

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

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

MEMORANDUM

September 7, 2015

To: Democratic Members of the Subcommittees on Energy and Power, and Environment and the Economy

Fr: Democratic Staff of the Committee on Energy and Commerce

Re: Hearing on “Oversight of the Nuclear Regulatory Commission”

On Wednesday, September 9, 2015, at 10:00 a.m. in room 2123 of the Rayburn House Office Building, the Subcommittees on Energy and Power and Energy and the Environment will hold a joint hearing on “Oversight of the Nuclear Regulatory Commission.” All five Nuclear Regulatory Commission (NRC) commissioners are expected to testify. This memo provides a brief overview of several issues that may be discussed at the hearing.

I. NUCLEAR REGULATORY COMMISSION FY2016 BUDGET REQUEST

For fiscal year (FY) 2016, the NRC requested \$1.03 billion, an increase of \$16.9 million above the FY 2015 enacted levels. This budget proposes 3,754 full-time equivalent employees (FTEs), a decrease of 55 employees below FY 2015.¹

NRC recovers some 90 percent of its budget from fees assessed to NRC licensees. For FY 2016, this means that \$910 million will be recovered through NRC user fees.²

In the area of nuclear reactor safety, NRC requested \$601.7 million to support activities at operating nuclear reactors. This includes funding to continue licensing and oversight activities for 100 commercial reactors; completing 900 licensing actions at existing reactors; continuing to implement lessons-learned from Fukushima; and support for 17 high priority and three medium-

¹ U.S. Nuclear Regulatory Commission, *FY 2016 Congressional Budget Justification*, 7 (Mar. 2015) (online at <http://pbadupws.nrc.gov/docs/ML1503/ML15030A093.pdf>).

² *Id* at 5.

priority rulemakings “including policy development activities related to the NRC regulatory framework after the Fukushima event.”³

NRC also requested \$238 million to support activities related to new nuclear reactors, a \$16.5 million increase over the previous year. This includes reviewing nine new reactor combined operating license applications; reviewing three design certifications; and continuing inspections for the Vogtle and Summer plants (two reactors each) that are currently under construction.⁴

In the area of nuclear materials and waste safety, NRC requested \$226 million to support activities related to fuel facilities, spent fuel storage, decommissioning, and low-level waste.⁵ NRC plans to conduct licensing activities for a new mixed-oxide (MOX) fuel fabrication facility. The funds will also support reviews and oversight activities for plants that are in the process of decommissioning, including the San Onofre, Kewaunee and Crystal River units. Additionally, the Commission plans to review some 20 spent nuclear fuel storage applications and just under 70 radioactive material transportation package design applications.⁶

II. YUCCA MOUNTAIN NUCLEAR WASTE REPOSITORY

For more detailed background on Yucca Mountain, please refer to the [hearing memo](#) for the May 15, 2015, Subcommittee on Environment and the Economy hearing.⁷

On January 29, 2015, NRC completed and issued the final volumes of the Safety Evaluation Report (SER), a multi-volume report summarizing the Yucca Mountain application, the technical staff’s safety review, and the staff findings and recommendations.⁸ The report noted that the Department of Energy’s (DOE) license application met regulatory requirements, except for those related to ownership of land and water rights. The SER recommended that “the Commission should not authorize construction of the repository because DOE has not met certain land and water rights requirements...and a supplement to DOE’s environmental impact

³ *Id.* at 20-21.

⁴ *Id.* at 28.

⁵ *Id.* at 7.

⁶ *Id.* at 39-51.

⁷ Memorandum from Democratic Staff to Democratic Members of the House Committee on Energy and Commerce, Subcommittee on Environment and the Economy, “*Update on the Current Status of Nuclear Waste Management Policy*” 114th Cong. (May 15, 2015) (online at <http://democrats.energycommerce.house.gov/sites/default/files/documents/Memo-EE-Nuclear-Waste-Update-2015-5-15.pdf>).

