

**ORAL ARGUMENT NOT YET SCHEDULED**

No. 13-1260

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**UNITED STATES COURT OF APPEALS  
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

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NYE COUNTY, NEVADA; STATE OF SOUTH CAROLINA; AND AIKEN  
COUNTY, SOUTH CAROLINA;

Petitioners.

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION,  
and ALLISON M. MACFARLANE, Chairman of the United States  
Nuclear Regulatory Commission,

Respondents.

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**PETITIONERS' REPLY TO NRC'S RESPONSE TO PETITIONERS'  
MOTION FOR SUMMARY REVERSAL**

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## ARGUMENT

### **I. SUMMARY REVERSAL OF CHAIRMAN MACFARLANE'S REFUSAL TO RECUSE HERSELF FROM THE YUCCA MOUNTAIN LICENSING PROCEEDING IS APPROPRIATE.**

#### **A. NRC's Response to the Motion for Summary Recusal Is Primarily Based Upon Erroneous and Irrelevant Procedural Issues Apparently Raised By NRC to Delay a Decision on the Merits Which Have Been Fully Briefed**

Contrary to Respondent Nuclear Regulatory Commission's ("NRC") claims, summary disposition is appropriate in this case. The Petition for Review presents the narrow issue of whether Chairman Macfarlane abused her discretion and violated Petitioners' due process rights and NRC's own legal standard for mandatory recusal when she issued a decision denying the Petitioners' August 23, 2013, Motion for Recusal. *In re U.S. Dep't of Energy*, NRC No. 63-001-HLW (Sept. 9, 2013) (hereinafter the "Recusal Decision").

Although the parties advanced contradictory arguments throughout their pleadings about the significance of the facts in the case, the authenticity of the documents, Macfarlane's statements in opposition to Yucca Mountain, and the underlying factual bases for recusal, taken from public documents, are undisputed. NRC has utterly failed to rebut Petitioners' claim on the merits: that a disinterested observer would conclude that Chairman Macfarlane has prejudged dispositive issues in the licensing proceeding and is not impartial. She admittedly investigated Yucca Mountain for years before joining the NRC; declared publicly that Yucca

Mountain is unsuitable as the nation's nuclear waste repository; criticized Yucca Mountain before Congress and in other public forums; and co-authored a book challenging the scientific and factual basis supporting the Department of Energy's ("DOE's") Yucca Mountain license application. Summary reversal is warranted.

Perhaps because the merits are so clear, NRC points to nonexistent complications and states it can only "highlight" its objection on the merits.<sup>1</sup> NRC devoted much of its Response to Petitioners' Motion for Summary Reversal (hereinafter "Response") to procedural and technical irrelevancies that are not only erroneous, but frankly absurd. For example, NRC objects to Petitioners quoting from a 2012 transcript of Congressional testimony, during which the Chairman continued to maintain that that her scientific analysis of alleged defects in the Yucca Mountain license application "are technically defensible."<sup>2</sup> Yet the Chairman herself cites from the same 2012 transcript in her Recusal Decision,<sup>3</sup> and NRC Counsel provided to Petitioners an excerpt of her 2012 testimony, which includes the "objectionable" statement on technical defensibility *for inclusion in the record* of the Chairman's decision in this case.<sup>4</sup> Having incorporated the statement in the record, it is beyond comprehension why NRC now claims this

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<sup>1</sup> NRC Response at 11.

<sup>2</sup> *Joint Hearing on NRC Policy and Governance Oversight Before the H. Subcomm. on Environment and the Economy with Subcomm. on Energy and Power, Comm. on Energy and Commerce*, 112th Cong. (2012).

<sup>3</sup> Recusal Decision at 12 n.40.

<sup>4</sup> Exhibit A to this Reply, NRC E-mail of Nov. 18, 2013 at Attachment 3, p. 131.

Congressional testimony is not “properly before the Court.”<sup>5</sup>

Similarly, NRC contends that Petitioners’ tabular comparison of DOE’s license application, Macfarlane’s findings and conclusions, and Nevada’s contentions opposing Yucca Mountain<sup>6</sup> was an “issue” that had not been presented to Chairman Macfarlane in Petitioners’ original Motion for Recusal. Response at 8. That statement is patently false, as a reading of the original Motion for Recusal demonstrates. The Motion for Recusal provides a detailed narrative comparison of DOE’s application, Macfarlane’s opposing scientific conclusions, and Nevada’s contentions.<sup>7</sup> The Petitioners’ tabular display simply converts the Motion for Recusal’s narrative comparison into a stark demonstration of her opposition to DOE’s application, and her alignment with Nevada, the chief opponent of the license application. Contrary to NRC’s assertions, Petitioners also cited to specific sections of the DOE application, which is a public record, to allow the Court to verify the accuracy of the information provided. Notably, NRC does not claim that the information in the table is inaccurate or dispute that Macfarlane’s position in each instance is categorically opposed to the position taken in DOE’s application and is instead aligned with the principal opponent of the Yucca Mountain repository.

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<sup>5</sup> Response at 7.

<sup>6</sup> Motion for Summary Reversal at 4–5.

<sup>7</sup> *See also* Petition for Review, Ex. B at 4-10 (hereinafter “Motion for Recusal”).

The parties' arguments over jurisdiction and ripeness are similarly straightforward. NRC contends that this Court lacks jurisdiction to decide the recusal claim until a final decision on the entire Yucca Mountain license is reached.<sup>8</sup> However, three separate prongs of the Nuclear Waste Policy Act ("NWPA"), 42 U.S.C. § 10139(a)(1)(A)-(C) establish jurisdiction to expeditiously review the Recusal Decision now. The facts in support of jurisdiction are not in dispute, and the Court should grant the Motion for Summary Reversal.

**B. Petitioners Relied Upon Documents Cited by the Commissioner and Her Statements on the Public Record.**

NRC objects to Petitioners' citation to transcripts of 2010 statements critical of Yucca Mountain made by Macfarlane as an expert hired by the Obama Administration to serve on the Blue Ribbon Commission on America's Nuclear Future, as well as her 2012 Congressional testimony. However, these are public records, of which this Court can take judicial notice, regardless of whether they were cited in the original Motion for Recusal.<sup>9</sup>

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<sup>8</sup> See NRC's Motion to Dismiss at 5–16.

<sup>9</sup> See, e.g., *Nat'l Citizens Comm. for Broad. v. FCC*, 555 F.2d 938, 959 n.71 (D.C. Cir. 1977), *aff'd in part, rev'd in part on other grounds*, 436 U.S. 775 (1978) ("It is strenuously contended that the latter submission was not part of the administrative record and hence should not be considered on appeal. However, as much of the report consists of discussion of cases in the public record, we see no harm in taking notice of it."); *Marshall County Health Care Auth. v. Shalala*, 988 F.2d 1221, 1226 (D.C. Cir. 1993) (where, in reviewing an agency order, the Court noted "as matters of public record, statements in the Federal Register can be examined on 12(b)(6) review").

NRC also overlooks the fact that Petitioners' inclusion of this more recent testimony is entirely appropriate to rebut NRC's attempt to categorize Macfarlane's statements as "policy" views held by Macfarlane as an "academic" many years before the license application was filed. *See* Recusal Decision at 4–5, 8–12; NRC's Consolidated Opposition to Petitioners' Petition for Writ of Mandamus and Emergency Motion for Preliminary Injunction at 18, 20 (hereinafter "Opposition"). Petitioners also expressly stated that the documents and testimony cited in the Motion for Recusal were among "many other examples of Dr. Macfarlane's statements echoing the arguments of opponents to the repository, or vice versa." Motion for Recusal at 8.

Furthermore, these statements were made by Macfarlane herself. As a practical matter, she should be well aware of what she has testified to recently. NRC even raises exhaustion of administrative remedies as a defense,<sup>10</sup> disingenuously implying that Chairman Macfarlane might have reconsidered her Recusal Decision if she had been confronted with these additional examples of her own public testimony in the Motion for Recusal.

### **C. Petitioners' Motion Complied With the Federal Rules.**

NRC erroneously argues that Petitioners' citations to their prior submittals in this case were somehow an attempt to circumvent this Court's rules. Response

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<sup>10</sup> NRC Response at 7–8.

at 4–6. First, the Motion for Summary Reversal stands on its own and provides this Court with a concise statement of the reasons and legal support for summary reversal of the Recusal Decision. Moreover, Petitioners’ inclusion of citations to prior filings was intended to demonstrate that the issues in this case have been thoroughly addressed by the parties, and to provide the Court with a convenient way to locate additional information on certain arguments should it so desire. These citations are also apparently necessary to counter NRC’s assertions that Petitioners have attempted to introduce new issues in the case.

