACTIVITIES
December 11, 2013

Purpose

This project plan outlines how the U.S. Nuclear Regulatory Commission (NRC) staff will conduct and manage the completion of the NRC Safety Evaluation Report (SER) for the U.S. Department of Energy's (DOE's) license application (LA) for authorization to construct a geologic repository for high-level waste at Yucca Mountain, NV (i.e., NUREG publication).

Project Scope

Safety Evaluation: The SER includes a detailed technical review of the general information and the safety analysis report provided by DOE in its LA. The completion of the SER will serve as a basis for the final licensing decision. The current effort to complete the SER builds upon all previously completed technical analyses and modeling, requests for additional information (RAIs) and DOE's responses, published documents, and preparation of internal draft documents. Activities under this scope will end with completion and issuance of the final four remaining SER volumes (i.e., Volumes 2, 3, 4, 5). The duration of this activity is scheduled for approximately 12 months. Note that SER Volume 1 has already been published, and the staff does not foresee a need to revisit, edit, or supplement Volume 1.

Adjudicatory hearings/LSN: The adjudicatory hearings are not being restarted at this time. In addition, the Licensing Support Network (LSN) is also not being reconstituted at this time, but all documents will be promptly loaded as non-public documents into the Agencywide Documents Access and Management System (ADAMS), and all references used in the SER will be publicly available in ADAMS.

EIS supplement: The Commission has requested that DOE complete the Environmental Impact Statement (EIS) supplement. In response to the Commission's request, the NRC staff understands that DOE plans to prepare the EIS supplement, although the detailed approach and schedule need to be developed. Some NRC staff will be required to provide limited coordination and review of DOE's efforts for the EIS supplement and potential adoption determination. The staff has initiated outreach activities with DOE and is planning for a public meeting in the 2nd quarter of fiscal year (FY) 2014, to discuss DOE's plan for moving forward with development of the EIS supplement and the NRC staff's engagement during this development process.

Attachment

Organization

The primary organization within NRC that supports the completion of the SER is the Office of Nuclear Material Safety and Safeguards (NMSS), Division of Spent Fuel Alternative Strategies (SFAS). SFAS is assisted by several other Offices. In addition, the Center for Nuclear Waste Regulatory Analyses (CNWRA), a federally funded research and development center, provides technical support. The Secretary of the Commission and Office of Information Services (OIS) have primary responsibility to ensure that the LSN documents are loaded into ADAMS. In addition, a Yucca Mountain Core Group consisting of the lead organization (NMSS) and other internal stakeholders, such as SECY, Office of Congressional Affairs, Office of Commission Appellate Adjudication, Office of Public Affairs, Office of the General Counsel (OGC), Office of the Chief Financial Officer, OIS, Office of Nuclear Security and Incident Response, and the Atomic Safety and Licensing Board Panel will meet periodically to review the status of the Yucca Mountain activities.

Process, Roles, Responsibilities and Steps to Finalize the SER

This section provides guidance to the NRC and CNWRA staff to complete the review of the DOE LA for authorization to construct a repository at Yucca Mountain.

The roles, responsibilities, and process to complete SER Volume finalization are defined in the following steps:

1. Using previously completed work, the Yucca Mountain Team (YMT) will evaluate a document comparison between published Technical Evaluation Reports (TERs) and the last draft versions of each SER Volume. The YMT will decide whether to revise the TER into an SER or whether it is more efficient to incorporate the TER information into the existing draft SER Volume. For instance, the staff's last draft version of SER Volume 3 contains preliminary regulatory findings that were not included in the Postclosure TER. This draft SER Volume may not include all the technical support from the Postclosure TER. It may make more sense to incorporate the updated technical support information from the Postclosure TER into the draft SER Volume 3 rather than inserting all the findings from the SER back into the TER.

   For SER Volume 2, the reverse may be true (i.e., it may be more appropriate to build upon the Preclosure TER, because the draft SER Volume 2 did not progress through the same level of review as was completed for the draft SER Volume 3). Therefore, it may be more efficient to move forward using a draft SER as the working file instead of a TER for one volume (i.e., SER Volume 3) and to use a TER as the working file instead of a draft SER file for a different volume. The YMT will review the documents to determine the most efficient and effective path forward for each volume. Furthermore, the staff will look for efficiencies as it works to complete the SER, such as assigning or reassigning

the most appropriate subject matter experts to support this effort, with due consideration of other high-priority agency activities.

2. All files used to develop the draft SER Volumes and associated TER Volumes have been retained and will be located on the CNWRA SharePoint site. Staff will use the CNWRA SharePoint site as the central file management system for completion of the SER. Depending on which option is selected in Step 1 above (i.e., start with last draft version of each SER Volume as the working file or start with the published TER Volume as the working file), the project manager (PM) (with assistance from CNWRA) will deconstruct the combined SER (or TER) volume file back to chapter level files. This will allow multiple reviewers to work simultaneously on each SER volume (at the chapter level) to incorporate changes, updates, and finalize each SER Volume's development. Note that staff will undertake original investigation or inquiry only as necessary to account or adjust for new information (*specific guidance being developed*).

3. Staff will adhere to the project management timelines and identify any issues that may impact schedule and quality to the cognizant Branch Chief for resolution, such as:

   - The most appropriate subject matter experts and other sufficiently qualified staff are not available at the appropriate time to develop the remaining SER Volumes concurrently.

   - There is a delay in the availability of the DOE LSN document collection or DOE is unable to provide the documents to staff in a timely manner.

   - Additional technical information is required from DOE to complete the SER, and DOE does not provide responses to new RAIs in a timely manner to support the NRC's schedule.

   - DOE is unable to complete the EIS supplement in a timely manner.

4. A Chapter Champion will be assigned as the lead author for each of the chapters contained in the four remaining SER volumes. The Chapter Champion consolidates, coordinates, and integrates input from technical reviewers into the development of the SER chapter; ensures that the regulatory bases and technical content provided by the technical reviewers are clearly articulated; and coordinates with other Chapter Champions to ensure the team's input is integrated into the SER. When the Chapter Champion indicates a chapter is ready for management and OGC review, the PM will move the designated chapter (file) into the OGC no legal objection (NLO) folder. Track changes will be made by both management and OGC. Staff will resolve

comments using track changes. Once all comments are resolved, the PM will accept changes, and write access will be restricted to technical staff at that time.

5. When the SER volume has been finalized (i.e. changes and updates have been made by staff, management and OGC review has been completed, and concurrence and OGC NLOs have been obtained) the NMSS Office Director will sign Form 426 authorizing publication of the SER Volume as a NUREG. The PM will coordinate with the Publication Branch, Office of Administration, to issue each SER Volume as a final NUREG.

Plan for Loading LSN Collection of Documents into ADAMS

OIS will create a new LSN library in ADAMS to house the LSN collections received by the Office of the Secretary on different types of media (external hard drives, compact disks, and digital versatile disks). During December 2013, OIS will acquire storage to house the new LSN library and 10 workstations to concurrently run multiple instances of a loader application being developed. The loader will add and profile the documents in the collections to the new LSN library. In early January, testing of the loading process after hours will commence and loading of the DOE collection will begin thereafter. The staff expects that experience in loading the documents during the first 2 weeks (approximately 70,000 documents per day) will be used to fine tune the approach and schedule. During February and March, loading of the collections from other parties will proceed in parallel with the DOE collection loading. In March, following completion of the loading of the DOE documents, OIS will begin configuration of user search interfaces and the building of search indexes. In late April and May, other parties' document loading and final testing and delivery will be completed. In parallel, OIS will configure the ADAMS Record Manager to automatically assign proper disposition and retention attributes to the documents in the LSN collections for compliance with the recordkeeping requirements.

Organization Structure for NMSS SFAS

As mentioned earlier, SFAS is the primary division within the NRC responsible for finalizing the Yucca Mountain SER. SFAS will be reorganized to accomplish the new work and be comprised of four branches. One of the four branches will continue to support existing ongoing SFAS work (including science technology, engineering, systems analysis, and related project management). The other three branches (Volume 2, Volume 3, and Volume 4/5/EIS) will be dedicated to supporting the finalization of the Yucca Mountain SER (Volumes 2, 3, 4, and 5) and review of the EIS supplement.

There will be three primary teams matrixed among the three Yucca Mountain branches that will support the finalization of the SER. The teams are outlined below:

Preclosure Team:
Primary responsibility: Finalize SER Volume 2

The Preclosure Team will consist of a Branch Chief (BC), one or two Senior Level Advisor(s) (SLs), a PM, a CNWRA volume PM, a Chapter Champion for each of the 10 chapters in SER Volume 2, and NRC/CNWRA technical and administrative support, as needed.

Postclosure Team:
Primary responsibility: Finalize SER Volume 3

The Postclosure Team will consist of a BC, an SER PM, a CNWRA Volume PM, a Chapter Champion for each of the 20 chapters in SER Volume 3, and NRC/CNWRA technical and administrative support, as needed.

Administrative and Programmatic Team:
Primary responsibilities: Finalize SER Volumes 4 and 5. Limited coordination and review will also be provided for DOE's development of the EIS supplement and potential adoption determination.

The Admin/Programmatic Team will consist of a BC, an SER PM (Volumes 4 and 5), an EIS PM, a CNWRA volume PM, a Chapter Champion for each of the 12 chapters in SER Volume 4 and one Chapter Champion for SER Volume 5, and NRC/CNWRA technical and administrative support, as needed.

