

April 29, 2014

The Honorable Fred Upton  
Chairman, Committee on Energy  
and Commerce  
United States House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

On behalf of the Commission,<sup>1</sup> I am transmitting the [March 2014 monthly status report](#) on the U.S. Nuclear Regulatory Commission (NRC) activities and utilization of unobligated carryover funds appropriated from the Nuclear Waste Fund. This report describes the NRC actions that were taken in March 2014 to address the remand by the U.S. Court of Appeals for the District of Columbia Circuit in *In re Aiken County*, regarding the licensing process for the U.S. Department of Energy's Yucca Mountain license application.

Please feel free to contact me or Amy Powell, Acting Director of Congressional Affairs, at (301) 415-1776 if you have questions or need more information.

Sincerely,

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Allison M. Macfarlane

Enclosure:  
[As stated](#)

cc: Representative Henry A. Waxman

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<sup>1</sup> Commissioner George Apostolakis did not participate.

Identical letter sent to:

The Honorable Fred Upton  
Chairman, Committee on Energy  
and Commerce  
United States House of Representatives  
Washington, DC 20515  
cc: Representative Harry A. Waxman

The Honorable John Shimkus  
Chairman, Subcommittee on Environment  
and the Economy  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, DC 20515  
cc: Representative Paul Tonko

The Honorable Barbara Boxer  
Chairman, Committee on Environment  
and Public Works  
United States Senate  
Washington, DC 20510  
cc: Senator David Vitter

The Honorable Sheldon Whitehouse  
Chairman, Subcommittee on Clean Air  
and Nuclear Safety  
Committee on Environment  
and Public Works  
United States Senate  
Washington, DC 20510  
cc: Senator Jeff Sessions

The Honorable Ed Whitfield  
Chairman, Subcommittee on Energy  
and Power  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, DC 20515  
cc: Representative Bobby L. Rush

The Honorable Harold Rogers  
Chairman, Committee on Appropriations  
United States House of Representatives  
Washington, DC 20515  
cc: Representative Nita Lowey

The Honorable Mike Simpson  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States House of Representatives  
Washington, DC 20515  
cc: Representative Marcy Kaptur

The Honorable Dianne Feinstein  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States Senate  
Washington, DC 20510  
cc: Senator Lamar Alexander

**U.S. Nuclear Regulatory Commission Monthly Status Report  
Activities Related to the Yucca Mountain Licensing Action  
Report for March 2014**

**Background**

On August 13, 2013, a panel of the U.S. Court of Appeals for the District of Columbia Circuit issued its decision in the case *In re Aiken County* directing the U.S. Nuclear Regulatory Commission (NRC) to “promptly continue with the legally mandated licensing process” for the U.S. Department of Energy’s (DOE’s) application to construct a geologic repository for high-level waste at Yucca Mountain, NV. The NRC promptly began taking steps to comply with the court’s direction following the issuance of the decision. On November 18, 2013, the Commission approved a Memorandum and Order, which set a course of action for the Yucca Mountain licensing process that is consistent with the Appeals Court decision and with the resources available. The Commission also issued a related Staff Requirements Memorandum (SRM) on November 18, 2013. The Commission provided further direction in a January 24, 2014, SRM.

**Accomplishments and Ongoing Work**

NRC staff in the Office of Nuclear Material Safety and Safeguards, with the support of the Center for Nuclear Waste Regulatory Analyses, continues to make significant progress toward completion of the four volumes of the safety evaluation report (SER). Attached is the task tracking tool, “Status of Safety Evaluation Report (SER) Chapters and Volume Tasks,” which has been updated to include work completed through March 31, 2014.