NRC’s own Response shows why Petitioners cited previous filings—to demonstrate that the issues have been exhaustively argued by both sides. For example, NRC’s Response contains 10 pages of argument concerning the merits of the Petition that are largely just a repetition of arguments previously made in NRC’s Opposition. *Compare* Response at 11–20 *with* Opposition at 14–26. If this Court required full briefing and oral argument, as is now requested by NRC, there is little reason to believe either party’s arguments on the merits of the Petition would substantively change. The merits have been exhaustively briefed.

NRC also relies on *Davis v. PBGC*, 734 F.3d 1161, 1166-67 (D.C. Cir. 2013), which held that the appellants in that case could not circumvent the Court’s rules by incorporating arguments from pleadings made with the district court in their brief. Here, Petitioners have not attempted to fully incorporate any prior



pleadings made with a district court into their Motion for Summary Reversal. Instead, this Court has original jurisdiction over this matter pursuant to the NWPA, and Petitioners merely cited to pleadings previously filed with this Court for the reasons outlined above. Moreover, the Motion for Summary Reversal stands on its own, making NRC's reliance on *Davis* wholly misplaced.

**D. This Court Has Not Already Rejected the Grounds for Summary Reversal.**

Contrary to NRC's argument, this Court has not "*already* found that the evidence . . . was insufficient to necessitate" recusal when the Court declined to issue a writ of mandamus. Response at 7. This Court's October 22, 2013 Order (Doc. #1462418) never addresses the evidence, or the likelihood of success on the merits, but instead denied mandamus because there was another "adequate remedy available to petitioners." Similarly, it is unclear why NRC ignores the independent jurisdictional grounds for judicial review provided in Section 119(a)(1)(C),<sup>11</sup> since review under Section 119(a)(1)(C) (or the other two prongs of Section 119(a)(1)) is an "adequate remedy available" that could have been the basis for this Court's denial of mandamus.

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<sup>11</sup> NRC again contends that when this Court declined to issue a writ of mandamus, it necessarily denied review under Section 119(a)(1)(B) or (C) of the NWPA, 42 U.S.C. § 10139(a)(1)(B)-(C). Response at 2, 10.

Contrary to NRC's assertion that the standard for summary disposition was ignored,<sup>12</sup> Petitioners previously addressed the same standard for summary disposition that NRC cites: whether the merits of the Petition are so clear that plenary briefing, oral argument, and the traditional collegiality of the decisional process would not affect the Court's decision. *Sills v. Bureau of Prisons*, 761 F.2d 792, 793-94 (D.C. Cir. 1985); *Cascade Broadcasting Group, Ltd. v. FCC*, 822 F.2d 1172, 1174 (D.C. Cir. 1987). Here, the Parties' positions on the merits of the Petition are abundantly clear,<sup>13</sup> and summary reversal is appropriate now.<sup>14</sup>

## **II. CHAIRMAN MACFARLANE HAS CLEARLY ABUSED HER DISCRETION IN DECLINING TO RECUSE HERSELF.**

NRC's arguments on the merits of the Petition are largely just a repetition of arguments made in its previous filings, and Petitioners have already responded to these arguments in their previous filings.<sup>15</sup> "[A] disinterested observer [would] conclude that [Macfarlane] has in some measure adjudged the facts as well as the

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<sup>12</sup> Response at 4.

<sup>13</sup> See *supra* pp. 1-2, 4.

<sup>14</sup> NRC also cites to *U.S. v. Brookins*, 345 F.3d 231, 237 n.6 (4th Cir. 2003) (The "standard for obtaining a summary reversal of a lower court's judgment is strenuous.") and *Maryland v. Dyson*, 527 U.S. 465, 466 n.1 (1999) (Summary reversal "does not decide any new or unanswered question of law, but simply corrects a lower court's demonstrably erroneous application of federal law.") Response at 3. Although both of these cases refer to review of a lower court decision (and not agency decisions), Petitioners have nonetheless shown that the Recusal Decision was in fact a demonstrably erroneous application of law. Motion for Summary Reversal at 2-14.

<sup>15</sup> See Petitioners' Reply to Respondents' Consolidated Opposition at 2-7; Motion for Summary Reversal at 2-14.

law of the particular case in advance of hearing it.” *NIRS v. NRC*, 509 F.3d 562, 571 (D.C. Cir. 2007). Chairman Macfarlane initiated and conducted her own extrajudicial scientific and factual investigations of Yucca Mountain,<sup>16</sup> and flatly concluded that Yucca Mountain was “unsuitable” as a geologic repository for nuclear waste in 2009; she publicly reiterated her analysis and criticisms of Yucca Mountain in 2010 prior to becoming NRC Chairman; she co-authored a book published in 2006 criticizing the adequacy of DOE’s safety modeling for the Yucca Mountain license application; she testified before Congress that same year regarding what she believes are flaws in DOE’s approach to ensuring safety at the site. Motion for Summary Reversal at 2. She has not retracted her judgment on numerous dispositive factual issues that must be decided by NRC, and even intimated that DOE reached its conclusion on the suitability of Yucca Mountain based upon political expediency and not science. Motion for Recusal at 9.

NRC reiterates that the Chairman cannot change the regulation mandating a repository performance assessment , and, therefore has nothing to judge regarding the use of the TSPA— implying that the models and the data DOE used, regardless of their efficacy, or how DOE implemented the models, must be accepted. *See*

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<sup>16</sup> *Joint Hearing on NRC Policy and Governance Oversight Before the H. Subcomm. on Environment and the Economy with Subcomm. on Energy and Power, Comm. on Energy and Commerce*, 112th Cong. (2012). *See also Hearing on the Status of the Yucca Mountain Project Before the S. Comm. On Environment and Public Works*, 109th Cong. (2006).

Response at 13. Nonsense. NRC must determine if DOE's *selection* of the specific TSPA models are technically justified, and if the selected models are capable of demonstrating that the repository will meet all regulatory requirements and will perform as expected and operate safely. *See* 10 C.F.R. § 63.31(a).

As NRC admits,<sup>17</sup> Macfarlane will be required to adjudicate disputes in this case, and her prior publications and statements clearly demonstrate that she has already prejudged a number of dispositive issues. Moreover, even if the licensing adjudication is currently "suspended," summary reversal is appropriate now. The Chairman of the NRC not only participates in making substantive decisions regarding the NWPA license process, such as suspension, but is responsible for key executive and administrative functions of the NRC, including personnel and budget decisions, that can dramatically impact the licensing process.<sup>18</sup>

## CONCLUSION

For the foregoing reasons, Petitioners' Motion for Summary Reversal should be granted.

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<sup>17</sup> NRC admits that Macfarlane will adjudicate certain disputes, "such as whether DOE's Total System Performance Assessment ("TSPA") models have failed to analyze or have improperly analyzed a particular 'feature, event or process' ("FEP)". Response at 9.

<sup>18</sup> *See* 10 C.F.R. § 1.11. In fact, if the adjudication remains "suspended," Macfarlane possesses the primary NRC authority to influence the proceeding while it is suspended, and the need for recusal is arguably even greater.

RESPECTFULLY SUBMITTED this 23<sup>rd</sup> day of December, 2013

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**CERTIFICATE OF FILING AND SERVICE**

I hereby certify that on this 23<sup>rd</sup> day of December, 2013, I filed with the Clerk's Office of the United States Court of Appeals for the District of Columbia Circuit, via hand delivery, an original and four copies of the foregoing *Reply to NRC's Response to Petitioners' Motion for Summary Reversal*, and filed the same with the Court's CM/ECF filing system. This method is calculated to serve:

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# EXHIBIT A

*Nov. 18, 2013 E-mail from Charles Mullins to Robert Andersen*

**Andersen, Robert M.**

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**From:** Mullins, Charles <Charles.Mullins@nrc.gov>  
**Sent:** Monday, November 18, 2013 4:00 PM  
**To:** Andersen, Robert M.  
**Subject:** Three items for the Record.  
**Attachments:** FW: ; FW: ; FW:

We take two of the items from Fn. 37.

We take the third item from Fn. 40. NOTE: It appears that the Chairman made a mistake in dating the hearing. It was June 24, not July 24.



**Andersen, Robert M.**

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**From:** Samuel, Olive <Olive.Samuel@nrc.gov>  
**Sent:** Monday, November 18, 2013 10:52 AM  
**To:** Mullins, Charles  
**Subject:** FW:  
**Attachments:** image2013-11-18-103858.pdf

Chuck,

Also Document 3 Responses following May 23, 2013-Senate Hearing. This is also in your G:/under you name.

-----Original Message-----

**From:** NRCDigitalSender@nrc.gov [mailto:NRCDigitalSender@nrc.gov]  
**Sent:** Monday, November 18, 2013 10:39 AM  
**To:** Samuel, Olive  
**Subject:**

This document was digitally sent to you using Dell Digital Sending device.