Schedule

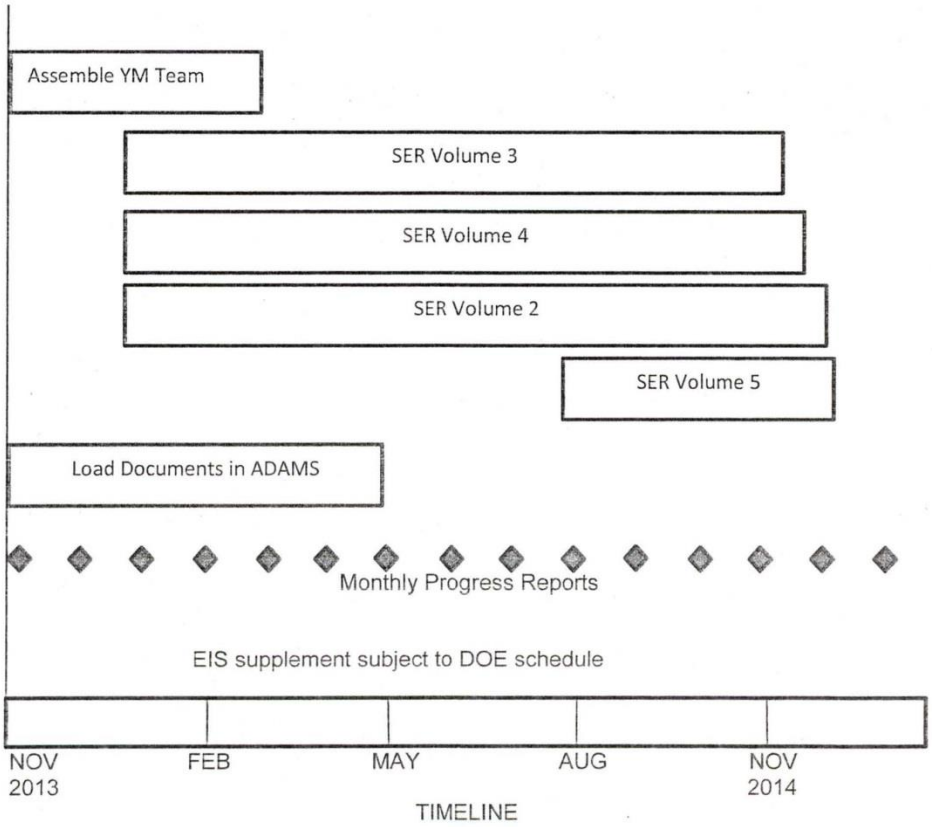
The staff estimates that with dedicated, focused effort, sufficient staff resources, and no unforeseen technical or process issues, all of the remaining volumes of the SER can be completed and issued within approximately 12 months after the staff initiates work. To complete and publish all remaining SER volumes within the 12-month schedule, the staff assumes that all volumes will be worked on concurrently and issued upon completion (i.e., if an SER Volume is completed earlier than the 12-month schedule, the staff will publish that volume before the other volumes are completed). The 12-month period includes time to establish the review teams for each volume, familiarize staff new to the project with the material, complete the volumes through concurrence, and issue them in final form.

The staff estimates it can reach an adoption decision within 3 months following receipt of the Final DOE EIS supplement. The 3-month timeframe is based on an assumption that staff is able to review a draft supplement issued earlier by DOE. DOE is in its early stage of assessing and planning the development of the EIS supplement. The staff assumes that the technical information on the supplement topics provided by DOE to staff in July 2009 will be a principal input to the supplement, and, following usual National Environmental Policy Act practices, a

draft EIS supplement would be issued for comment in advance of the final EIS supplement. Lastly, the staff has begun outreach activities by contacting DOE to plan for a public meeting in the 2nd quarter of fiscal year 2014 to understand DOE's intentions for completing the EIS supplement, consistent with Commission direction.

Below is a high-level summary representation of the interrelated schedule and approximate timelines to assemble the YMT, start and finish each SER Volume, load documents into ADAMS, and complete monthly progress reports for both the Commission and Congress. It also identifies a yet-to-be-determined timeline for DOE to start and finish the EIS supplement.

Yucca Mountain Schedule



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QUESTION 2 (Continued). The Commission's response to our Nov. 21, 2013 letter stated that the staff would present a plan for implementing the Commission's decision to resume the Yucca Mountain license review by the end of "this month" (December 2013). The Commission's response also committed to keep the Committee fully and currently informed.

b) If the staff has not completed its plan, why not and when will it be completed?

ANSWER.
The plan has been completed and provided to the Committee, as well as NRC's other oversight committees and subcommittees.

c) Will the staff's plan include estimates of the resources necessary to support a final Commission decision on the license application? If not, why not?

d) Does the staff's plan assume Congress will provide the resources necessary for the Commission to a final decision on the license application? If not, why not?

ANSWER.
The plan addresses completion of the SERs and EIS supplement and not the entire application. The writ of mandamus issued by the D.C. Circuit Court directed NRC to continue with the Yucca Mountain licensing process unless and until Congress authoritatively says otherwise or there are no appropriated funds remaining. When the decision granting the writ of mandamus was issued, the agency had approximately $11 million in unobligated carryover funding appropriated from the Nuclear Waste Fund. The NRC staff has estimated that, absent any unforeseen issues, these resources are sufficient to complete the SER (estimated cost of completion: $8.3 million) and an adoption determination review of a supplemental Environmental Impact Statement to be prepared by the Department of Energy. Further, the Licensing Support Network document collection currently in the Secretary of the Commission's possession can be loaded into the non-public portion of the NRC's Agencywide Documents Access and Management System for approximately $700,000. We seek to maintain an adequate margin so as not to jeopardize our ability to complete these tasks, which constitute the next logical steps in the licensing process, and we will reevaluate our path forward not to resume the adjudication in the event that circumstances materially change. In the time since the Commission Order on November 18, 2013, an additional $2.2 million was deobligated from previous obligations. On January 24, 2014, the Commission provided further direction on the use of the deobligated funds to enable public access to the Licensing Support Network documents after the staff has collected three months of additional data on actual project expenditures to ensure sufficient funds exist to complete and issue all volumes of the SER and of the supplemental Environmental Impact Statement (EIS).

Following issuance of the SER and an adoption determination of the supplemental EIS, a number of licensing steps remain to reach a decision regarding construction authorization for a

repository at Yucca Mountain. This includes completion of the adjudicatory hearings, which currently include 15 parties and nearly 300 admitted contentions.

e) Please provide detailed schedule and resource estimates to support the following actions:

i) Complete and publish each individual volume of the Safety Evaluation Report;

ANSWER.
The NRC staff has estimated that it can complete and issue the remaining volumes of the Yucca Mountain SER approximately 12 months after initiating work. In accordance with Commission direction, staff will issue each SER volume upon its completion. The staff's estimate for completing the SER identified that approximately $8.3 million would be needed to complete the SER. More information will be provided in the NRC's monthly reports.

ii) Complete the hearing process and adjudication of contentions;

iii) Render a final decision on the issuance of a construction authorization.

ANSWER.
ii) A schedule for the high-level waste proceeding is set forth in 10 CFR Part 2, Appendix D. Appendix D contemplates that the adjudicatory proceeding would be completed after a Commission decision on any appeal from an initial Board decision on contested matters. The schedule also contemplates that discovery would proceed in parallel with the staff's development of the Safety Evaluation Report. As described in the Commission's November 18, 2013, order, the Commission's 2011 decision suspending the proceeding effectively tolled the Appendix D schedule and the November 18 order resulted in a further deviation from that schedule, in that discovery would not occur in parallel with completion of the Safety Evaluation Report. If the adjudicatory proceeding resumes, there will likely need to be additional deviations from the Appendix D schedule. For FY 2010, prior to the suspension of the proceeding, the NRC requested $56.0 million to support its licensing and hearing-related activities. *See* Performance Budget Fiscal Year 2010, NUREG-1100, Volume 25 (May 2009). Completion of the adjudicatory process would be a multi-year effort. Resource estimates to resume and complete the proceeding under current circumstances, which would include any additional costs for restart activities, would need to be evaluated and the Commission would take appropriate action in the course of the agency's budget development process.

iii) As noted above in response to question 2.e.ii, a schedule for the high-level waste proceeding is set forth in 10 CFR Part 2, Appendix D. This schedule includes milestones for any decision regarding issuance of a construction authorization. Resource estimates to reach this milestone under current circumstances, which would include any additional costs for restart activities, would need to be evaluated and the Commission would take appropriate action in the course of the agency's budget development process.

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QUESTION 3. Has the NRC contacted the Office of Management and Budget regarding the need to fund the Yucca Mountain license review? If not, why not?

ANSWER.
No. The D.C. Circuit Court of Appeals mandamus order does not include a requirement for the Commission to request additional funds. The Commission's focus has been on how to spend the available funds as ordered by the court. Any future decision to seek additional funding would be made by the Commission as a collegial body.

a. If so, please describe OMB's response.

ANSWER.
Not applicable.