On February 28, 2014, the DOE provided a letter deferring the environmental impact statement (EIS) supplement preparation to the NRC. In the letter DOE committed to provide an update to the report submitted to the NRC on July 30, 2009, entitled, *Analysis of Postclosure Groundwater Impacts for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*. DOE states it will “provide the NRC with substantially all of the technical information necessary to inform a draft EIS.” On March 19, 2014, the NRC staff transmitted a letter to DOE requesting a meeting on April 7, 2014, to discuss the plan, content, and schedule for this report update. DOE confirmed its participation in this public meeting at NRC headquarters. In addition, the NRC staff is compiling information to present to the Commission for further direction on developing an EIS supplement in light of the DOE decision.

Agency attorneys provided support to the staff and the Commission on program planning-related activities and participated in ongoing Federal court litigation related to Yucca Mountain. Agency attorneys advised staff on issues related to SER development and continued reviewing draft chapters of the SER.

In March, the agency completed the loading and indexing of Licensing Support Network (LSN) documents into a nonpublic library of NRC’s Agencywide Documents Access and Management System (ADAMS). The LSN documents were previously provided, per agency direction, by the parties to the now-suspended adjudicatory hearing on the DOE high-level waste repository application. The agency also completed the search templates, making the LSN documents accessible and searchable internally by ADAMS users within the NRC. The remaining related

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task is to complete the processing of the LSN documents into the agency's records management system. This processing does not impact any agency ADAMS user's ability to search and access the LSN documents.

### **Schedule and Cost for Remaining Activities**

Completion of the SER is scheduled to take approximately 12 months, ending in January 2015. To date, no unforeseen technical or process issues have arisen that would affect the completion date. Work is continuing on schedule with the exception of two chapters. Issues arose from the need for internal alignment on staff positions for the two earliest chapters reviewed in volumes 2 and 4. These chapters are being reviewed and progressing toward completion. The issues are being resolved and will inform the completion of the other chapters. The overall schedule is not affected.

The schedule and budget for development and completion of an EIS supplement are being re-evaluated in light of the February 28, 2014, Department of Energy (DOE) independent decision not to prepare the supplement. Neither the Commission nor any individual Commissioner was consulted prior to, or expressed agreement with, DOE's decision. Staff is gathering similar information for determining how to proceed regarding the EIS supplement.

Efforts to make the LSN document collection available in a nonpublic ADAMS library are expected to be fully completed under budget and ahead of schedule by the end of April 2014. In accordance with the January 2014 SRM, staff is in the process of gathering information on the cost, schedule, and availability of funding for making publicly available the documents now loaded in the ADAMS internal LSN library. The NRC staff anticipates informing the Commission on the results of this and its EIS supplement analysis in April 2014. The staff will ensure that all documents referenced in the SER and EIS supplement are available to the public by the time these documents are issued.<sup>1</sup>

In September 2013, NRC staff estimated the cost of completing the remaining SER volumes to be approximately \$8.3 million and estimated that \$700,000 is needed to complete the loading of LSN documents into a nonpublic ADAMS library. To date these figures remain on target. The staff's estimate had also included \$625,000 for reviewing and reaching an adoption determination regarding an EIS supplement issued by the DOE. However, this cost is being reevaluated in light of the DOE decision that it will no longer complete the EIS supplement. In addition, staff estimates that related activities such as the cost of work performed by NRC attorneys on Federal court litigation following the issuance of the mandamus order, monthly reporting, and other support efforts will require approximately \$750,000 over the course of the project.<sup>2</sup> Therefore, the projected cumulative expenditures are approximately \$10.4 million. The staff will update this estimate after a Commission decision regarding the production of the EIS supplement.

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<sup>1</sup> Documents will be publicly available following usual NRC practices for copyrighted materials such as books or journal articles, proprietary information, or other controlled information.

<sup>2</sup> This total does not include any potential agency liabilities from external litigation.