**Environment and Public Works Committee Hearing  
May 23, 2013  
Follow-Up Questions for Written Submission**

Questions for Macfarlane

Questions from:

Senator Frank Lautenberg

1. President Obama's Blue Ribbon Commission on America's Nuclear Future recommended establishing a permanent geologic storage facility for nuclear waste in addition to developing interim storage facilities in multiple locations around the country. Transporting the more than 67,500 metric tons of used nuclear fuel currently stored on-site at nuclear power plants to these repositories will require multiple shipments. While the Department of Energy is responsible for overseeing the transport of nuclear waste around the country, the NRC is responsible for regulating the design and manufacturing of the containers used to transport nuclear fuel.

- a. Do you continue to support the recommendations of the Blue Ribbon Commission regarding nuclear waste storage?

ANSWER:

Yes, I support the Blue Ribbon Commission's recommendations as a former BRC member. As Chairman of the Nuclear Regulatory Commission, my role now is – and will continue if confirmed – to ensure that the facilities we license are protective of public health and safety.

- b. Are there opportunities for the NRC to encourage on-site storage of spent fuel in a manner that facilitates the eventual transport of the spent fuel to an interim or long-term repository?

ANSWER:

The NRC's regulatory responsibility is to ensure that spent nuclear fuel is managed safely and securely in either wet or dry storage located at reactor sites or away from reactors, and can be safely transported to an interim or long-term repository. The NRC licenses on-site storage of spent nuclear fuel, but does not direct its licensees toward a particular storage option. The NRC also does not promote a specific national waste management policy. As the National Policy evolves, the NRC's mission remains the same – to ensure the safe and secure use of radioactive materials while protecting people and the environment.

2. Currently, all of the spent fuel from nuclear reactors in the U.S. is stored on-site due to the absence of a safe, centralized storage location. Most of this waste is stored in spent fuel pools, where water is used to cool and contain the radioactivity from spent nuclear fuel. However, due to the declining capacity of spent fuel pools, some facilities are storing spent fuel in dry cask storage, which utilizes passive cooling.

Senator David Vitter

Qualifications

I am wondering after a year as Chair what you think it takes to be Chair of the NRC...

1. Do you think an NRC Commissioner should have strong technical expertise relevant to the NRC's mission to protect the public health and safety and be knowledgeable about the nuclear industry it regulates?

ANSWER:

Yes, an NRC Commissioner would be well served to have a technical background. As Chairman of the NRC, I have drawn upon my technical and scientific expertise and associated analytical skills, environmental policy experience, interpersonal skills, and knowledge of the nuclear industry to work collegially with my fellow Commissioners and effectively lead the talented men and women at the NRC. If confirmed, I would continue to benefit from and utilize these skills.

2. Please describe the technical expertise and industry knowledge you had before you joined the commission.

ANSWER:

My technical expertise is focused on the back end of the nuclear fuel cycle, though I am familiar with the front end processes as well. I have published extensively on technical issues associated with the storage and disposal of spent nuclear fuel. I have also examined economic issues associated with storage and disposal of spent fuel. I have published technical articles on nuclear energy in general. I have consulted for industry, as well. I am the only individual with a background in geology to serve on the Commission. I hold a doctorate in geology from the Massachusetts Institute of Technology and a bachelor's of science degree in geology from the University of Rochester.

3. Do you think the NRC Chair should have organizational leadership and management experience sufficient to oversee a large, complex organization with important public safety responsibilities?

ANSWER:

The leadership of the NRC is a complex task that requires an array of skills. Prior to joining the NRC last July, I led a variety of different organizations and worked with many employees who reported directly to me. As Chairman of the NRC for the past ten months, I have broadened and strengthened my management and interpersonal skills. If confirmed, I believe my strong leadership, management, and interpersonal skills will enable me to work well with my fellow Commissioners, the NRC's senior managers, and the talented and dedicated NRC staff, as we fulfill our mission to protect public health and safety and promote the common defense and security.

4. Please describe your organizational and leadership experience before you joined the NRC.

81. How should the NRC be more mindful of the limits of its adequate protection charge when making regulatory decisions?

ANSWER:

The NRC has consistently iterated over time that "adequate protection" is neither "absolute protection," nor "no risk." Consistent with this principle, the NRC has developed a variety of "tools" and methodologies to help inform its decision on adequate protection. These include deterministic analysis, probability and risk analysis coupled with comparison against such measures as the Safety Goals (with both qualitative and quantitative goals), core damage frequency and large early release frequency, consideration of uncertainties, the use of expert panels, and consideration of defense-in-depth. Consideration of adequate protection is reflected in many Commission policy statements, and various backfitting and issue finality restrictions in the NRC's regulations. The NRC's internal guidance – in the form of various Management Directives, and the NRC's guidance on regulatory analysis – also reflect the Atomic Energy Act's direction on adequate protection.

#### Yucca Mountain

Chairman Macfarlane, we have been struggling with some agencies' shortcomings in the conducting their work in an open and transparent manner.

82. If reconfirmed as Chairman, will you commit to conduct the Commission's business in a completely open and transparent manner, including such things as the agency's conclusions resulting from safety analyses?

ANSWER:

Yes, as stated above in response to question 11, I am committed to continue effective, open and transparent regulation. This would include an agency decision to make final agency conclusions resulting from its safety analyses publicly available, to the extent permitted by law. If, for example, the staff's safety evaluation report were to include sensitive information, that information may need to be withheld from the public.

83. Does your commitment to transparency extend to the release of the NRC's conclusions regarding the Yucca Mountain Safety Analysis Report?

ANSWER:

Yes, my commitment to transparency would extend to any Commission decision to release final conclusions in a completed Safety Evaluation Report regarding the proposed repository at Yucca Mountain.

84. If not, why not?

ANSWER:

As noted above, I am committed to an open and transparent regulatory process.

85. If the Court requires the NRC to resume the license review, will you honor the Court's decision?

**ANSWER:**

I will await the final court decision, review it when it comes, and work with my colleagues on the Commission to determine the appropriate next steps for the agency.

**Other Questions**

86. Chairman McFarlane, do you believe the Nuclear Waste Policy Act (NWPA) is the "law of the land" as it relates to the siting and licensing of geologic repositories for the permanent disposal of spent fuel and high-level radioactive waste? Yes or No?

**ANSWER:**

I agree that, until it is amended or repealed, the NWPA is still applicable to the siting and licensing of geological repositories for the permanent disposal of spent fuel and high-level radioactive waste. However, I am advised by the NRC's General Counsel that the NWPA is not the only Congressional action on this topic and that Congressional appropriations legislation also governs the agency's activities relating to the licensing of geological repositories.

87. Has anything changed the NWPA in terms of the NRC's mandate that the NRC approve or disapprove the DOE Yucca Mountain license application?

**ANSWER:**

As stated in response to the previous question, the NWPA is still applicable and any requirements contained in the Act remain in effect, as do requirements imposed by other applicable legislation, including appropriations legislation.

88. Do you believe that the NRC should continue to comply with NWPA mandate? If not why not?

**ANSWER:**

I believe that the Commission should comply with its legal obligations.

- a. Does the NRC have any layover funds regarding past Yucca appropriations?

**ANSWER:**

Yes

- b. How much?

**ANSWER:**

See response to Question 88(c)

- c. Could this money not be used to complete the technical review?



**ANSWER:**

The NRC currently has approximately \$11.1 million in unobligated carryover funds (and \$2.5 million in obligated, unexpended carryover funds) appropriated from the Nuclear Waste Fund. The precise portion of the \$2.5 million that might ultimately become available will not be known until the completion of the audits associated with the closeout of certain contracts. The money could be used to fund some activities related to the Yucca Mountain project, including the completion of the technical licensing review.

89. What will you do to bring the agency into compliance with the law, NWPA?

**ANSWER:**

I will await the final court decision, review it when it comes, and work with my colleagues on the Commission to determine the appropriate next steps for the agency.

90. Do you believe that the NRC is an independent agency and that politics should not interfere with its congressionally mandates duties and responsibilities?

**ANSWER:**

Yes.

91. Do you believe that your predecessor's action to essentially suspend the licensing review of the Yucca license application by was an administrative decision or a policy decision?

**ANSWER:**

I do not have personal awareness in this matter, nor the logic behind the actions of my predecessor. As a practical matter, long before I was appointed Chairman, no new funding was appropriated for the licensing review and consequently NRC staffing and resources were directed elsewhere.

92. How much carry over funding for the licensing review of Yucca does your agency have current available?

**ANSWER:**

The NRC currently has approximately \$11.1 million in unobligated carryover funds (and \$2.5 million in obligated, unexpended carryover funds) appropriated from the Nuclear Waste Fund. The precise portion of the \$2.5 million that might ultimately become available will not be known until the completion of the audits associated with the closeout of certain contracts.