⁸ U.S. Nuclear Regulatory Commission, *Safety Evaluation Report Related to Disposal of High-Level Radioactive Wastes in a Geologic Repository at Yucca Mountain, Nevada* (Jan. 29, 2015) (online at www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1949/).

statement has not yet been completed.”⁹ In March 2015, NRC announced that its staff would prepare a supplement to DOE’s environmental impact statement (EIS) to address “the impacts of the proposed repository at Yucca Mountain on groundwater as well as the impacts from groundwater discharges to the surface.”¹⁰

On August 13, 2015, NRC issued a draft supplement to DOE’s EIS. The supplement *found that the groundwater and groundwater discharge “impacts would be small.”*¹¹ NRC is currently in the process of receiving comments through the end of October and expects to issue a final supplement in early 2016.¹²

NRC Chairman Stephen Burns also recently noted another significant hurdle to a final decision on Yucca Mountain authorization. In a recent speech, the Chairman pointed out that:

...an adjudicatory hearing would have to be held which presumes that the applicant will take an active role, and the Commission would have to complete its review of contested and uncontested issues. It is uncertain how long it would take to resolve the existing 288 issues that were admitted in the hearing (called “contentions”), not considering possible new or amended challenges.¹³

III. NRC’s RESPONSE TO THE FUKUSHIMA NUCLEAR DISASTER

A. Background

On March 21, 2011, NRC created a task force to conduct short-term and long-term analysis of the lessons learned from the disaster at the Fukushima Dai-ichi nuclear facility in Japan. On July 12, 2011, the Near Term Task Force released its recommendations based on its

⁹ U.S. Nuclear Regulatory Commission, “*NRC Publishes Final Two Volumes of Yucca Mountain Safety Evaluation*”, No: 15-005 (Jan. 29, 2015) (online at <http://www.nrc.gov/reading-rm/doc-collections/news/2015/15-005.pdf>).

¹⁰ NRC Chairman Stephen G. Burns, *Prepared Remarks Before United States Energy Association Meeting, National Press Club* (Apr. 30, 2015) (online at <http://pbadupws.nrc.gov/docs/ML1512/ML15121A048.pdf>).

¹¹ U.S. Nuclear Regulatory Commission, *NRC Issues Draft Supplement to Yucca Mountain Environmental Impact Statement*, 15-051 (Aug. 13, 2015) (online at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr2184/>).

¹² *Id.*

¹³ NRC Chairman Stephen G. Burns, *Prepared Remarks Before United States Energy Association Meeting, National Press Club* (Apr. 30, 2015) (online at <http://pbadupws.nrc.gov/docs/ML1512/ML15121A048.pdf>).

review of the events leading up to and following the Fukushima accident.¹⁴ Although the Task Force concluded that continued operation and licensing of nuclear reactors in the United States “do not pose an imminent risk to public health and safety,” the report outlined 12 recommendations for strengthening nuclear safety.¹⁵

On March 9, 2012, the Commission authorized staff to issue three orders to U.S. commercial nuclear reactors to enhance safety in wake of the Fukushima disaster. The first requires the plants to better protect safety equipment, such as on-site diesel generators, from floods, earthquakes, and other catastrophic events and to obtain sufficient equipment to support all reactors at a given site simultaneously. More information about the seismic re-evaluations underway as a result of this order is provided below. The second order requires all plants to install enhanced monitoring equipment to better gauge water levels in spent fuel pools during emergencies.¹⁶ The third order, which applies to Mark I and Mark II boiling water reactors similar to the type used in Fukushima, requires these reactors to install or improve hardened venting systems to reduce the likelihood of a hydrogen explosion in an emergency.¹⁷

On June 6, 2013, the Commission issued a modified order to requiring that vents be equipped to operate under severe accident conditions, such as when damage to the reactor core causes pressures, temperatures, hydrogen concentrations, and radiation levels to rise.¹⁸

On April 30, 2015, the NRC staff of the Near Term Task Force released a memorandum recommending a proposed rulemaking that would establish requirements for the mitigation of beyond-design-bases events for certain nuclear power reactor licensees and applicants.¹⁹ This proposal included several requirements aimed at improving the safety of nuclear reactors, such as the recommendation to require nuclear plant owners to develop and use Severe Accident Management Guidelines (SAMGs). These guidelines are emergency plans that lay out a strategy to deal with meltdown incidents at nuclear plants. SAMGs are currently a voluntary industry initiative.

¹⁴ U.S. Nuclear Regulatory Commission, *Recommendations for Enhancing Reactor Safety in the 21st Century* (Jul. 12, 2011).

¹⁵ *Id.*

¹⁶ U.S. Nuclear Regulatory Commission, *NRC to Issue Orders, Information Request as Part of Implementing Fukushima-Related Recommendations* (Mar. 9, 2012).

¹⁷ *Id.*

¹⁸ U.S. Nuclear Regulatory Commission, *NRC Issues Enhanced Requirements for Post-Fukushima Venting Systems at Many U.S. Reactors (RIN 3150-AJ49)* (Jun. 6, 2013).