## Nuclear Waste Fund Expenditures

During the month of March, the NRC expended \$1,037,292 of NWF funds on its actions in direct response to the court's decision. Cumulative expenditures since the August 13, 2013, U.S. Court of Appeals decision are \$2,228,312. The August 13, 2013, balance of \$13,549,315 of unexpended NWF funding, less the \$2,228,312, results in a remaining unexpended balance of \$11,321,003. Total unobligated NWF funds remaining as of March 31, 2014, are \$9,477,208. The following table provides further details regarding NRC's expenditure of NWF funds since August 13, 2013.

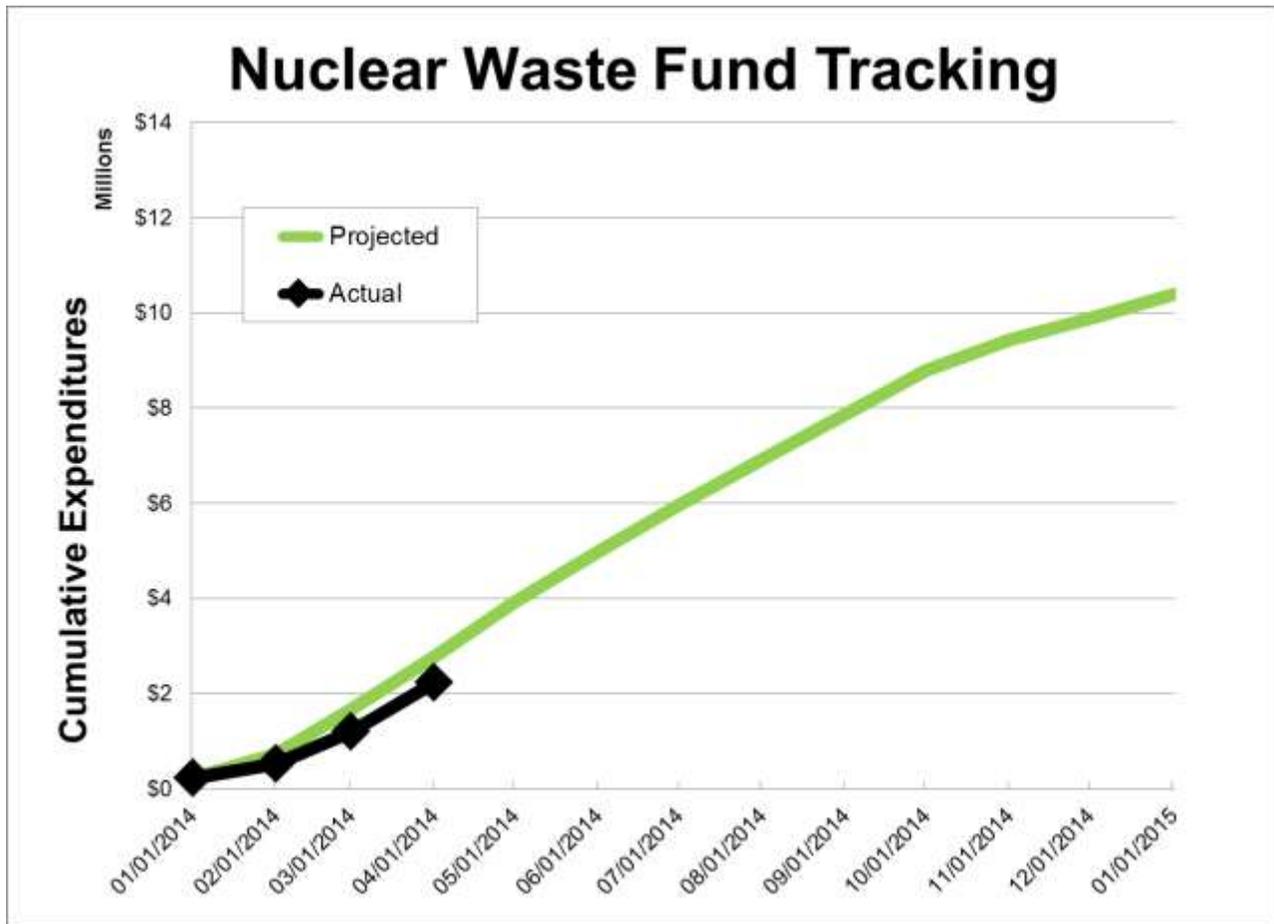
<b>Yucca Mountain Licensing Activities</b>	<b>Cost Estimate</b>	<b>March Expenditures</b>	<b>Cumulative Expenditures</b>
Completion of the safety evaluation report	\$8,310,000	\$861,323	\$1,544,151
Loading of Licensing Support Network documents into nonpublic ADAMS	\$700,000	\$53,327	173,206
Adoption of the environmental impact statement supplement <sup>1</sup>	\$625,000	\$20,144	\$20,330
Program planning and support		\$68,765	\$196,740
Response to the August 30, 2013, Commission Order		\$ 0	\$137,518
Federal court litigation		\$29,199	\$ 81,890
Support/Advice in NRC proceedings		\$ 1,143	\$ 35,535
Subtotal, other support costs chargeable to NWF funds	\$750,000	\$99,107	\$451,683
Adjustments to contracts funded by previous NWF appropriations		\$3,391	\$38,942
<b>Total</b>	<b>\$10,385,000</b>	<b>\$1,037,292</b>	<b>\$2,228,312</b>