93. What are you willing to do to bring your agency into compliance with the law?

a. Request funds from Congress to complete licensing review?

**ANSWER:**

I will await the final court decision, review it when it comes, and work with my colleagues on the Commission to determine the appropriate next steps for the agency.

- b. Finish and issue SERs (Safety Evaluation Report) with complete with regulatory analyses?

**ANSWER:**

I will await the final court decision, review it when it comes, and work with my colleagues on the Commission to determine the appropriate next steps for the agency.

94. Do you acknowledge that repository siting is a Congressional responsibility and not an NRC responsibility?

**ANSWER:**

I acknowledge that Congress has selected a site for a repository, and that the NRC has no role in choosing a site.

95. Do you agree that the NRC's responsibility to make a determination about the proposed Yucca design is safe?

**ANSWER:**

I agree that the responsibility to make determinations concerning the safety of the construction and operation of a proposed geologic repository belongs to the NRC.

96. Do you agree that the NRC has a substantial record before it on the safety to the Yucca project, and a Staff safety evaluation report (SER) on the DOE design? And that the record has been available since 2008? And that the SER has been ready for public review since 2010?

**ANSWER:**

It is my understanding that in June 2008, DOE submitted its application for a proposed geologic repository at Yucca Mountain and that once the application was docketed, the NRC's technical staff initiated a comprehensive review. The application is available on the NRC's public website. I am also aware that the NRC issued one volume of its SER related to the "General Information" section of the DOE license application, which contains introductory and overview information about the proposed facility and its operation. The NRC has neither completed nor issued Volumes 2, 3, 4, and 5 of the SER. It is my understanding that the NRC completed orderly closure of its Yucca Mountain review activities by the end of Fiscal Year 2011. As part of orderly closure, the NRC documented and published publicly three volumes of a Technical Evaluation Report.

97. Would you agree that your main technical expertise relevant to service on the NRC is your understanding of geology and particularly the geology of the Yucca site?

**ANSWER:**

In addition to my expertise as a geologist, I have spent most of my career analyzing policies and technical issues related to nuclear waste and energy from a scientific

viewpoint. From 2010 to 2012 I served on the Blue Ribbon Commission on America's Nuclear Future, created by the Obama Administration to make recommendations about a national strategy for dealing with the nation's high-level nuclear waste. My research has focused on policies and technical issues related to the back end of the nuclear fuel cycle from a scientific viewpoint as well as other aspects of nuclear energy in general.

98. If you are confirmed to the NRC, do you agree to give Congress and the public the benefit of your expertise by voting to restart the Yucca licensing proceeding, releasing the SER, and participating in a final decision on the safety of the Yucca project?

ANSWER:

As I stated in my June 2012 testimony, my work in this area predates the DOE license application for Yucca Mountain by six years. I have not analyzed the license application or the NRC's analyses. As Chairman, I remain impartial about whether DOE's application meets the NRC's regulatory requirements. Further, I believe it is prudent to wait for the D. C. Circuit Court's decision before determining a course of action with respect to these issues. Once the court renders its decision, the Commission will determine the appropriate next steps for the agency.

Last June the Court of Appeals rejected the NRC's updated waste confidence ruling. The NRC had found that there is reasonable assurance that spent fuel will be removed from reactor sites even if the Yucca repository is not licensed. Without waste confidence, there is more uncertainty about NRC new plant licensing.

99. To restore confidence that new reactor sites will not become graveyards for spent nuclear fuel, would you be willing to make decisions in reactor licensing cases beginning now, before the hearings, decisions and appeals on Waste Confidence are complete? If not, why not?

ANSWER:

The Commission formally directed the NRC staff to prepare an environmental impact statement and updated rule to address the issues identified by the Court of Appeals. Resolving these issues generically, through the NRC's rulemaking process, continues to be the shortest path to the resumption of licensing activities. However, the Commission recognized that there could be some circumstances where a site-specific review would be warranted, and instructed the staff to identify licensing proceedings where there is an exceptional or compelling need for a site-specific analysis. To date, the NRC staff has not identified any proceedings that would merit a site-specific review. The Commission is continuing to monitor the progress of the generic environmental impact statement and rule, which is on schedule to be completed in September 2014.

100. Well, if the NRC is not going to complete the Yucca license, is not going to act on reactor construction, uprates, or plant life extensions, why should Congress appropriate any funds for those activities?

ANSWER:

In an August 7, 2012 Order, the Commission directed the NRC staff to continue its technical review of applications for initial and renewed licenses during the Waste



**Andersen, Robert M.**

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**From:** Samuel, Olive <Olive.Samuel@nrc.gov>  
**Sent:** Monday, November 18, 2013 10:48 AM  
**To:** Mullins, Charles  
**Subject:** FW:  
**Attachments:** image2013-11-18-103706.pdf

Document 2, Responses following June 13, 2012 , Senate Hearing. This also is in the G:/ under you name.

-----Original Message-----

**From:** NRCDigitalSender@nrc.gov [mailto:NRCDigitalSender@nrc.gov]  
**Sent:** Monday, November 18, 2013 10:37 AM  
**To:** Samuel, Olive  
**Subject:**

This document was digitally sent to you using Dell Digital Sending device.

**Environment and Public Works Committee  
Confirmation Hearing for Dr. Allison Macfarlane  
June 13, 2012  
Responses to Follow-up Questions from  
Senator Jeff Sessions**

1. Please list all the conference panels, meetings, public rallies, or other public events that you have attended at which nuclear energy or nuclear waste issues were discussed.

During my career I have attended many events related to nuclear energy or nuclear waste and do not have an exhaustive record or recollection of every single one. The following list represents my best efforts to reconstruct as complete and exhaustive a list as is possible. To the extent that I discover any additional panels, meetings, rallies, or other public events at which nuclear energy or nuclear waste issues were discussed, I will provide those names to the Committee as well.

In addition to the list below, I have regularly attend(ed) the following meetings: The MIT Security Studies Seminar Series, the Belfer Center for Science and International Affairs multiple speaker series, History of Science Department, and Department of Earth and Atmospheric Science, at Harvard University, the Center for International Security and Cooperation multiple speaker series at Stanford University, the Nuclear Engineering Department and the Energy Resources Group at University of California, Berkeley, Princeton University multiple speaker series, Georgia Tech multiple speaker series, University of Toronto seminar series, University of Michigan seminar series, Oberlin College seminar series, Johns Hopkins School of Advanced International Studies seminar series, the Peace Studies Program at Cornell University, the Bulletin of the Atomic Scientists nuclear energy workshops and Doomsday workshops, the Carnegie Conferences, seminar series at Brookings, the Carnegie Endowment for International Peace, the Monterrey Institute, the Center for Strategic and International Studies, the Center for International and Security Studies at Maryland, the Elliott School at George Washington University, the National Republican Club/National Defense University, the Federation of American Scientists, the Union of Concerned Scientists, Brookings Institution, the Partnership for Global Security, the Watertown, Massachusetts RAB, Society for Risk Analysis, Massachusetts, Los Alamos National Laboratory public hearings, meetings of the Society for the Social Studies of Science, the American Geophysical Union, the Geological Society of America, the American Association for the Advancement of Science, and the Summer Symposia on Science and Global Affairs.

My Blue Ribbon Commission public meetings were:

Full Commission Meetings

- Washington - March 25, 2010- March 26, 2010
- Washington - May 25, 2010 - May 26, 2010
- Kennewick, WA - July 14, 2010- July 15, 2010
- Washington- September 21, 2010 - September 22, 2010
- Washington - November 15, 2010 - November 16, 2010
- Augusta, GA - January 6, 2011 - January 7, 2011
- Carlsbad, NM- January 26, 2011
- Washington - February 1, 2011 - February 2, 2011
- Washington - May 13, 2011
- Washington - December 2, 2011

Reactor and Fuel Cycle Technology Subcommittee

- Washington - October 12, 2010
- Washington - August 30, 2010 - August 31, 2010
- Idaho Falls - July 12, 2010 - July 13, 2010

Disposal Subcommittee

- Washington - July 7, 2010
- Washington - September 1, 2010
- Finland - October 21, 2010 - October 22, 2010
- Sweden- October 23, 2010 - October 26, 2010

Regional Public Meetings with State Regional Governments

- Denver, CO - September 13, 2011
- Boston, MA - October 12, 2011
- Washington - October 20, 2011

Events I have attended and at which spoken about nuclear energy or nuclear waste include:

- 4/12 School of Foreign Service, Georgetown University, Washington, DC
- 4/12 Nautilus, Seoul, South Korea (workshop)