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QUESTION 4. There have been repeated statements about the need to reconstitute the staff necessary to resume review of DOE's Yucca Mountain license application. Has the staff been reconstituted?

a) **Please provide a list of staff needed for the team and describe the types of positions and areas of expertise.**

b) **How many positions remain unfilled at this time and when will they be filled?**

c) **Of the staff that have been assigned to the license review, please indicate how many have previous experience working on the Yucca Mountain license review and the length of that experience.**

ANSWER.
In response to a Question for the Record from the House Committee on Energy and Commerce, Subcommittee on Environment and the Economy hearing held on September 10, 2013, the staff provided a list of the type of expertise needed to review the DOE's Yucca Mountain license application. The information contained in that response is still valid and provides a roadmap for how the staff has been reconstituting the Yucca team. Of the 40 NRC positions identified to work on the SER and supplemental EIS, one position remains to be filled. The position will be filled in the next few weeks. Most positions were assigned in December, following the Commission's Memorandum and Order defining the tasks. Of the remaining positions, five more were assigned in January, and four more in February. In addition, staff are fully supported by the Center for Nuclear Waste Regulatory Analyses, the NRC's Federally-Funded Research and Development Center. Almost all of the staff assigned have previous experience on the Yucca Mountain license review, ranging from several years to multiple decades.

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QUESTION 5. In our September 10th hearing with Chairman Macfarlane, Chairman Murphy noted that the NRC had spent Nuclear Waste Fund $9.4 million to terminate the Yucca Mountain license review, money which had been appropriated to fund the license review. This has resulted in a fundamental injustice to the electricity consumers who paid for the NRC to scuttle the license review which the DC Circuit Court as a legal obligation.

a. **Has the Commission considered restoring the funds that were inappropriately used to terminate the Yucca licensing process? If not, why not?**

b. **When will the NRC make a decision on this matter?**

c. **Has the Commission considered referring this matter to the Office of the Inspector General?**

ANSWER.

a. The NRC expended NWF resources in accordance with the appropriations of Congress and its role under the NWPA. However, in our November 18, 2013 Order, we responded to various parties' assertions that non-Nuclear Waste Fund funds should be used for activities associated with resumption of the licensing process. As we explained in our November 18, 2013 Order, the Commission has determined that it lacks legal authority to use non-Nuclear Waste Fund funds for activities in connection with the licensing process, including using non-Nuclear Waste Funds to "restore" prior Nuclear Waste Fund appropriations.

b. See answer to Question 5a above.

c. No.

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QUESTION 6. If the Yucca Mountain licensing process was completed and the Commission issued a license, would that support an affirmative Waste Confidence determination?

ANSWER.
Even if the NRC were to issue a license authorizing construction of a repository at Yucca Mountain, this does not guarantee that the repository would be constructed, or that it would be licensed to operate.

Issuance of a license to construct and operate a high-level radioactive waste geologic repository would provide additional support for numerous assumptions and analyses concerning the safe storage of spent nuclear fuel that are in the current draft Waste Confidence Generic Environmental Impact Statement. The draft Generic Environmental Impact Statement addresses the environmental impacts of continuing to store spent fuel at a reactor site or an away-from-reactor storage facility, after the end of a reactor's licensed life for operations until final disposition in a geologic repository. The draft Generic Environmental Impact Statement concludes that the environmental impacts of continued storage can be analyzed generically and provides the regulatory basis for the proposed Waste Confidence rule. The proposed Waste Confidence rule adopts (codifies) this generic analysis of environmental impacts for continued storage of spent fuel.

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QUESTION 7. In our Sept. 10th hearing, I reviewed how Volume 3 of the Safety Evaluation Report was "substantially complete" when the license review was terminated. What is the earliest date that Volume 3 of the SER will be released?

ANSWER.
The staff's current plan for completion of the SER estimates that Volume 3 of the SER will be released in December 2014, given a dedicated, focused effort, sufficient resources, and no unforeseen technical or process issues.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 8. The Nuclear Waste Policy Act provided the NRC 3 years to review and issue a final decision on a repository license application. Yet, the NRC staff has estimated that 12 months would be necessary to complete the remaining volumes of the SER and the Commission endorsed this estimate in its November 18, 2013, order. How can you justify allowing 1/3 of that time to finalize SERs that were nearly complete over 2 years ago?

a. When will the clock actually start ticking on that 12 months?

ANSWER.
The recommencement of our licensing review necessitates additional time to assemble a review team capable of producing a high-quality SER. The plan is to complete all four volumes of the SER by January 2015. The staff's twelve-month schedule began with the start of their full-scale technical review in January 2014.

Consistent with existing agency requirements and guidance, the projected timeframe will provide the staff time to complete its review addressing all applicable regulatory requirements, with its analysis and conclusions documented in the SER, in order to support the staff's technical and legal findings in any potential adjudicatory proceeding. The review includes time for the staff to re-familiarize themselves with the substantial amount of previously developed material and consider any new and significant information.

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QUESTION 9. What actions is the Commission taking to ensure strict scrutiny and accountability for Nuclear Waste Fund expenditures?

ANSWER.

In a November 18, 2013, Staff Requirements Memorandum (SRM), the Commission directed the NRC Chief Financial Officer to provide monthly reports on Nuclear Waste Fund expenditures. The Commission also requested immediate notification if at any point the staff becomes concerned that any part of the Commission's direction will not be able to be implemented with the available Nuclear Waste Fund resources. In its January 24, 2014, SRM, the Commission reiterated that it will continue to closely monitor Nuclear Waste Fund expenditures to ensure effective implementation of Commission direction and the prudent use of funds, including quarterly briefings to Commission staff in order to provide detailed information on progress towards completion, the pace of expenditure of funds, and issues that arise in the course of the project.

NRC's appropriations from the Nuclear Waste Fund were provided specifically for the purpose of funding the agency's responsibilities under the Nuclear Waste Policy Act of 1982, as amended. Federal appropriations law requires agencies to apply appropriations "only to the objects for which the appropriations were made," 31 U.S.C. § 1301(a). Therefore, the NRC has always tracked and controlled Nuclear Waste Fund resources separately from its other appropriated funds. Allocation, obligation, and expenditure of NRC's Nuclear Waste Fund resources are accounted for within NRC's administrative control of funds process. Further, NRC internal management directives require strict financial controls over the charging of costs to Nuclear Waste Fund resources.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 10. From the beginning of August to the time of the hearing, the Commission has conducted three meetings to discuss management and personnel issues, one briefing on NRC's construction activities, one briefing on international activities, and four vote affirmation sessions. However, on January 6, the Commission held a briefing on Spent Fuel Pool Safety and Consideration of Expedited Transfer of Spent Fuel to Dry Casks.

a. Why did the Commission spend time meeting on an issue with such low safety significance and for which the NRC staff recommended no further regulatory action?

ANSWER.
After the Fukushima Dai-ichi accident, the Commission began holding meetings on the status of progress on NRC actions in response to the accident. Those meetings have addressed, for example, filtered vents, agency consideration of economic consequences of accidents, and spent fuel pool safety and consideration of expedited transfer of spent fuel to dry casks. Spent fuel storage issues are of considerable interest to both the Commission and the public.

b. Which commissioner requested the Commission briefing on the expedited transfer of spent fuel?

ANSWER.
Commissioner Magwood in a memorandum to the Commission dated August 27, 2012, requested a meeting to review historical studies and analyses underlying NRC's current regulations, learnings thus far from Fukushima, and to update the Commission on recent studies conducted by the staff. The Commission agreed that a broad meeting on the topic should be considered. Subsequently, the Chairman proposed a specific meeting on the Safety of Spent Fuel Pools and Consideration of Expedited Transfer. The Commission approved the meeting.

c. How does the Commission set its priorities and decide which issues warrant a meeting?

ANSWER.
In accordance with the Internal Commission Procedures, Chapter IV – Commission Meetings/Hearings, the Office of the Secretary (SECY) prepares recommendations for the Chairman's consideration after receiving input from numerous NRC offices, requests from other Federal agencies and other outside entities, and requests from individual Commissioners. The Secretary of the Commission meets at pre-agenda sessions with the Chairman and representatives of the Office of General Counsel and Office of the Executive Director for Operations. The results of the pre-agenda meeting form the basis for the Chairman's recommendations to the other Commissioners of a proposed agenda.

The purpose of the Agenda Planning Session, presided over by the Chairman and typically held monthly, is for the Commission to review, discuss, and approve the proposed meeting schedule, as well as any other agenda-related matters that the Chairman or individual Commissioners

wish to address. At agenda planning sessions, Commissioners can propose additional meeting topics. In recognition of the collegial process, an individual Commissioner's request that a meeting be scheduled, and a proposed scheduling note subsequently be prepared for approval by the Commission, will be granted unless a majority of the Commission disapproves the request.

d. What role does safety significance play in scheduling Commission meetings?

ANSWER.
Safety significance is a consideration in determining topics for Commission meetings. The Commission also considers events, such as the Fukushima Dai-ichi accident. The meeting on spent fuel pool safety and consideration of expedited transfer of spent fuel to dry casks was an outgrowth of actions in response to the Fukushima Dai-ichi accident.

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Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 11. At the 12/12/13 hearing it was evident that the Commission had not deliberated on or come to any Commission position on H.R. 3132 or any elements of this. Is this correct?

a. **If so, have you since begun to formulate a Commission position on H.R. 3132, especially in light of several Commissioner statements indicating that elements of the Bill can be helpful?**

b. **If not, when will such deliberations be scheduled?**

ANSWER.
The Commission has not been asked for its collegial views on H.R. 3132 and therefore has not deliberated or come to a Commission position on the bill or any of its provisions. Individual Commissioner perspectives are being provided in response to Questions for the Record from the December 12, 2013, hearing.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 12. As part of the NRC's effort to improve the accuracy of its cost estimates, is the NRC staff reviewing whether more accurate cost estimates might have altered the cost justification for previous regulatory actions? If not, why not?