<sup>1</sup> Estimate will be reevaluated in light of the February 28, 2014 letter from DOE.

The unexpended NWF fund balance of \$11,321,003 includes \$254,348 of previously appropriated NWF funds that remain unexpended but obligated on contracts with the Center for Nuclear Waste Regulatory Analyses.

Staff has estimated the expenses necessary to complete the SER and related activities directed by the Commission. Figure 1 on page 4 shows the cumulative projected and actual expenditures. Projected expenditures include cost estimates shown in Table 1. The actual cumulative expenditures reflect costs through March 31, 2014, as given in Table 1.

Figure 1 Nuclear Waste Fund Tracking



### Stakeholder Communications and Interactions

NRC staff presented a status update on the NRC's Yucca Mountain licensing review activities to more than 80 attendees at the Low-Level Radioactive Waste Forum in Austin, Texas, on March 18, 2014.

NRC staff held a public meeting on April 7, 2014, with DOE representatives to discuss DOE's plans and schedule for completion of an update to a 2009 technical report on groundwater impacts. Copies of the staff's letter to DOE on March 19, 2014, confirming the meeting were sent to parties involved in previous Yucca Mountain adjudication. The meeting notice is available on the NRC Public Meeting Schedule website. Details from this meeting will be included in the April monthly status report.

# Status of Safety Evaluation Report (SER) Chapters and Volume Tasks

Volume 2 - Volume 5

█ Milestone Achieved as of March 31, 2014

CHAPTER MILESTONES	Staff Develops SER Inputs	Staff Completes SER Inputs	Branch Chief Review	OGC Chapter NLO Review	OGC Chapter Comment Resolution	Staff Verifies References are Publicly Available	Technical Editor Review	Project Manager Accepts/Rejects Tech Edits
<b>CHAPTER MILESTONES</b>								<b>[CHAPTER COMPLETE]</b>
<b>Volume 2: Review of Repository Safety Before Permanent Closure</b>								
Chapter 1 - Site Description								07/11/2014
Chapter 2 - Description of Structures, Systems, & Components & Operations								03/27/2014
Chapter 3 - ID Hazard & Initiating Events								06/10/2014
Chapter 4 - ID Event Sequence								09/10/2014
Chapter 5 - Consequences								07/11/2014
Chapter 6 - ID Structures, Systems, & Components Important to Safety								05/27/2014
Chapter 7 - Design of Structures, Systems, & Components								08/09/2014
Chapter 8 - ALARA								08/10/2014
Chapter 9 - Retrieval								05/27/2014
Chapter 10 - Decontamination & Demolition								06/19/2014
Abstract								09/10/2014
Executive Summary								09/10/2014
Introduction								09/10/2014
Glossary								09/10/2014
Conclusions								09/24/2014
Appendices								09/24/2014