- 4/12 Elliott School, George Washington University, Washington, DC
- 4/12 Teaching the Fuel Cycle Workshop, Elliott School, George Washington University, Washington, DC
- 3/12 Burden of Choice, Heyman Center for the Humanities, Columbia University, New York NY
- 3/12 Radioactive Waste Management Committee, 45<sup>th</sup> meeting, Nuclear Energy Agency, Paris, France
- 3/12 Fukushima: Lessons Learned? Workshop Oberlin College, Oberlin, OH
- 2/12 Federation of American Scientists, Global American Business Institute, Washington DC
- 2/12 American Association for the Advancement of Science, Vancouver, Canada (annual conference)
- 2/12 Platts 8<sup>th</sup> Annual Nuclear Energy Conference, Bethesda, MD
- 2/12 Keystone Center Energy Board Meeting, Keystone, CO
- 1/12 Bulletin of the Atomic Scientists' Doomsday Symposium, Washington, DC
- 12/11 Tokyo Democratic Party, the Diet, Tokyo, Japan
- 12/11 Japan Association of Science, Technology and Society, Tokyo University, Tokyo Japan
- 12/11 Japan Atomic Energy Commission, Tokyo, Japan
- 12/11 Joint-Fact-Finding Process, Graduate School of Public Policy, Tokyo University, Japan
- 11/11 Society for the Social Studies of Science, Annual Meeting, Cleveland, OH
- 10/11 American Academy of Arts and Sciences, Stanford, CA
- 10/11 National Journal Policy Summit, National Press Club, Washington, DC
- 10/11 Elliott School of International Affairs, George Washington University, Washington, DC
- 10/11 Harris School of Public Policy, University of Chicago, Chicago, IL
- 5/11 School of Advanced International Studies, Johns Hopkins University, Washington DC
- 12/10 Vision Series Lectures, George Mason University, Fairfax, VA
- 12/10 Nuclear Futures Workshop, UC Berkeley, CA

11/10 Bulletin of the Atomic Scientists Annual Meeting, Washington, DC

11/10 The STS Circle, Kennedy School of Government, Harvard University, Cambridge, MA

9/10 STEP Symposium, Princeton University, Princeton, NJ

4/10 School of Public Policy, George Mason University, Fairfax, VA

3/10 Environmental Science and Policy, George Mason University, Fairfax, VA

3/10 ANS Lecture, Nuclear Science & Engineering, MIT, Cambridge, MA

2/10 The Future of Nuclear Energy, Princeton University, Princeton, NJ

2/10 American Association for the Advancement of Science, Annual Meeting, San Diego, CA

2/10 Platts Nuclear Energy Conference, Bethesda, MD

2/10 Georgia Institute of Technology, Atlanta, GA

1/10 GEEi School of Advanced International Studies, Johns Hopkins, Washington, DC

12/09 Kettle Run High School, Nokesville, VA

11/09 School of Advanced International Studies, Johns Hopkins, Washington, DC

11/09 Nuclear International Research Group, University of Toronto, Toronto, Canada

11/09 Society for the Social Study of Science, Annual Conference, Crystal City, VA

10/09 Nuclear Power – Back on the Table Conference, Penn State, State College, PA

8/09 PAGES Summer School, Nuclear Engineering Department, UC Berkeley, CA

6/09 Institute for Energy and the Environment, Summer School, Takoma Park, MD

6/09 Fresh Energy, St. Paul, MN

4/09 58<sup>th</sup> Pugwash Conference on Science and World Affairs, The Hague, Netherlands

4/09 21<sup>st</sup> Annual Environment Virginia Conference, Virginia Military Institute, Lexington, VA

4/09 Carnegie Conference, Washington, DC

4/09 Roanoke Valley Governor's School, Roanoke, VA

3/09 Center for International Security Studies at Maryland, University of Maryland, College Park, MD

3/09 Meridian Institute, Washington, DC

3/09 Nuclear Energy in a Carbon-Constrained World Course, Princeton University, Princeton, NJ

2/09 Mason Energy Roundtables, GMU, Fairfax, VA

1/09 Al Gore Summit, New York, NY

11/08 Partnership for Global Security, Washington DC

11/08 Center for Strategic and International Studies, Washington DC

6/08 Senate Briefing, Washington DC

5/08 Carnegie Endowment for International Peace, Washington, DC

5/08 Science Symposium, St Olaf College, Northfield, MN

4/08 Committee on Energy and Water, US House of Representatives, Washington, DC

4/08 Symposium, Lake Forest College, Lake Forest, IL

1/08 Center for International and Security Studies, University of Maryland, College Park, MD

1/08 School of Foreign Service, Georgetown University, Washington, DC

7/07 Toward a Plan B for High-Level Waste, George Mason Univ., Arlington, VA

6/07 California Energy Commission, Sacramento, CA

6/07 Center for Science and Global Security, Princeton University, Princeton, NJ

4/07 Department of Earth & Atmospheric Sciences, SUNY Albany, NY

3/07 Technology and Culture Forum, MIT, Cambridge, MA

2/07 Nuclear Waste Technical Review Board, Arlington, VA

2/07 Waste Management Symposium, Tucson, AZ

1/07 Keystone Center Energy Board, Keystone Colorado

12/06 Science, Technology and International Affairs Program, Georgetown University, Washington, DC

11/06 Materials Research Symposium, Nuclear Waste Management Symposium, Boston, MA

11/06 Future of Nuclear Energy Conference, Bulletin of the Atomic Scientists, Chicago, IL

11/06 Keystone Joint Fact-Finding on Nuclear Energy, Washington, DC  
10/06 Department of Geology, University of Maryland, College Park, MD  
9/06 Geological Society of Washington, Washington, DC  
7/06 Nevada Nuclear Projects Board, Reno NV  
5/06 American Geophysical Union Conference, Baltimore, MD  
5/06 Lifetime Learning Group, Newton, MA  
5/06 High-Level Nuclear Waste Management Conference, Las Vegas, NV  
4/06 Capitol Hill Briefing, organized by AAAS, Washington, DC  
3/06 Technology and Policy of Weapons Course, MIT, Cambridge, MA  
11/05 Nuclear Policy Research Institute, Airlie, VA  
9/05 Technology Review Magazine's Emerging Technologies Conference, Cambridge, MA  
7/05 Plutonium Workshop, University of Cambridge, Cambridge, UK  
3/05 Nuclear Engineering Department, MIT, Cambridge, MA  
3/05 School of Foreign Service, Georgetown University, Washington, DC  
3/05 School of Computational Sciences, George Mason University, Fairfax, VA  
2/05 Ford School of Public Policy, University of Michigan, Ann Arbor, MI  
2/05 Belfer Center for Science and International Affairs, Harvard University, Cambridge, MA  
11/04 Radioactive Waste Management Course, University of Michigan, Ann Arbor, MI  
11/04 Technology Policy Course, Kennedy School of Government, Harvard, Cambridge, MA  
11/04 Knight Fellows Program Seminar Series, MIT, Cambridge, MA  
10/04 Scientific Integrity Roundtable, Harvard University, Cambridge, MA  
9/04 Student Pugwash, MIT, Cambridge, MA  
9/04 Technology and Culture Forum, MIT, Cambridge, MA  
7/04 16<sup>th</sup> Summer Symposium for Science and World Affairs, Beijing, China  
4/04 Environmental Politics Course, Georgia Institute of Technology, Atlanta, GA  
2/04 Great Decisions, Atlanta, Georgia  
11/03 School of Earth and Atmospheric Science, Georgia Tech, Atlanta, GA  
11/03 American Anthropology Association National Meeting, Chicago, IL  
9/03 Program on Science and Global Security, Princeton University, Princeton, NJ  
4/03 Earth, Atmospheric & Planetary Sciences, MIT, Cambridge, MA  
4/03 Peace Studies Program, Cornell University, Ithaca, NY  
2/03 School of Earth and Atmospheric Science, Georgia Tech, Atlanta, GA