ANSWER.

The staff is currently reviewing cost estimates for some previous rules under the Cumulative Effects of Regulation (CER) case studies to address Commission direction provided in SECY-11-0032, "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process" (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML13071A635). This review is being performed in concert with industry to understand the costs incurred by industry in implementing these rules, to provide insight regarding the accuracy of the NRC's cost estimates, and to identify lessons learned for further improving regulatory analysis estimates. For rules that are necessary for adequate protection of public health and safety, that level of protection must be assured without regard to cost. For rules that are not necessary for adequate protection, the rule must provide substantial benefit and the expected benefits should outweigh the costs. The purpose of the CER case studies is to gather lessons learned that could further improve future regulatory analyses and not produce after-the-fact rationalizations to justify decisions already made. The NRC believes that decisions to promulgate existing rules, which included opportunities for the public to comment on NRC cost estimates, were based on adequate information regarding the values and impacts and followed a systematic and disciplined process that was open and transparent in arriving at those decisions.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 13. The NRC is entering a multi-year study on radiation impacts around nuclear power plants using the National Academy of Sciences. Please explain the reasons for undertaking this study.

ANSWER.
Each commercial nuclear power plant and fuel cycle facility that the NRC regulates is authorized to release small amounts of radioactive materials to the environment as specified in the regulations and licensing documents. The NRC's regulations include dose limits for members of the public and concentration limits for liquid and gaseous effluent releases, which licensees must also meet. NRC regulations and licenses require each licensee to establish and maintain a program for monitoring radioactive effluents. NRC regulations require licensees to measure and report these effluents from their facilities. The staff has concluded from reviewing reports from both nuclear power plants and fuel cycle facilities that offsite doses to individual members of the public are a small fraction of the annual radiation dose limits. The offsite dose from an NRC regulated facility to the postulated highest exposed member of the public is generally less than 1 percent of the amount of radiation that the average U.S. citizen receives in a year from all background sources in the environment, such as naturally occurring radioactive materials in soil and rocks and radon in the air. Nonetheless, some stakeholders have expressed recurrent concerns about the potential effect of these releases on the health of residents living near nuclear facilities.

To help address these stakeholder concerns, the staff uses the 1990 National Cancer Institute (NCI) report and other more recent epidemiology reports conducted by various State Health Departments when responding to questions regarding incidences of cancer in populations near nuclear power facilities. The staff relies on credible health studies to augment its discussions about the NRC's robust regulatory programs to keep offsite doses as low as is reasonably achievable (ALARA) by providing public health information that directly applies to the health outcomes that are often of concern (i.e., cancer). However, the 1990 NCI report is now more than 20 years old, and more modern analysis methods, combined with up-to-date information sources, will provide contemporary cancer information in current populations living near NRC-licensed nuclear facilities. As a result, the NRC decided to update the NCI study. Studies of this nature are not new or unique to the United States. Since 2008, Canada, France, Germany, Great Britain, Spain, and Switzerland have all conducted epidemiology studies of populations near nuclear facilities within their borders to address public health concerns.

a. Please describe any deficiencies in current scientific information concerning the radiation risks surrounding nuclear power plants that warrant this study.

ANSWER.
The reason for this study is to provide the latest health information to the general public on cancer risks in populations around NRC-licensed nuclear facilities using more modern analyses methods and up-to-date information sources. The NRC staff realizes off-site radiation doses from licensed facilities are very low and uncertainties in the current scientific understanding of radiation risk at low doses are unlikely to be addressed by this study. However, the staff also realizes that health studies can provide useful information and augment staff discussions when

addressing recurrent health risk concerns from the public. For example, the 1990 NCI study that NRC has asked the National Academy of Sciences (NAS) to update has proven to be a useful resource for staff to reference when discussing cancer risks with the public. In addition, the NAS Phase 1 report confirmed the staff position that, at the low offsite doses from these facilities, researchers would not expect to observe any increased cancer risks in the populations surrounding these facilities attributed to the regulated release of radioactive effluents. Nevertheless, the staff believes that despite these potential limitations and expected outcomes, the studies would be helpful to address public health concerns and are, therefore, still worthwhile to pursue. As recent international studies indicate, epidemiology studies can be an important tool for addressing public health concerns, even with these known limitations.

b. There have been a number of recent studies published on this topic of nuclear power and radiation risk. One in particular is the May 2013 Canadian Nuclear Safety Commission report, which studied children who lived around three nuclear power plants spanning 1990 to 2008. Like other reports, this recent Canadian study concluded there is no extra cancer risk for children living near a nuclear power plant. Do you know if this report has been reviewed by the NRC?

ANSWER.
Yes, the NRC staff has reviewed this report as well as other recent international studies. The staff has also shared these reports with the NAS study staff.

c. Please provide information on how much has been spent (on) the previous phases in the NAS study and how much the remaining phases are estimated to cost.

ANSWER.
NAS has taken a two-phase approach to the study. The cost of Phase 1, which explored the feasibility of conducting an updated study using modern analytical methods, was $1,036,653. The committee identified two scientifically sound approaches for carrying out the assessment of cancer risks in populations near U.S. nuclear facilities. The Phase 1 report also recommended a pilot study involving seven nuclear facilities to assess the practical implementation of the recommended approaches. The current Pilot Study Planning Phase budget is $564,600. An additional $900,000 has been estimated for the Pilot Study Execution Phase. After the pilot studies, the NRC staff intends to determine whether the recommended study designs can be performed on the remaining facilities at a reasonable cost and effort, whether they provide useful information to discuss public health concerns with NRC stakeholders, and if the agency should proceed with Phase 2, which would be to perform an assessment of cancer risks at all NRC-licensed facilities. However, we do not have an estimate of what the remainder of the Phase 2 study would cost at this time.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 14. The Commission's response to our November 21st letter indicates that Fukushima-related activity has affected other agency regulatory work including new plant reviews, license renewals, and power uprate requests. How many standard NRC regulatory actions and reviews have been delayed because of Fukushima-related work?

ANSWER.
With respect to new reactor reviews, for Commission-approved Fukushima recommendations, the NRC staff requested that the combined license and design certification applicants provide the information required by the orders and the 50.54(f) letters described in SECY-12-0025. Completion of the necessary analyses in response to new seismic data and mitigation strategies for extended station blackout stemming from Fukushima recommendations have added to the scope of the reviews, and in some cases, these analyses have affected the ability of the applicants to meet review schedules. In addition, resources from certain select technical disciplines such as hydrology and seismology were diverted to support resolution of Fukushima lessons learned issues for the operating fleet and this impacted the pace at which resources were available to resolve new reactor application issues. However, in most cases, the issues resulting from Fukushima lessons learned are not critical path in completing the new reactor design certification and combined license reviews, and have, therefore, not affected the review schedules. In addition, none of these activities have impacted the construction schedule for Vogtle Units 3&4, and VC Summer Units 2&3.

With respect to operating reactors (including power uprates), the increase in work related to Fukushima is causing our review of licensing actions and other licensing tasks to take longer to complete. Before the work for Fukushima came in, licensing actions and other licensing tasks were usually closed on average within 7 months. By the end of 2013, they were taking on average 9 months to close, and that time is increasing.

With respect to license renewals, there have been no delays. There have only been minor staffing and resource impacts related to Fukushima in license renewal; none of which resulted in a delay to the overall schedule of license renewal activities."

a. Is it correct that NRC continues to operate the Japan Lessons-Learned Directorate separate from its line organization?

ANSWER.
The Japan Lessons-Learned Project Directorate (JLD) is integrated as an organizational unit within the NRC's Office of Nuclear Reactor Regulation. To oversee the prioritization and implementation of the Fukushima lessons learned, the Commission chartered the NRC's Japan Lessons Learned Steering Committee. As part of that charter, the JLD was established to coordinate activities and communications related to the NRC's response to the accident. The JLD organization and the Office of Nuclear Reactor Regulation coordinates with other NRC Offices to ensure the appropriate prioritization of activities, both among the Fukushima items and between the Fukushima items and other NRC activities.

b. Having addressed the most safety-significant post-Fukushima changes, isn't it time the NRC returned to regular order?

ANSWER.
Recent Commission direction to the NRC staff to continue coordination and reporting activities through the implementation of the highest priority post-Fukushima actions will require continued dedication and focus by the staff to ensure the successful and timely completion of these activities. However, the post-Fukushima activities are increasingly being incorporated into the normal agency planning, budgeting, and performance monitoring activities. In addition, many of the specific activities arising from the identification of lessons learned from the Fukushima accident are being managed and implemented by the line organizations that existed before the accident without routine oversight by the Steering Committee. The Japan Lessons Learned Project Directorate will continue to ensure appropriate coordination is continued within the agency, with the nuclear industry, and with other stakeholders until the highest priority activities are implemented and the desired safety outcomes have been achieved.

c. Would you each please tell me your views on the benefits of transferring any further Fukushima regulatory activity into the normal regulatory decision-making processes of the agency-returning staff to their regular positions – so that the agency can perform its regulatory activity in an integrated, efficient fashion?