¹⁹ U.S. Nuclear Regulatory Commission, *Proposed Rulemaking: Mitigation of Beyond-Design-Basis Events (RIN 3150-AJ49)* (Apr. 30, 2015) (online at <http://pbadupws.nrc.gov/docs/ML1504/ML15049A213.pdf>).

On August 27, 2015, the NRC Commissioners voted 3-to-1 to remove the proposed requirements for SAMGs from the rulemaking, and leaving them as a voluntary practice.²⁰ This decision means NRC will have no authority to review SAMGs and it will not be able to issue citations if industry plans are insufficient to deal with nuclear accidents.

The April 2015 proposal also included requirements for Mark I and Mark II boiling water reactors to have external containment filters on vents in order to prevent radiation exposure when vents are used to prevent explosions during a meltdown. On August 27, 2015, the Commission voted 3-to-1 to remove the proposed design requirements for new reactor applicants from the *Federal Register*.²¹ This means that NRC will not seek public comment on whether to upgrade America's Fukushima-style reactors with filtered vents to prevent radiation exposure.

B. Seismic Re-Evaluations

NRC's Fukushima Task Force concluded that NRC's regulatory approach for evaluation of site hazards associated with natural phenomena, such as earthquakes and floods, "has evolved over time as new information regarding site hazards and their potential consequences has become available." Consequently, "the licensing bases, design, and level of protection from natural phenomena differ among the existing operating reactors in the United States, depending on when the plant was constructed and when the plant was licensed for operation."²² Accordingly, the Commission ordered nuclear reactor licensees to re-evaluate their vulnerability to seismic events.

Nuclear reactor licensees and construction permit holders in the Central and Eastern United States had to submit seismic hazard screening reports to NRC by March 31, 2014. NRC staff are in the process of reviewing these reports and will prioritize the licensees based on the hazards identified. Licensees for which the reevaluated seismic hazard exceeds the plant's design basis were required to submit "Expedited Seismic Evaluation Process" reports by the end of 2014 and will have to implement any equipment modifications by the end of 2016.

Three licensees in the Western United States, the Diablo Canyon Power Plant in California, the Columbia Generating Station in Washington State, and the Palo Verde Nuclear Generating Station in Arizona, submitted seismic hazard screening reports in March of 2015.²³

²⁰ U.S. Nuclear Regulatory Commission, *Commission Voting Record – Proposed Rulemaking: Mitigation of Beyond-Design-Basis Events (RIN 3150-AJ49)* (Aug. 27, 2015) (online at <http://pbadupws.nrc.gov/docs/ML1523/ML15239B241.pdf>).

²¹ U.S. Nuclear Regulatory Commission, *Staff Requirements – SECY-15-0065 – Proposed Rulemaking: Mitigation of Beyond-Design-Basis Events* (Aug. 27, 2015) (online at <http://pbadupws.nrc.gov/docs/ML1523/ML15239A767.pdf>).

²² U.S. Nuclear Regulatory Commission, *Recommendations for Enhancing Reactor Safety in the 21st Century*, at 28 (Jul. 12, 2011).

²³ Arizona Power Service, *Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2, and 3 Docket Nos. STN 50-528, 50-529, and 50-530 Seismic Hazard and Screening Report* (Mar.

They have until January 2016 to submit “Expedited Seismic Evaluation Process” reports, and June 2018 to complete any expedited equipment modifications.

In the meantime, each of these licensees will undertake a longer-term risk evaluation. All higher-priority licensees, regardless of region, must submit risk evaluations by June 2017; lower priority licensees have until the end of 2020 to submit risk evaluations.

IV. WITNESSES

The following witnesses have been invited to testify:

The Honorable Stephen Burns
Chairman
Nuclear Regulatory Commission

The Honorable Kristine L. Svinicki
Commissioner
Nuclear Regulatory Commission

The Honorable William C. Ostendorff
Commissioner
Nuclear Regulatory Commission

The Honorable Jeff Baran
Commissioner
Nuclear Regulatory Commission

10, 2015) (online at <http://pbadupws.nrc.gov/docs/ML1507/ML15076A073.pdf>); Pacific Gas and Electric Company, *Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident: Seismic Hazard and Screening Report* (Mar. 11, 2015) (online at <http://pbadupws.nrc.gov/docs/ml1507/ML15070A607.pdf>); Energy Northwest, *Columbia Generating Station, Docket No. 50-397 Seismic Hazard and Screening Report, Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident* (Mar. 12, 2015) (online at <http://pbadupws.nrc.gov/docs/ML1507/ML15078A243.pdf>).