2/03 Sam Nunn School of International Affairs, Georgia Tech, Atlanta, GA  
1/03 Western Hemisphere Project, MIT, Cambridge, MA  
1/03 Congressional Briefing  
10/02 Geological Society of America meeting, Denver, CO  
9/02 World Energy Policy in the 21<sup>st</sup> Century, University of Maryland, College Park, MD  
7/02 International Professional Meeting of Independent Technical Security Analysts, Chicago, IL  
7/02 Workshop on Radiological Hazards Posed by Nuclear Power Plants, SSP, MIT  
4/02 Congressional House staffers, Washington, DC  
11/01 Society for Risk Analysis, New England, Cambridge, MA  
11/01 Institute for Science and Interdisciplinary Studies, Hampshire College, Amherst, MA  
11/01 Society for the Social Studies of Science Conference, Cambridge, MA  
10/01 Swords to Solar Flares: Earth Science and the Cold War Workshop, Cornell U, Ithaca, NY  
9/01 Center for International Studies, MIT, Cambridge, MA  
9/01 Department of Nuclear Engineering, MIT, Cambridge, MA  
9/01 Managing the Atom, BCSIA, Harvard University, Cambridge, MA  
7/01 13<sup>th</sup> Summer Symposium for Science and World Affairs, Berlin, Germany  
7/01 Security Studies Program, MIT, Cambridge, MA  
6/01 Sino-American Transparency Project, Beijing, China  
2/01 Japan-US Nonproliferation Workshop, Harvard University, Cambridge, MA  
11/00 Managing the Atom Group, BCSIA, Harvard University, Cambridge, MA  
10/00 Plutonium 2000: International Conference on the Future of Plutonium, (conference) Brussels, Belgium  
10/00 Harvard Museum of Natural History, Harvard University, Cambridge, MA  
8/00 12<sup>th</sup> Summer Symposium for Science and World Affairs, Moscow, Russia  
8/00 New Jersey Governor's School for Science, Drew University, NJ  
7/00 International Workshop on Interim Storage of Spent Fuel, Tokyo University, Tokyo, Japan  
5/00 American Geophysical Union meeting, Washington,  
4/00 Managing the Atom Group, BCSIA, Harvard University, Cambridge, MA  
3/00 IANUS Group, University of Darmstadt, Darmstadt, Germany  
3/00 German Physical Society Conference, Dresden, Germany  
3/00 Civil Plutonium Workshop, ISIS Conference, Washington, DC  
3/00 Security Studies Program, MIT, Cambridge, MA



2/00 German Reactor Safety Commission Hearing, Bonn, Germany  
2/00 Japan-US Nonproliferation Workshop, Harvard University, Cambridge, MA  
1/00 Plutonium Workshop, Jülich, Germany  
11/09 Ethics and Science Class, MIT, Cambridge, MA  
10/99 Geological Society of America National Meeting, Denver, CO  
8/99 GLOBAL '99, Jackson Hole, WY  
8/99 Social Science Research Council - MacArthur Foundation, New Delhi, India  
7/99 11<sup>th</sup> Summer Symposium for Science & World Affairs, Shanghai, China  
6/99 American Geophysical Union, Boston, MA  
3/99 Living with Nuclear Technologies: Our Enduring Nuclear Legacy, University of Wyoming  
3/99 Environmental Earth Science Department, Eastern Connecticut State University  
3/99 US- Japan Nuclear Non-Proliferation Dialogue, Tokyo, Japan  
2/99 Harvard University - Tokyo University Joint Meeting, Harvard University, Cambridge, MA  
7/98 Landau Network-Centro Volta and UNESCO School on Science for Peace, Como, Italy  
6/98 Center for International Security and Arms Control, Stanford University, Stanford, CA  
5/98 Social Science Research Council - MacArthur Foundation, San Salvador, El Salvador  
3/98 Geophysics Department, Stanford University, Stanford, CA  
2/98 Center for International Security and Arms Control, Stanford University, Stanford, CA  
9/97 INESAP International Meeting, Shanghai, China  
7/97 9th Summer Symposium for Science and World Affairs, Cornell University, Ithaca, NY  
6/97 21st Actinides Separations Conference, Charleston, SC  
5/97 Center for Science and International Affairs, Harvard University, Cambridge, MA  
4/97 Defense and Arms Control Program, MIT, Cambridge, MA  
2/97 Japan - CSIA Workshop, Kennedy School, Harvard University, Cambridge, MA  
2/97 Anthropology Department, MIT, Cambridge, MA  
2/97 Bunting Institute, Radcliffe College, Cambridge, MA  
7/96 8th Summer Symposium on Science and World Affairs, Beijing, China

2. Please provide copies (written, audio, or video) of all speeches you have made concerning nuclear energy, nuclear safety, spent nuclear fuel, Yucca Mountain, nuclear waste, or other issues of relevance to the work of the Nuclear Regulatory Commission.

Enclosed please find a CD that contains a copy of pertinent speeches for which I have been able to locate a written record. To the extent that I identify text for any additional speeches, I will provide that text to the Committee.

3. Please provide a list of all organizations (with an interest in nuclear energy, nuclear waste, nuclear safety, or related matters) of which you are, or have been, a member?

As indicated on my Committee questionnaire, I have been a member of the Blue Ribbon Commission on America's Nuclear Future, the Bulletin of the Atomic Scientists, Keystone Center Energy Board, National Academy of Sciences, and the Keystone Center.

I have also held professional memberships with the American Nuclear Society, the American Geophysical Union, the Geological Society of America, and the Society for the Social Studies of Science. In the past I have been a paid member of the Natural Resources Defense Council and the Sierra Club, and participated in the Resident Advisory Board discussions in Watertown, Massachusetts.

4. Do you support expansion of nuclear power generation in the United States, at the present time, in a manner that would ensure that nuclear energy remains a significant component – in the range of 20% or greater – of the Nation's electric generation mix?

It is not the role of the NRC to determine the overall national energy policy. That being said, I do believe that a diverse supply of energy, including nuclear power, is necessary for the security and continued growth of the United States. I have written and said as much in the past and I continue to believe this to be the case.

5. Has any member of your immediate family received funding, either directly or indirectly, from organizations opposed to licensing Yucca Mountain as a repository for spent nuclear fuel or from organizations opposed to licensing new nuclear reactors? If so, please describe.

I consider my immediate family to consist of my husband, my sister, and my mother. To the best of my knowledge, they have not received funding from organizations opposed to licensing Yucca Mountain or new nuclear reactors.

6. The law of the land – the Nuclear Waste Policy Act – established Yucca Mountain in 1987 as the designated site for the nation's geologic repository. You have stated that "it was clearly a mistake for Congress to select only one site to characterize" and that Congress did so because Nevada was "politically weak" at that time.

a. Do you stand by these words?

I am not certain from where the first quote originates; the second quote comes from my co-edited volume, *Uncertainty Underground*, chapter 6. My analysis presented in chapter 6 notes that a number of political reasons existed for the selection of the Yucca Mountain site, among them, that Nevada had "a small population and two recently elected senators, it was outranked by Texas and Washington, which were represented by long-serving congresspeople who had acquired far more power and influence than had Nevada's delegation in the Capitol." I noted these as a few of the potential reasons why the 1987 amendments to the Nuclear Waste Policy Act reduced the requirement of the simultaneous characterization of three geologically distinct sites to only Yucca Mountain.

- b. Would you agree that the law has not changed – that Yucca remains the only lawful repository for spent nuclear fuel?

I recognize that the Nuclear Waste Policy Act as amended in 1987 called for the characterization of only the Yucca Mountain site in Nevada.

- c. Wouldn't you agree that, if Congress had maintained 3 possible sites, the federal government would have spent a great deal more of the taxpayer's money than the \$14 billion spent on Yucca, without achieving an operational repository?

I cannot speculate how much would have been spent and whether we would have an operational repository if Congress had continued consideration of three sites.

- d. If confirmed, will you follow and implement the statutes of this nation, as written, not as you would like them to be?

If confirmed, I would work with my fellow commissioners to faithfully fulfill the mission of the NRC and would follow the law.

7. You stated 2003, as part of a Senate field hearing, that you are "not against nuclear power" and that it is a "viable source of energy...as long as the problems are solved, and one of the problems is nuclear waste." What are other "problems," besides waste, that would not make nuclear power a "viable source of energy?" Do you believe that, as the laws and regulations of the nation and NRC currently exist, that license for new nuclear reactors can be issued?

I have written that nuclear energy is an important part of the energy diversity in the United States. Nonetheless, the NRC issued two reactors licenses this year for the construction of four new reactors in Georgia and South Carolina, demonstrating that licenses for new reactors can be issued under the laws and regulations as they currently exist.

8. You stated at the 2003 Senate field hearing that "DOE has underestimated...the future infiltration of water into [Yucca] mountain from precipitation, because they have not adequately accounted for the effects on the climate...from the extreme carbon dioxide levels that the planet will likely experience in only 100 years." You also state that DOE has not "adequately accounted for the effects of increasing CO2 levels on climate warming." Do you continue to have these concerns?

In my 2003 Senate testimony, I discussed analyses completed by MaryLynn Musgrove and Daniel Schrag of Harvard University. The studies were completed about ten years ago, prior to DOE submitting the license application to construct a repository at Yucca Mountain.

Knowledge changes with time, more evidence comes to light, and I have not reviewed either the DOE's license application, nor the NRC's technical analyses, both of which post-date my analyses. I would have to analyze both of these documents to see if the questions raised during my testimony were addressed.