ANSWER.
As discussed in response to question “b” above, the NRC is routinely evaluating its programs and activities to achieve successful implementation of the Fukushima lessons-learned activities while also meeting other parts of the agency’s performance goals. The Fukushima-related activities have been increasingly re-incorporated into the NRC’s normal planning, budgeting, and performance monitoring programs and prioritized along with other agency programs. The Commission, as a body, views the continued oversight by the Japan Lessons Learned Steering Committee, which comprise senior managers from various offices, and coordination by the Japan Lessons-Learned Project Directorate, as the best way to ensure safety improvements are evaluated and, where appropriate, implemented in an integrated and efficient manner.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane on Behalf of the Commission
The Honorable John Shimkus

QUESTION 15. What is the Commission doing to ensure that the cyber security rules are risk informed and are not applied to non-safety related equipment?

ANSWER.
In March 2009, the NRC issued Title 10 of the *Code of Federal Regulations* 73.54, "Protection of Digital Computer and Communication Systems and Networks." This cyber security rule is risk-informed and performance-based, requiring licensees to analyze, identify, and adequately protect digital assets associated with safety-related, important-to-safety, security, and emergency preparedness functions and support systems. Thus, although the scope of the rule is not limited to safety-related equipment, the cyber security rule does not apply to digital assets that the licensee determines have no potential to adversely impact safety, security, or emergency preparedness functions or support systems associated with those functions. The Commission has developed an associated regulatory guide that licensees may use to facilitate their understanding and implementation of the regulatory requirements. Licensee efforts are subject to inspection and verification by the NRC.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Ed Whitfield

QUESTION 1. According to the NRC staff's FY 2012 report on adverse trends in the industry's safety performance: *" ... the staff identified no statistically significant adverse trends in industry safety performance.* " In fact, a closer inspection of the long-term trend graphs in that report show that the industry is improving safety in 10 out of the 14 graphs. The staff indicated the remaining four: *" ... did not have a statistically significant trend.* " However, the nuclear reactor safety budget has grown 48% over the last ten years even though the number of licensing actions and tasks has decreased 40%. Four reactors permanently shut down last year, another one will this year, and reports persist that others may also.

a. Please describe what actions you believe the Commission should take to ensure the budget is commensurate with a decreased workload, a shrinking fleet, and improving industry safety performance.

ANSWER.
The Commission will continue to oversee the agency budget formulation and execution processes to ensure resource requests are commensurate with workload. This includes overseeing the annual budget formulation process of developing a two year projected workload in the Nuclear Reactor Safety and Nuclear Materials and Waste Safety Programs, including the anticipated number of licensees and the number and complexity of anticipated license applications. On an annual basis, the Commission oversees the review of the baseline budget and adjusts resource allocations based on several factors, including letters of intent from current and prospective licensees, changes in regulatory requirements, and prior year expenditures. The year prior to executing the budget, the Commission oversees the review of requested resources and associated workload that was previously requested and adjusts them based on the most current information. Lastly, in the year of budget execution, the agency adjusts resources commensurate with the level of work actually received. The most recent budget that was formulated (FY2015) is based on current assumptions regarding the projected workload for FY2014. The agency will begin to develop the FY2016 budget in the coming months using updated assumptions about operating plants, COL applications, and other indicators of the projected workload.

As of November 16, 2013, the NRC has 3871 staff, including the Office of the Inspector General, which is down 368 employees from FY2010. The NRC has actively engaged in efforts to streamline the organization. For example, the NRC initiated efforts to reduce its overhead by centralizing and consolidating corporate support functions through its Transforming Assets into Business Solutions (TABS) initiative. This effort has resulted in a reduction of Office Support FTE of 273 (25%) from FY2011 to FY2015.

If you can provide a more specific citation for the numbers used above, I would be happy to address them in more detail.

b. Please describe any recommendations you believe would improve the prioritization and application of resources to matters that are safety significant.

ANSWER.
Over the last few years, the agency has made improvements to our budgeting processes. Most recently, the NRC adopted a baseline budgeting approach for the development of the FY2015 budget. The approach uses information on the execution of resources from the prior year as a starting point for developing the resource request, then takes into account known “fact-of-life” changes in workload as well as the Commission’s planning objectives for budget development and prioritization of planned activities to ensure prioritization and application of resources to matters that are safety significant. Further, during the budget process, the Commission ensures that adequate resources are requested to achieve the safety and security goals and objectives as described in the agency Strategic Plan. As stated in response to part (a) of this question, with the oversight of the Commission, the agency should continue its annual budget formulation and execution processes to ensure the most effective and efficient application of resources.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 1. Given the DC Circuit Court of Appeals reaffirmed the NRC's obligation under the Nuclear Waste Policy Act to review the Yucca Mountain license application, do you as an individual commissioner believe it is incumbent upon the NRC to request the funding necessary to complete the license review?

ANSWER.

We do not understand the court's decision or any other legal authority to require us to request additional funding from the Nuclear Waste Fund.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 2. Do you as an individual commissioner believe the NRC should propose a supplemental budget request to the Office of Management and Budget to support full resumption of the license review? If not, why not.

ANSWER.
I do not believe that NRC should propose a supplemental budget request to OMB to support full resumption of the license application. We are currently upholding our legal obligations under both the Nuclear Waste Policy Act and the writ of mandamus issued by the U.S. Court of Appeals for the D.C. Circuit and using previously appropriated Nuclear Waste Fund money to complete the license application review process. The court gave the NRC broad discretion to choose a pragmatic course of action to resume the Yucca Mountain licensing process, and we chose an incremental approach that is both constructive and consistent with the writ and the resources available. We are using available funding to complete the Safety Evaluation Report (SER), the Environmental Impact Statement (EIS) supplement and make the Licensing Support Network (LSN) documents publicly available.

I believe that the Commission rightly decided to defer resumption of the adjudicatory proceeding and reconstitution of the LSN. The Commission should consider the reconstitution of the LSN in the context of the hearings it would be needed to support, not in a piecemeal manner. Neither the SER or the EIS supplement is complete and we still lack an applicant with sufficient resources to participate in the licensing process, conduct discovery, and defend its application in the required adjudicatory hearings. No amount of resources will enable the NRC to conduct any type of meaningful review of the licensing application in the absence of an applicant with sufficient funding to participate in the process and defend its application. I would also note that Congress once again passed an appropriations bill that included no money for either the NRC or DOE to conduct activities related to Yucca Mountain. For these reasons, and in consideration of the current budget environment, I do not believe it is wise for NRC to request money we do not currently need.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 3. If the Commission fails to request funding for completing the Yucca Mountain licensing process, do you as an individual commissioner believe that would weaken the basis for Waste Confidence findings?

ANSWER.
No. The "waste confidence" rulemaking that the Commission is undertaking right now seeks to adopt the Commission's generic assessment of the environmental impact of several scenarios, including the need for continued storage of spent fuel at reactor sites for an indefinite period of time due to continued uncertainty concerning the licensing and construction of a repository. Although the Commission is currently considering comments it has received on the generic environmental impact statement (GEIS) that it has prepared, it is confident not only that it is technologically feasible to license and construct a repository, but also that the final GEIS will adequately address the impacts of continued storage under several scenarios, without regard to whether additional funds are sought for the Yucca Mountain licensing process.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 4. Given the fact that the NRC routinely issues draft SERs during other license reviews and later revises them, do you as an individual commissioner believe the Commission should utilize the same approach on the Yucca Mountain license review for the sake of transparency? If not, why not?

ANSWER.
It is not the NRC's practice to issue "draft" safety evaluation reports (SERs). The NRC issues SERs with open items for some licensing actions, but there is no statutory or regulatory requirement to issue an SER with open items in the Yucca Mountain proceeding or any other proceeding. An SER with open items is final on all matters except those designated as "open items," and receives the same level of management and legal review as an SER with no open items. Once open items are closed, a complete SER is issued. For other licensing actions, the NRC issues chapters of the SER as they are completed. With respect to the SER for the Yucca Mountain license review, in our November 18, 2013 Order, we directed the staff to work on the remaining four volumes of the SER (volumes 2-5) concurrently but issue each volume upon completion. As stated in the November 18, 2013 Order, we believe that release of completed volumes serially provides adequate transparency of the staff's work.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable John Shimkus

QUESTION 5. Recently, the NRC staff provided a 400-page report to the Commission: *"Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark 1 Boiling Water Reactor.* " The cover memo for that report states:

> ***"This study shows the likelihood of a radiological release from the spent fuel after the analyzed severe earthquake at the reference plant to be very low (about 1 time in 10 million years or lower)."***
>
> **The staff has provided the Commission with a 200-page report entitled *"Staff Evaluation and Recommendation for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel".* In this report, the staff concluded that:**
>
> ***"The costs of expedited transfer of spent fuel to dry cask storage outweigh the benefits";***
>
> ***"Additional studies are not needed';* and**
>
> ***"No further regulatory action is recommended for the resolution of this issue and this Tier 3 item should be closed".***

a. As an individual commissioner, do you have any reason to doubt the NRC staffs competence in this regard?

ANSWER.
Our experts at the Nuclear Regulatory Commission are highly competent. The consequence study and the staff recommendation on expedited transfer is a policy matter before the Commission for consideration.

b. Chairman Macfarlane, you coauthored a study in 2003 on this very topic and reached a different conclusion: "Our central proposal is to move spent fuel into dry casks after it has cooled for 5 years." Do you stand by your earlier proposal or do you agree with the NRC staff?