## Status of Safety Evaluation Report (SER) Chapters and Volume Tasks

Volume 2 - Volume 5

█ Milestone Achieved as of March 31, 2014

CHAPTER MILESTONES	Staff Develops SER Inputs	Staff Completes SER Inputs	Branch Chief Review	OGC Chapter NLO Review	OGC Chapter Comment Resolution	Staff Verifies References are Publicly Available	Technical Editor Review	Project Manager Accepts/Rejects Tech Edits
<b>Volume 3: Review of Repository Safety After Permanent Closure</b>								
Chapter 1 - Multiple Barriers								05/13/2014
Chapter 2 - Scenarios (Features, Events, & Processes)								07/11/2014
Chapter 3 - Probability								
Chapter 4 - Degradation of Engineered Barriers								
Chapter 5 - Mechanical Disruption of Engineered Barriers								
Chapter 6 - Water Chemistry & Barriers								08/13/2014
Chapter 7 - Radionuclide Release								05/27/2014
Chapter 8 - Climate & Infiltration								
Chapter 9 - Flow in the Unsaturated Zone								05/13/2014
Chapter 10 - Radionuclides in the Unsaturated Zone								05/27/2014
Chapter 11 - Flow in the Saturated Zone								07/11/2014
Chapter 12 - Radionuclides in the Saturated Zone								07/25/2014
Chapter 13 - Igneous Distruption								
Chapter 14 - Radionuclides in Groundwater								05/13/2014
Chapter 15 - Airborne Transport & Redistribution								05/13/2014
Chapter 16 - Biosphere								05/13/2014
Chapter 17 - Individual Protection								05/27/2014
Chapter 18 - Human Intrusion								
Chapter 19 - Groundwater Protection								
Chapter 20 - Expert Elicitation								07/04/2014
Abstract								07/11/2014
Executive Summary								07/11/2014
Introduction								07/11/2014
Glossary								07/11/2014
Conclusions								08/27/2014
Appendices								08/27/2014

CHAPTER COMPLETE!

# Status of Safety Evaluation Report (SER) Chapters and Volume Tasks

## Volume 2 - Volume 5

Milestone Achieved as of March 31, 2014

CHAPTER MILESTONES	Staff Develops SER Inputs	Staff Completes SER Inputs	Branch Chief Review	OGC Chapter NLO Review	OGC Chapter Comment Resolution	Staff Verifies References are Publicly Available	Technical Editor Review	Project Manager Accepts/Rejects Tech Edits
								[CHAPTER COMPLETE]
<b>Volume 4: Review of Administrative and Programmatic Requirements</b>								
Chapter 1 - Research & Development Program to Resolve Safety Questions								08/27/2014
Chapter 2 - Performance Confirmation Program								09/10/2014
Chapter 3 - Quality Assurance Program								02/27/2014
Chapter 4 - Records, Reports, Tests, and Inspections								04/15/2014
Chapter 5 - DOE Organization Structure - Construction								04/15/2014
Chapter 6 - Key Positions								04/15/2014
Chapter 7 - Qualifications and Training								05/30/2014
Chapter 8 - Plans for Startup Activities and Testing								05/30/2014
Chapter 9 - Plans for Conduct of Normal Activities								05/30/2014
Chapter 10 - Emergency Planning								04/29/2014
Chapter 11 - Controls to Restrict Access and Regulate								05/13/2014
Chapter 12 - Uses of Geologic Repository Operations Area for other Purposes								05/13/2014
Abstract								07/11/2014
Executive Summary								07/11/2014
Introduction								07/11/2014
Glossary								07/11/2014
Conclusions								08/10/2014
Appendices								09/10/2014