9. Do you support the idea, endorsed by the Blue Ribbon Commission, of establishing a new federal corporation to focus solely on nuclear waste management? In your view, what should be the purpose, role, jurisdiction, and authority of such a federal corporation?

As a Commissioner on the Blue Ribbon Commission, I stand by our findings and recommendations, including the recommendation to "establish a new organization to implement the waste program." As discussed in the BRC report, this organization should manage the consolidated storage of spent nuclear fuel, the transportation of commercial spent fuel, and disposal of spent fuel and high-level waste, as well as conduct non-generic research, development, and demonstration activities related to these functions. The new organization would

be tasked with finding suitable sites and transportation routes, and in doing so interacting with affected units of federal, state, local, and tribal governments. It would be overseen by Congress and regulated by the NRC based on standards set by the EPA, working with the NRC.

10. In a December 2004 article in MIT Technology Review entitled "A New Vision for Nuclear Waste" which discusses concerns with Yucca Mountain, you are quoted as saying, "If it goes on for another 50 years, it doesn't matter. It could go on for 100 or 200 years, and it's probably for the better....We've got plenty of time to play with it." Could you explain what you meant by this statement in 2004, and do you stand by that statement today?

I do not recall giving that quote. To the extent that I did make any such statement, I cannot recall the context in which it was given.

11. Probabilistic Analysis:

- a. Are you familiar with the NRC guidance to the staff on the use of Probabilistic Risk Assessment (PRA) (60 Fed. Reg. 42628), which states that this kind of analysis should be increased in all NRC regulatory matters?

I am aware that Commissioner Apostolakis convened a Risk Management Task Force and the NRC staff is now evaluating the Task Force's report.

- b. You have criticized this approach. For example, in Chapter 6 in the book you edited, *Uncertainty Underground*, you contend that DOE erred by using "probabilistic" analysis to review the Yucca project. How would you approach this issue as a member of the NRC – would you seek to revise existing NRC guidance regarding probabilistic assessment?

I would approach all issues that I address at the NRC, if confirmed, in the same manner: by assessing the current state of knowledge on the issue, objectively examining the facts, seeking the thoughts and input of my fellow commissioners as well as NRC staff, and making a final decision based on that information.

**Environment and Public Works Committee  
Confirmation Hearing for Dr. Allison Macfarlane  
June 13, 2012  
Responses to Follow-up Questions from  
Senator John Barrasso**

1. The NRC has been in turmoil under the leadership of the current chairman. What experience or experiences do you have that demonstrate your effectiveness as a manager?

There is an exceptional structure in place at the NRC to manage the day-to-day operations and oversee the dedicated and talented employees of the agency. I note that the NRC is consistently ranked among the top government agencies in staff satisfaction. If confirmed, I view my role as one of leadership in continuing the mission of the NRC, while being accountable to you and the people of the United States.

My background reflects a broad array of functions and opportunities that I've had throughout my career that demonstrate leadership skills that will serve me well at the NRC. As the Principle Investigator on numerous grants, I was solely responsible for managing the budgets, contracting with different entities, selecting staff, and making executive decisions. I also have chaired positions on academic committees, which involved making difficult decisions on senior positions at large academic institutions, and have served in a leadership role as a Commissioner on the Blue Ribbon Commission and on panels for the National Academy of Sciences. Finally, as Chair of the Science and Security Board of the Bulletin of Atomic Scientists, I was required to call and chair regular meetings, regularly interact with the Governing Board, work with the editorial staff, and evaluate personnel.

Based on these experiences, I understand the need for a chairman to operate in a collegial manner, reaching out to the other commissioners on the matters facing the agency. In past leadership positions, I have worked with people from a variety of viewpoints and demonstrated effective leadership as we worked to forge consensus on the issues we tackled, and I look forward to hopefully being able to do so yet again as a part of the NRC.

2. As a follow up to Senator Sessions' questions during your confirmation hearing, what is the largest organization you have managed in terms of people who have reported to you?



As noted above, I have led a variety of different organizations, and in this capacity have worked with many employees who have reported directly to me. My management and interpersonal skills will allow me to effectively harness the talents and experience of NRC's corps of outstanding officials.

3. During your confirmation hearing, Senator Sessions asked you what was the largest budget you have ever managed. Your response was unclear. Please provide additional details regarding the largest budget you have ever managed, including the size of the budget, and your fiduciary responsibilities in managing the budget.

As noted above, I have served in various leadership positions on Boards and committees during which I had budgetary oversight, and this includes my time on the Board of the Bulletin of the Atomic Scientists, which was responsible for overseeing a budget of over a million dollars.

4. How would you characterize your management style?

I work collegially with those under my leadership.

5. Do you believe Yucca Mountain is unsuitable as a permanent nuclear waste repository?

I have not examined all the recent evidence on Yucca Mountain, including the Department of Energy's license application and the NRC's technical review of that application and would have to do so to reach a judgment about its current suitability.

6. My home State of Wyoming has an abundance of domestic uranium, yet the permitting of these sites has met with bureaucratic delay and red tape. In your opinion, does licensing and developing uranium production domestically, as opposed to relying on foreign uranium, make America more or less secure?

The role of the NRC is to ensure public health and safety, not to make policy. If confirmed, I would endeavor to carry out that mission. Together with my fellow commissioners, and the NRC staff, I would continue ongoing efforts to ensure that NRC regulatory processes are as efficient as possible, consistent with its safety mission.

7. If confirmed, will you ensure that uranium licensing is done more expeditiously while maintaining your agency's high standards for safety?

If confirmed, I would work to ensure that the NRC addresses all business in an effective and efficient manner as possible as long as that does not compromise safety.

8. Do you think the NRC should have a specific process for Section 106 Consultations for dealing with cultural sites on or near licensed uranium recovery operations? If so, what would the process be?

If confirmed, I would work to thoroughly review and analyze all of the issues involved in uranium recovery licensing and operations. I would welcome an opportunity to discuss this issue with you and hear your concerns.

9. At the annual briefings on uranium recovery with the Commission, stakeholders are limited to 5 minutes in addressing their issues. Would you be willing to allow stakeholders additional time to address the Commission at briefings to the Commission on uranium recovery issues?

I place a high priority on public involvement. If confirmed, I would work to understand how these briefings are structured, and if possible and agreeable to my fellow commissioners, be willing to consider adding more time to all stakeholders at these meetings.



**Environment and Public Works Committee  
Confirmation Hearing for Dr. Allison Macfarlane  
June 13, 2012  
Responses to Follow-up Questions from  
Senator Mike Crapo**

1. As a member of the Blue Ribbon Commission you participated in a multi-year review of our Nation's policies on the back-end of the nuclear fuel cycle and development of a comprehensive set of recommendations. As an independent regulatory agency, the NRC has a critical role in assuring that spent nuclear fuel and high-level radioactive waste is managed safely, securely, and in an environmentally sound manner. Are there BRC recommendations that fall into NRC's scope that you think should be a priority for Commission action?

If confirmed, I look forward to hearing from BRC staff and working with my fellow commissioners on these issues. The BRC, in its final report, made a few recommendations that fall under the NRC's scope. For example, the BRC recommended that NRC continue its work "to develop a regulatory framework for advanced nuclear energy systems." In addition, the BRC supported a risk assessment approach to evaluating the safety of advanced nuclear energy systems.

The BRC report suggested that the NRC and Environmental Protection Agency (EPA) should begin working closely together to develop a process for establishing a new generic disposal facility standard as well as a regulatory framework and standards for deep borehole disposal of high-level nuclear waste.

The BRC recommended that a proposed NRC project, the Package Performance Study, concerning transportation packages, be re-assessed in light of recent developments and, if the proposed test has value independent from timing, licensing or other issues related to Yucca Mountain, NRC should fund and conduct such a test.

The BRC report suggested that the NRC should undertake studies to develop the technical basis for transport of higher burn-up spent fuel from reactors and to better understand how spent fuel stored for extended periods would perform when subsequently shipped.

2. The Blue Ribbon Commission briefly examined but did not take a stance on the issue of co-mingling defense and civilian nuclear waste under a new

nuclear waste management organization. Do you believe the disposal of defense wastes should remain the responsibility of the Department of Energy in order to ensure commitments made in state settlement agreements are properly preserved?

The Blue Ribbon Commission report noted that a number of issues require detailed re-examination before deciding on the commingling of defense and commercial wastes. I agree with this position. The issues requiring re-examination include the "shift in focus at DOE away from the production of materials for nuclear weapons to the cleanup and disposal of legacy wastes...the establishment of legally-binding site clean-up commitments that require DOE to remove defense wastes from some sites...the current lack of statutory authority to develop a repository at a site other than Yucca Mountain...successful development and operation of a geologic repository (WIPP)...and our recommendations to establish a new organization outside of DOE to develop and operate repositories."