ANSWER.
The consequence study and staff recommendation on expedited transfer is a policy matter before the Commission for consideration. I am rigorously reviewing the technical analysis, regulatory analysis, and policy information that has been developed by NRC staff since 2003, as well as other information and analysis in the peer-reviewed literature since 2003 as well as input from the public and other interested parties.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Joe Barton

QUESTION 1. In November 2013, NRC released a report entitled "A comparison of U.S. and Japanese regulatory requirements in effect at the time of the Fukushima accident."

a. **Do you support all of the findings of the staff report?**
b. **The authors of the report acknowledge that the staff's comparison was not an exhaustive review. Do you think it is appropriate for the Commission to consider revising the NRC's regulatory framework without having an exhaustive review as a solid basis for such a revision?**
c. **What differences between U.S. and Japanese regulatory framework were left out of the final report? Why were they not deemed to merit further analysis?**

ANSWER.
With regard to the comparison of U.S. and Japanese regulatory requirements that were in effect at the time of the Fukushima Dai-chi accident in March 2011, I support all of the staff's findings. The NRC staff's comparison, which was performed with contractor support, focused on the issues that were especially important to the Fukushima event, including: protection from design basis natural phenomena such as earthquakes, tsunami, and floods; loss of ultimate heat sink; loss of electrical power; containment venting; and severe accident management.

The staff found that the U.S. and Japanese had many similarities in design bases requirements and guidance at the time of the event. There were also differences between the U.S. and Japan in the preparation for and response to beyond design bases events and severe accidents. However, the staff's comparison should not be construed as implying that the Fukushima accident and associated consequences could or would have been completely avoided assuming Japan had the same U.S. regulatory framework prior to the accident. In addition, even though the report identified some differences, it concluded that a Fukushima-type accident could occur in the United States.

It should be noted that the staff's study was performed to evaluate the similarities and differences between the U.S. and Japanese regulatory requirements that were in effect at the time of the accident at Fukushima Daiichi. Since that time, Japan has re-organized the nuclear regulatory body and developed many new safety standards and regulations to improve regulatory oversight of its nuclear power plants. The NRC has also imposed additional requirements and undertaken numerous activities to address the lessons learned from the accident.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 1. Did you inform your fellow commissioners of your intention to declare your opposition to H.R. 3132 prior to this hearing?

ANSWER.
I discussed my reservations about H.R. 3132 with Commissioner Apostolakis and Commissioner Ostendorff. I may also have discussed the bill with Commissioners Magwood and Svinicki, but I do not specifically recall doing so.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 2. Did you make any attempt to convey your concerns to either my personal staff or staff for the Committee Majority or Minority prior to this hearing?

ANSWER.
As I have expressed consistently when appearing before you and your colleagues on the Committee, I want to look forward – not backward - at the NRC and intend to fulfill my duties as Chairman in a collegial manner such that a number of the bill's provisions would not be necessary. I trust that you agree that I have conducted myself in this manner. Additionally, our Office of Congressional Affairs and Office of General Counsel provided staff-level technical assistance and feedback on the bill to your personal staff and Committee staff both in the drafting stages and before the hearing. These discussions included the potential unintended consequences and constraints upon an NRC Chairman's actions during an emergency response given provisions of the bill as introduced. Following the hearing, I also met with you on January 9, 2014, to discuss my concerns about H.R. 3132.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 3. During the hearing you stated that the internal Commission procedures are "quite adequate." If that is the case, please identify specifically how the procedures will institutionally prevent the abuses identified by the IG during the tenure of your predecessor.

ANSWER.
In 2011, the Commission completed a substantial revision of the Internal Commission Procedures. I was not yet a member of the Commission at the time, but I understand that a number of the revisions were crafted to address conflicts that had arisen prior to my arrival. During my tenure as Chairman, I have found that the Commission functions well under the procedures as modified in 2011, and therefore do not see a need for legislation.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 4. **The June 26, 2012 NRC IG Report *"Possible Violations of Reorganization Plan No. 1 of 1980 and NRC's Internal Commission Procedures by NRC Chairman" (*2012 IG Report*)* states:**

> ***"President Carter said that the Chairman has a functional duty under the Reorganization Plan to declare emergency authority, and if he enacted emergency authority without a declaration, he would have been in violation of the Reorganization Plan. President Carter envisioned a Chairman exercising emergency authority for a specific transient emergency lasting a matter of days, not emergency authority for a matter of months."***

a. Do you agree with President Carter that a chairman has a functional duty to declare emergency authority? If not, why not?

b. How long do you believe a chairman should be allowed to exercise emergency authority?

ANSWER.

a. I firmly believe that a Chairman who begins exercising emergency authority should declare that he or she is doing so, and I have committed to doing so in testimony before this Committee. In any event, it is now a statutory requirement, under Public Law 113-76, that the NRC Chairman provide notification to the Commission and Congress within one day after beginning to exercise emergency authority.

b. A Chairman should be allowed to exercise emergency authority for the duration of the emergency, however long it lasts. The key consideration should not be how long the Chairman has been exercising emergency authority, but rather whether there is, or is not, an ongoing emergency situation.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 5. **The 2012 IG Report states:**

> ***"President Carter stated it would have been inappropriate for the Chairman to exercise emergency authority for a nuclear incident in Japan. Absent a domestic emergency, the authority lies with the full Commission and any review of the nuclear incident in Japan should have been in the hands of the Commission."***

Do you believe the use of emergency authority for foreign events is warranted? Why or why not?

ANSWER.
In general, I agree that an NRC Chairman should be able to respond appropriately and effectively to a foreign nuclear emergency without needing to use any emergency authority under Section 3 of the Reorganization Plan. The Chairman exercises existing authority as official spokesman and principal executive officer in supervising the agency staff responding to the emergency. It is only when there is a need to establish new policy, issue an order on a matter not delegated to the NRC staff, or perform any other function normally assigned to the Commission, that the Chairman would need to invoke emergency powers in order to resolve the matter herself. For an emergency involving a foreign country, this need is less likely to arise. With that said, I would not want to foreclose the possibility of a nuclear emergency in a foreign country that could call for more substantial emergency response actions by the NRC—for example a nuclear event in a neighboring country that has cross-border effects—and that may therefore require use of the NRC organizational structure specifically designed for emergency response.

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QUESTION 6. During an emergency, the chairman or a designee acts as the Executive Team Director. NRC briefing materials list the Executive Team Director's key responsibilities for an activated operations center as the following:

- ***"Receive initial and periodic briefings on the nature and progression of the incident***
- ***Ensure other Commissioners are kept informed***
- ***Manage external interface (Federal agencies, White House, States, Congressional officials, State Department, IAEA, tribal organizations)***
- ***Call to Governor's designee and DHS Secretary***
- ***Review and approve Situation Report (SITREP) and Press Releases***
- ***Determine if Site Team (expanded activation mode) is necessary***
- ***Prepare/Act as agency spokesperson for news center and interagency events (e.g. WH briefings)***

Please explain why the inclusion of an emergency declaration would be burdensome considering these key responsibilities already exist and procedures have been established for managing necessary communications.

ANSWER.
As noted in the answer to question 5 above, it is now a statutory requirement that the NRC Chairman provide notice within one day after beginning to exercise emergency authority.

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Questions for Chairman Macfarlane
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QUESTION 7. The 2012 IG Report states: *"Several officials commented that NRC has no procedures to follow for the Chairman to assert his emergency authority."* Do you believe the NRC should have a procedure that clearly articulates the circumstances or actions that would require a chairman to exercise emergency authority and describes the process for doing so?

a. If so, please describe what you believe should be included in such a procedure.
b. If not, why not?

ANSWER.
I do not believe any additional procedures are necessary. Public Law 113-76, as I refer to in other answers, now requires the NRC Chairman to provide notifications within one day after commencing exercise of emergency authority. In addition, Reorganization Plan No. 1 of 1980 already sets forth the circumstances that would empower a Chairman to exercise emergency authorities (i.e., there must be "an emergency pertaining to a particular facility or materials licensed or regulated by the Commission"). Also under the Plan, emergency-response actions requiring exercise of emergency authority would, in general, be those actions that, in non-emergency situations, the full Commission could exercise under section 1 of the Plan. Because of the unpredictable nature of emergencies, I believe that section 3 of the Reorganization Plan appropriately provides flexibility to allow an NRC Chairman (or the Chairman's designee) to respond to the emergency at hand.

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QUESTION 7 (sic). According to NRC briefing materials, licensees are required to notify the NRC of an event within 15 minutes. The NRC then expects to notify – within one hour – EPA, DOE, DHS, HHS, USDA, and FEMA. For what length of time do you believe a chairman should be allowed to unilaterally exercise the power of the fully commission before notifying the public, the Congress, and fellow Commissioners?

ANSWER.
My intent is to provide notice to the Commission as soon as reasonably possible, but not later than within one day after commencing exercise of emergency authority as required by Public Law 113-76. In addition, I support the additional change to the Internal Commission Procedures to continue this requirement.

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QUESTION 8. The Office of Public Affairs leads one of the teams staffing the operations center during an emergency. Wouldn't this be an appropriate and efficient manner to notify the public in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.
During an emergency, the Office of Public Affairs would likely be involved in the process of notifying the public about the emergency.

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QUESTION 9. One of the chairman's responsibilities as the Executive Team Director is to keep the commissioners informed. Do you believe the procedures in place to meet that responsibility would be adequate to notify fellow commissioners in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.
We will ensure that appropriate procedures are in place to carry out the notification requirements under Public Law 113-76.

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QUESTION 10. The Office of Congressional Affairs participates on one of the team staffing the operations center during an emergency. Do you believe this be an appropriate and efficient manner to notify Congressional officials in the event a chairman decides to exercise emergency authority? If not, why not?

ANSWER.
Public Law 13-76 requires notification to Congress within one day after the Chairman commences exercise of emergency authority. The Office of Congressional Affairs would likely be involved in the process of complying with this requirement.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 11. NRC's procedures reference communications that are pre-planned. Do you believe developing preplanned notifications of a chairman's decision to exercise emergency authority might be an effective way to ensure the timeliness and efficiency of such notification? If not, why not?

ANSWER.
Pre-planned notifications are certainly one option to consider.

Attachment 1 – Additional Questions for the Record
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QUESTION 12. In the hearing, you testified that the agency's budget is developed by NRC staff. Section 201 of the Energy Reorganization Act of 1974 states: "*Each Member of the Commission, including the Chairman, shall have equal responsibility and authority in all decisions and actions of the Commission, shall have full access to all information relating to the performance of his duties or responsibilities, and shall have one vote.*"

The prior NRC chairman asserted budget authority to unilaterally close down the legally-mandated review of the Yucca Mountain repository license application. Since the budget is a major instrument of policymaking, which is the purview of the Commission, please describe whether you believe the Chairman should be allowed to influence budget development prior to considerations by the full commission.

ANSWER.
The NRC's Performance Budget is formulated consistent with provisions of both the Energy Reorganization Act of 1974, and the Reorganization Plan No. 1 of 1980. Per the Energy Reorganization Act of 1974, the Chairman of the Commission is the principal executive officer of the Commission and he or she exercises all the executive and administrative functions of the Commission, including functions of the Commission with respect to the use and expenditure of funds. Functions reserved to the Commission include those with respect to revising budget estimates and determining the distribution of appropriated funds according to the major programs and purposes. The Reorganization Plan of 1980 strengthened the executive and administrative roles of the NRC Chairman. The Plan provides that the Chairman shall determine the use and expenditure of funds according to major programs and purposes approved by the Commission. Further, the Plan provides that the Chairman shall present the budget estimate to the Commission for its consideration. Under this statute, the preparation of the budget estimate shall be delegated to the Executive Director for Operations, subject to the Chairman's direction and supervision.

The NRC's internal budget development and review process encompasses steps that recognize the role of the Chairman and the Commission. The initial step in the process at the Commission level is for the Chairman to provide high-level planning objectives for budget development and prioritization of planned activities to the Commission for review and approval. Through this process, the Chairman ensures that the staff-prepared budget submitted to the Chairman is aligned with strategic direction from the Commission. Based on the high-level planning objectives, the Executive Director for Operations and the Chief Financial Officer submit to the Chairman a budget with their workload estimates, resource requirements and narrative justifications. The Chairman reviews the senior management budget input and submits his or her decisions to the Commission for review, analysis, and approval through the Commission voting process.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
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QUESTION 13. Section 201 of the Energy Reorganization Act of 1974 states: ***"In carrying out any of his functions under the provisions of this section the Chairman shall be governed by general policies of the Commission and by such regulatory decisions, findings, and determinations as the Commission may by law be authorized to make. "***

Section 2 of the Reorganization Plan of 1980 states: ***"The Chairman as principal executive officer and the Executive Director for Operations shall be governed by the general policies of the Commission and by such regulatory decisions, findings, and determinations, including those for reorganization proposals, budget revisions and distribution of appropriated funds, as the Commission may by law, including this Plan, be authorized to make."***

If a majority of the Commission believes that the Chairman is failing to operate in accordance with the internal commission procedures, what action do you think commissioners should take? Do you believe legislation authorizing such action would provide clarity to such a situation?

ANSWER.
Our Internal Commission Procedures (ICPs), which we vote on and establish as a collegial body, set forth a framework governing the conduct of business at the Commission level of the NRC. These procedures may be changed or waived by a majority of the Commission, and when questions arise regarding implementation or interpretation of the ICPs, we resolve those issues as a collegial body, consistent with existing law.

I believe that our ICPs are clear and legislation providing clarity is unnecessary. In my experience, the Commission operates very well as a collegial decision-making body and we freely discuss issues with one another. As with any issue of concern, members of the Commission, including the Chairman, should make every effort to discuss a perceived failure to follow the ICPs directly with one another and strive to resolve such issues collegially through our existing procedures. I believe legislation in this area could have a negative impact on our ability to function as a collegial body.

Attachment 1 – Additional Questions for the Record
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QUESTION 14. **The NRC Inspector General issued a report "NRC Chairman's Unilateral Decision to Terminate NRCs Review of DOE Yucca Mountain Repository License Application" on June 6, 2011 (2011 OIG Report):**

"OIG reviewed the Commissioners' voting process associated with SECY-10-0102 and learned that the internal Commission Procedures were not followed relative to voting deadline, extension requests, or polling of other Commissioners to determine whether they agree with extension requests."

And:

"Although the notational voting process associated with SECY-10-0102 was complete as of October 29, 2010, as of the date of this report the Commission has not held an affirmation vote on the matter and the draft order continues to sit in deliberation before the Commission for affirmation."

a. Please indicate how long you believe a chairman or commissioner should be allowed to prevent an adjudicatory decision from being finalized.
b. Please describe what you believe would be the best mechanism to ensure Internal Commission Procedures are enforced.
c. Please provide any other resolution to such a situation that you believe would be effective at ensuring adjudicatory decisions are not unnecessarily delayed.

ANSWER.

The Commission seeks to provide meaningful hearing opportunities to the public, while at the same time providing license applicants a prompt resolution of adjudicatory disputes concerning their applications. The time needed for the Commission's consideration and resolution of an adjudicatory matter will vary, and will be informed by a number of factors, including the nature of the legal, factual, and/or policy issues that must be decided. These issues may vary in number, and in legal and technical complexity. With this in mind, the Commission's rules of procedure in 10 C.F.R. Part 2 provide broad latitude for the Commission to take action as a collegial body in individual proceedings, to ensure prompt and effective resolution of matters set for adjudication.

As to the Commission's internal decision-making process, the Internal Commission Procedures (the ICP's) provide that Commissioners' votes on Commission papers – including adjudicatory papers – are normally requested in 10 business days. The ICPs further provide that approval of extensions of time to vote on an adjudicatory paper must be given by a Commission majority. Once voting is complete on an adjudicatory paper, the NRC adjudicatory staff will submit the draft final order to establish a majority position on the decision. Commissioners at that time have an opportunity to make changes to the order and/or incorporate additional views. As soon

as a majority position on the decision has been established, the Secretary of the Commission will poll the Commission on scheduling the affirmation of the decision, and an affirmation will then be scheduled to obtain a formal vote of the Commission. In sum, the ICPs provide a comprehensive, clear process to guide Commission action on adjudicatory matters.

In view of the robust internal procedures already in place, no revisions to the ICPs – or other mechanisms – are needed to ensure that the ICPs are enforced. Each adjudication is different. The Commission continues to work collegially, taking into account all Commission priorities, to ensure the issuance of reasoned, thoughtful decisions based on informed adjudicatory records, consistent with the Commission's stated goal of achieving prompt resolution of adjudicatory disputes.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 15. Please describe any unintended consequences you believe H.R. 3132 presents. For each postulated consequence please provide legislative language you believe would adequately mitigate it.

ANSWER.
The current legal framework for Commission governance and operation, as set out in Energy Reorganization Act of 1974, and the Reorganization Plan No. 1 of 1980, together with the Commission's ICPs, provide all the structure the Commission needs to fulfill its responsibilities. The Energy Reorganization Act, which provides that each Commissioner shall have equal responsibility and authority in all decisions and actions of the Commission, full access to information relating to the performance of his or her duties or responsibilities, and one vote, reflects Congress's intent that a multi-member Commission should establish policy and determine nuclear regulation. The Reorganization Plan No. 1 of 1980 corrected deficiencies in the Commission's functioning, evidenced by the agency's response to the accident at Three Mile Island, by vesting the executive, administrative, and emergency management functions of the agency in one person. To implement these statutes, the Commission approved a framework that more clearly defined the operational responsibilities of the Chairman and the other members of the Commission.

Essentially, the Chairman of the NRC has additional responsibilities in limited, specific areas in order to enhance the Commission's ability to carry out its responsibilities. The Chairman of the NRC has very little power or independent authority, and the few additional responsibilities the Chairman has are designed to benefit the Commission, not the Chairman. In my view, by eliminating what little authority or responsibility the Chairman has to develop policy planning and guidance, present budget estimates and proposals, and direct the activities of the Office of Public Affairs and the Office of Congressional Affairs, H.R. 3132 will unnecessarily prolong budget development and policy planning and guidance, will negatively impact the agency's ability to communicate the Commission's policies clearly and consistently, and will not result in better decision-making by the Commission as a collegial body. By requiring the Chairman or her delegate to involve all other Commissioners in the decision-making surrounding an agency response to an emergency, H.R. 3132 eliminates improvements to the agency's ability to respond effectively in an emergency that were recommended by the President's Commission on the Accident at TMI (Kemeny Commission). As written, H.R. 3132 also removes the Chairman's or delegate's ability to respond immediately to a security threat to NRC-licensed or regulated materials or facilities, and requires the Chairman or delegate to wait for another federal agency to make a determination that a security event is imminent. In short, H.R. 3132 will not help the Commission function more collegially, and may impede the Commission's effectiveness in managing day-to-day responsibilities as well as emergencies.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Lee Terry

QUESTION 16. Please provide any other opinions you believe may further inform the Committee's consideration of H.R. 3132.