3. In interviews and publication you have stated that the Yucca Mountain site is not suitable for the permanent disposal of spent nuclear fuel and high-level radioactive waste. As NRC Chairman, what would you do if either court decisions or congressional direction dictate that NRC must restart the Yucca Mountain licensing proceedings?

If either a court decision or congressional direction dictate that the NRC must restart the Yucca Mountain licensing proceedings, I would consult with my fellow commissioners and general counsel to ensure that all appropriate next steps are taken.

I also wish to reiterate that I have not examined all of the recent evidence and analysis on Yucca Mountain, including the Department of Energy's license application and the NRC's technical review of that application and I have no position on this issue.

4. Considering the tremendous amount of study devoted to Yucca Mountain over the past decades, isn't there significant value in utilizing the consent-based approach called for in the BRC report to complete the Yucca Mountain licensing review?

It is my understanding under existing law, the NRC does not select sites, but instead licenses sites for use.

**Andersen, Robert M.**

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**From:** Samuel, Olive <Olive.Samuel@nrc.gov>  
**Sent:** Monday, November 18, 2013 10:47 AM  
**To:** Mullins, Charles  
**Subject:** FW:  
**Attachments:** image2013-11-18-103550.pdf

See Attachment - Transcript of Hearing House - June 24,2012. This document has been scanned and it is in your g:/ also

-----Original Message-----

**From:** NRCDigitalSender@nrc.gov [mailto:NRCDigitalSender@nrc.gov]  
**Sent:** Monday, November 18, 2013 10:36 AM  
**To:** Samuel, Olive  
**Subject:**

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4 ``NRC POLICY AND GOVERNANCE OVERSIGHT``

5 TUESDAY, JUNE 24, 2012

6 House of Representatives,

7 Subcommittee on Environment and the Economy

8 Joint with the

9 Subcommittee on Energy and Power

10 Committee on Energy and Commerce

11 Washington, D.C.

12       The Subcommittees met, pursuant to call, at 10:02 a.m.,  
13 in Room 2123 of the Rayburn House Office Building, Hon. John  
14 Shimkus [Chairman of the Subcommittee on Environment and the  
15 Economy] presiding.

16       Present from the Subcommittee on Environment and the  
17 Economy: Representatives Shimkus, Murphy, Pitts, Bass, Latta,  
18 McMorris Rodgers, Cassidy, Barton, Upton (ex officio), Green,

124

2716 my two colleagues have just provided very cogent examples  
2717 which I agree with. I will just state one overall comment  
2718 that I think the actions that the current commissioners have  
2719 taken who have been here through the Fukushima issues have  
2720 been very responsible, that I think in large part what gets  
2721 left out of a lot of the public press commentary is that we  
2722 are by and large following the recommendations of our close  
2723 to 4,000-person staff. Bill Borchardt here who is in the row  
2724 behind us, he and his team under Steering Committee have been  
2725 integrating and prioritizing these recommendations, and I  
2726 think we have been very thoughtful in considering the  
2727 recommendations. Also realize that not all these issues are  
2728 of the same safety significance, and therefore, some deserve  
2729 more urgency than others. And I think today we have acted in  
2730 that way.

2731 Mr. {Shimkus.} And I thank you. And I know a lot of  
2732 this was post-Fukushima but I think there is also examples of  
2733 other issues that you could probably defend your vote on on  
2734 public safety. So with that, I appreciate it.

2735 The chair now recognizes the vice chairman of the  
2736 committee, Mr. Murphy, for 5 minutes.

2737 Mr. {Murphy.} Don't you want to say I am in the Navy?

2738 Mr. {Shimkus.} I said beat Navy. You were here there,  
2739 weren't you? Or that is why you are so late and didn't ask

127

2788 hum.

2789 Mr. {Murphy.} Pretty incredible facility over there.

2790 Safe?

2791 Ms. {Macfarlane.} Yes.

2792 Mr. {Murphy.} I imagine you are particularly interested  
2793 as a geologist noting the entire country of Sweden is in one  
2794 big block of granite and fairly--

2795 Ms. {Macfarlane.} Well, it is a little more complicated  
2796 than that.

2797 Mr. {Murphy.} I understand, different types of granite  
2798 but it is an impressive facility. Have you been to Yucca  
2799 Mountain?

2800 Ms. {Macfarlane.} Yes, many times.

2801 Mr. {Murphy.} Okay, you have been there. And with  
2802 regard to that, one of the concerns on record that you have  
2803 stated before you took on this position with the committee  
2804 that you are not in favor of Yucca Mountain and I believe you  
2805 are not in favor of reprocessing. Do I have those positions  
2806 correct or am I wrong on those?

2807 Ms. {Macfarlane.} I think you are wrong on them. On  
2808 the Yucca Mountain position, I have never said that I am not  
2809 in favor of Yucca Mountain. In fact, I can read to you--

2810 Mr. {Murphy.} I would love to hear that, thank you.

2811 Ms. {Macfarlane.} --from the book that co-edited,

128

2812 ``Uncertainty Underground,'' and a direct quote is ``this  
2813 book is not a judgment on the suitability of Yucca Mountain  
2814 as a repository''--

2815 Mr. {Murphy.} I am sorry. What was the title of the  
2816 book, ``Uncertainty?''

2817 Ms. {Macfarlane.} ``Uncertainty Underground.''

2818 Mr. {Murphy.} Sounds like a comment to me.

2819 Ms. {Macfarlane.} It is a comment, yes--

2820 Mr. {Murphy.} All right.

2821 Ms. {Macfarlane.} --it is a comment about uncertainty  
2822 that exists. But it is a technical uncertainty. Anyway, the  
2823 quote is ``this book is not a judgment on the suitability of  
2824 Yucca Mountain as a repository for spent nuclear fuel and  
2825 high-level nuclear waste. We leave that judgment to the  
2826 reader.''

2827 Mr. {Murphy.} I understand, but with a title like that,  
2828 I am serious, I am looking forward to reading your book.

2829 And now your predecessor, Chairman Jaczko, held a fairly  
2830 negative view I think of the nuclear industry and nuclear  
2831 energy. In a speech earlier this year he indicated that 20  
2832 years from now, the nuclear industry is just as likely to  
2833 ``be dominated by a process of continuous decommissioning''  
2834 instead of a process of continuous construction of nuclear  
2835 reactors. What is your view on that?

131

2884 learn from and explain our viewpoints in a way that we would  
2885 not have if this process went away.

2886 Mr. {Murphy.} I appreciate the complexity of those.

2887 Mr. Chairman, can I just beg for one more since I don't  
2888 see anybody else?

2889 Mr. {Shimkus.} Without objection.

2890 Mr. {Murphy.} Thirty seconds. And then, Chair, in 2009  
2891 when you were asked by a writer for the MIT Technology  
2892 Review, the question ``is Yucca really unsuitable?'' You  
2893 answered yes at that time. Are you saying your opinion has  
2894 changed? And I put this in the context of what the other  
2895 commissioner said, the value of having a more lengthy and  
2896 detailed answer to things because maybe these things cannot  
2897 be reduced to a yes/no answer. Has your position changed?  
2898 Is it yes? Is it no? Is it we have more work to do?

2899 Ms. {Macfarlane.} I am not sure the context of that  
2900 quote, so I can't speak directly to that quote, but what I  
2901 can tell you--and maybe in a sense of reassuring--is that I  
2902 have spent much time researching Yucca Mountain. I believe  
2903 all the analyses that I have done are technically defensible.  
2904 As a scientist, I would not try to publish anything that  
2905 wasn't technically defensible; it wouldn't be publishable.  
2906 Most of the analyses that I did of Yucca Mountain for the  
2907 book, which was published in 2006, were done in the early



132

2908 2000 time frame. That was before the license application was  
2909 submitted. I have not read the license application, I have  
2910 not read yet the NRC's technical analyses. Of course, with  
2911 time, knowledge, changes, more evidence comes to light, and I  
2912 intend to keep an open mind.

2913 Mr. {Murphy.} I appreciate your candor and your  
2914 scientific integrity. Thank you very much.

2915 I yield back.

2916 Mr. {Shimkus.} The gentleman's time has expired.

2917 We were talking about votes. We took a vote this spring  
2918 on finishing the NRC study; 326 Members voted to do that so I  
2919 think it is by far the majority bipartisan consensus that we  
2920 move forward at least finishing the study.

2921 With that, I would like to ask unanimous consent that  
2922 June 26, 2012, NRC Office of Inspector General report  
2923 concerning possible violations of Reorganization Plan #1 of  
2924 1980, NRC's internal commission procedures be introduced into  
2925 the record. Without objection, the document will be entered  
2926 into the record.

2927 [The information follows:]

2928 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*