ANSWER.
Please see my answer to question 15 above.

Attachment 1 – Additional Questions for the Record
Questions for Chairman Macfarlane
The Honorable Cathy Castor

QUESTION 1. During the hearing, I raised the issue of official international travel by the Commissioners. As I requested during the hearing, please provide an explanation of why your international travel is worth the taxpayer expense and time away from your responsibilities at the Commission.

ANSWER.
International activities are an integral part of the Nuclear Regulatory Commission's (NRC's) work, and are managed in a manner consistent with NRC's domestic organizational and programmatic priorities. The Commission's foreign travel is guided by the importance of engagement with a nuclear community that grows more global every day. Ranging from the sharing of nuclear power plant operating experience, collaborating with regulatory counterparts on the import and export of nuclear materials and equipment, fulfilling nonproliferation objectives, and supporting international conventions and treaties, Commissioners dedicate time and resources to overseas travel in order to advance messages or policy positions on the many pressing issues that are or will affect nuclear safety and security the United States.

NRC's international activities and the Commission's foreign travel focus on engagement with countries to exchange experience related to both radiological materials and nuclear power plant operating, construction and licensing activities that are directly applicable to nuclear safety and security in the United States. By traveling overseas to engage with senior international regulatory counterparts, Commissioners share regulatory insights concerning both radioactive materials and operating experience information from other countries that can be applied to the domestic program. NRC's program of assistance helps to strengthen regulatory programs and build relationships with senior nuclear regulatory officials around the world. As the senior-most officials of the NRC, members of the Commission act as a force-multiplier in the promotion of nuclear safety and have an unparalleled ability to influence key international activities.

As statutorily mandated, and in support of United States Government (USG) nonproliferation objectives, the NRC is responsible for the safe and secure export and import of nuclear materials and equipment. For example, the Commission seeks opportunities for close collaboration with counterpart regulators to ensure that the NRC is in compliance with the International Atomic Energy Agency's Code of Conduct on the Safety and Security of Radioactive Sources, which the Energy Policy Act of 2005 adopted into U.S. law.

As obligated by the USG, the NRC also implements key provisions in various international legal instruments. Illustrative of these obligations is NRC's activities in support of the Convention on Nuclear Safety (CNS). NRC ensures that obligations under these and other such agreements that impact NRC licensees are properly implemented, and NRC participates in regularly scheduled international meetings to exchange information with other CNS Contracting Parties. For example, in 2014 the Chairman will present the U.S. National Report at the CNS Review Meeting and will use that opportunity to engage with counterpart regulators of the 77 CNS Contracting Parties.

In the last fifteen years, several events have significantly changed the landscape within which NRC conducts its domestic and international activities. These events include the terrorist attacks of September 11, 2001, and the subsequent focus on securing radioactive materials of

concern, the resurgence of new build for commercial power plants in the United States and abroad, including the significant number of “new entrant” countries seeking nuclear power programs, and the March 2011 Fukushima-Daiichi accident following the Tōhoku earthquake and tsunami. In addition, the manufacture of nuclear parts and the provision of nuclear services have been significantly reduced in the United States for domestic nuclear power plant construction, which has created a dependence on the global marketplace among U.S. nuclear power plant owners/operators.

A part of this trend has been the increased visibility of international standards and international peer reviews, as well as a focus on strengthening and harmonizing the international import-export regime. The Commission is best able to influence these international developments by traveling internationally and bringing to bear insights gained from foreign counterparts on domestic rulemaking and licensing decision-making.

There is strong support for the NRC’s international activities from the Congress as well as other Federal agencies. For example, the Congress authorized and appropriated funding in 2004 for NRC to conduct international assistance activities relating to both new nuclear power plants and the safety and security of radioactive materials. Commission travel is coordinated with, and is frequently directly responsive to, USG foreign policy priorities, at a level seen as appropriate for an independent agency. Participation by Commissioners in international conferences and bilateral meetings enhances the USG and NRC’s influence with nuclear regulatory officials around the world.

In addition, we believe that nuclear safety and security must be universal priorities, regardless of political structure, reactor design, or any other factors that may place countries in contrast with one another. We remain committed to providing regulatory assistance as much as our resources will allow. For countries with nuclear power plants, or which may consider building nuclear plants in the future, there are common technical and licensing issues that regulators must address irrespective of the chosen design. Countries that use radioactive sources for medical, agricultural, or industrial purposes also require a robust regulatory infrastructure to ensure that materials are safely used and securely stored, preventing worker or public overexposure, theft, or diversion.

While on international travel, the Commissioners continue to conduct their domestic responsibilities. The Commissioners participate in voting on issues before them and regularly interact with staff and interested stakeholders via email and conference calls, even if this requires working at non-traditional hours. The Commission’s work does not stop while a member is away, whether on domestic or foreign travel. The Commission ensures that its priority is on nuclear safety and security in the United States and globally.

Attachment 2 – Member Requests for the Record
Questions for Chairman Macfarlane
The Honorable Steve Scalise

During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are provided below.

QUESTION 1. Chairman Macfarlane, during the hearing you agreed to provide for the record the number of Tier 2 and Tier 3 Post-Fukushima requirements that the NRC is considering. Please provide a list of the items under consideration or further research.

ANSWER.
The following table details the three Tier 2 Fukushima Near Term Task Force (NTTF) recommendations that the NRC is considering:

Source of Tier 2 Activity	Description and Status of Tier 2 Activity
NTTF Report Recommendations 7.2-7.5	Description: Require licensees to provide reliable spent fuel pool makeup capabilities. Status: Per Commission direction, staff action on these recommendations has been consolidated with the NTTF Recommendation 4 Station Blackout Mitigation Strategies Rulemaking which is on schedule for issuance in 2016
NTTF Report Recommendation 9.3 (partial)	Description: Issue a generic order to nuclear power plants requiring a revision to the emergency plan to address multiunit dose assessments, periodic training and exercises for multiunit and prolonged SBO scenarios, drills on identification and acquisition of offsite resources, and ensuring sufficient emergency preparedness (EP) resources for multiunit and prolonged SBO scenarios. Status: With the exception of multiunit dose assessments, each of these activities is being accomplished through implementation of the Tier 1 Mitigation Strategies Order. Regarding multiunit dose assessments, licensees have submitted information regarding their capabilities to conduct these assessments. The staff expects to issue responses by the end of February 2014.
SECY-12-0025, Enclosure 3	Description: Reevaluate other natural external hazards against current requirements and guidance and update the design basis. Take appropriate regulatory action to resolve issues associated with updated site-specific hazards. Status: This Tier 2 item will incorporate insights from the ongoing flooding and seismic reevaluations and will begin once sufficient staff resources become available

In Enclosure 3 of SECY-13-0095, “Fourth 6-Month Status Update on Response to Lessons Learned from Japan’s March 11, 2011, Great Tohoku Earthquake and Subsequent Tsunami”, the NRC provided an assessment of the current status of each of the Tier 3 activities. The following table lists the 15 Tier 3 Fukushima NTTF recommendations that the NRC is considering:

Source of Tier 3 Activity	**Description of Tier 3 Activity**
NTTF Report Recommendation 2.2	Ten-year confirmation of seismic and flooding hazards.
NTTF Report Recommendation 3 (partial)	Potential enhancements to the capability to prevent or mitigate seismically-induced fires and floods.
NTTF Report Recommendation 5.2	Reliable hardened vents for other containment designs.
NTTF Report Recommendation 6	Hydrogen control and mitigation inside containment or in other buildings.
NTTF Report Recommendations 9.1, 9.2	EP enhancements for prolonged SBO and multiunit events.
NTTF Report Recommendation 9.3 (partial)	Emergency Response Data System (ERDS) capability.
NTTF Report Recommendation 10	Additional EP topics for prolonged station blackout and multiunit events.
NTTF Report Recommendation 11	EP topics for decision-making, radiation monitoring, and public education.
NTTF Report Recommendation 12.1	Reactor Oversight Process modifications to reflect the recommended defense-in-depth framework.
NTTF Report Recommendation 12.2	Staff training on severe accidents and resident inspector training on severe accident management guidelines.
SECY-12-0025, Enclosure 2	Basis of emergency planning zone size.
SECY-12-0025, Enclosure 2	Pre-staging of potassium iodide beyond 10 miles.
SECY-12-0025, Enclosure 2	Transfer of spent fuel to dry cask storage.
SECY-12-0025, Enclosure 2	Reactor and containment instrumentation withstanding beyond design basis conditions
COMGBJ-11-0002	Determine Applicability of Lessons Learned to Other Regulated Facilities

Attachment 2 – Member Requests for the Record
Questions for Chairman Macfarlane
The Honorable H. Morgan Griffith

QUESTION 1. Chairman Macfarlane, during the hearing you agreed to provide more detail as to how the Commission plans to adapt to an environment in which it receives less money in operating fees as a result of the increased number of plants permanently shutting down. Please provide detailed information including estimates of the decrease in incoming fees and the steps NRC will take to adjust its budget accordingly.

ANSWER.
As stated in the response to Whitfield Question 3, the NRC budget is determined through the appropriations and NRC's total fee collection is based on OBRA-90, as amended. Currently, the NRC is developing the FY 2014 Proposed Fee Rule (Revision of Fee Schedules) which will explain how the fees for the agency's FY 2014 budget are expected to be recovered. The NRC plans to publish this proposed rule for comment by the end of March 2014.