WRITTEN STATEMENT

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UNITED STATES NUCLEAR REGULATORY COMMISSION

TO THE

HOUSE COMMITTEE ON ENERGY AND COMMERCE

SUBCOMMITTEE ON ENERGY AND POWER

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Good morning, Chairman Upton, Ranking Member Waxman, Chairman Whitfield, Ranking Member Rush, and distinguished Members of the Subcommittee. My colleagues and I appreciate the opportunity to appear before you today to discuss the U. S. Nuclear Regulatory Commission's (NRC) Fiscal Year (FY) 2015 budget request.

As you know, the NRC is an independent Federal agency established to license and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment. The NRC has formulated its Fiscal Year (FY) 2015 Congressional Budget Justification to support the agency's safety and security strategic goals and outcomes.

The NRC's safety strategic goal is to ensure adequate protection of public health and safety and the environment. The agency's safety program outcomes are to prevent the occurrence of any nuclear reactor accidents, inadvertent criticality events, acute radiation exposures, or significant releases of radioactive materials. The security strategic goal is to ensure adequate protection in the secure use and management of radioactive materials. The security program outcomes are to thwart attempts to sabotage licensed facilities or divert

special nuclear material, and to prevent any instances where licensed radioactive materials are used in a malicious manner.

To fulfill its responsibility to protect public health and safety, the NRC performs the following regulatory functions: developing regulations and guidance for applicants and licensees; licensing or certifying applicants to use nuclear materials, operate nuclear facilities, and decommission facilities; inspecting and assessing licensee operations and facilities to ensure that licensees comply with NRC requirements, and taking appropriate follow-up or enforcement actions when necessary; evaluating operating experience of licensed facilities and activities; and conducting research, holding hearings, and obtaining independent reviews to support regulatory decisions. I remain proud of the outstanding job that the NRC staff does on a daily basis to protect public health and safety.

SPECIFICS OF THE FY 2015 BUDGET REQUEST

The NRC's FY 2015 Congressional Budget Justification provides the necessary resources for the Nuclear Reactor Safety and Nuclear Materials and Waste Safety Programs to carry out the agency's mission and achieve the stated goals and desired outcomes for the American public. The NRC's proposed FY 2015 budget is $1,059.5 million, which represents an increase of $3.6 million when compared with the FY 2014 enacted budget.

The Office of the Inspector General's component of the FY 2015 proposed budget is $12.1 million, and includes resources to carry out its mission to independently and objectively conduct audits and investigations to ensure the efficiency and integrity of NRC and the Defense

Nuclear Facilities Safety Board programs and operations and to promote cost-effective management.

Pursuant to the provisions of the Omnibus Budget Reconciliation Act of 1990, as amended, the NRC's FY 2015 budget provides for 90 percent fee recovery, less the amounts appropriated for (1) Waste Incidental to Reprocessing Activities under Section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 and (2) generic homeland security activities. Accordingly, $935.2 million of the FY 2015 budget would be recovered from fees assessed to NRC licensees. This would result in a net appropriation of $124.2 million, which is a decrease of $1 million in net appropriations when compared with the FY 2014 enacted budget.

NUCLEAR REACTOR SAFETY

The Nuclear Reactor Safety Program encompasses NRC efforts to license, regulate, and oversee civilian nuclear power, research, and test reactors in a manner that adequately protects public health and safety and the environment. This program also provides high assurance of the physical security of facilities and protection against radiological sabotage. This program contributes to the NRC's safety and security goals through the activities of the Operating Reactors and New Reactors Business Lines that regulate existing and new nuclear reactors to ensure their safe operation and physical security.

Resources requested in the FY 2015 budget for the Nuclear Reactor Safety Program are $815.2 million, which represents an overall increase of $3.8 million when compared with the FY 2014 enacted budget.

Operating Reactors

The Operating Reactors Business Line supports the licensing, oversight, rulemaking, international activities, research, and event response associated with safe and secure operation of 100 civilian nuclear power plants and 31 research and test reactors. The number of operating reactors decreased by the four (Kewaunee, San Onofre Units 2 and 3, and Crystal River 3) that have submitted letters notifying the NRC that they have permanently ceased operations. It also accounts for the announced closure of Vermont Yankee in October 2014, as well as the start of operation at Watts Bar 2 in FY 2015 if that is authorized by the NRC.

The FY 2015 budget request for Operating Reactors is $577.3 million, which represents an overall funding decrease of $12.8 million when compared with the FY 2014 enacted budget. The major activities that the requested resources will support include the following:

- Continuing licensing activities for 100 power reactors. The NRC anticipates that the licensing workload will include completing 900 licensing actions (100 of which are Fukushima-related), including the review of approximately six power uprates and approximately 15 ongoing reviews of compliance with National Fire Protection Association (NFPA) Standard 805 for the approximately 25 reactors that will be transitioning to a risk-informed, performance-based set of requirements.
- Continuing Fukushima lessons-learned activities, including seismic and flooding hazard reevaluations.
- Licensee implementation and staff closeout reviews and inspections of mitigating strategies (MS) and enhanced spent fuel pool instrumentation orders. For the severe accident capable hardened vents order, the staff will be completing the safety evaluations for the licensee's Phase 1 integrated plans and monitoring licensee implementation. For the emergency preparedness activities, closeout and inspection efforts, materially linked with the MS order, will take place four months before the closeout of and inspection for the MS order.
- Continuing reviews for 11 license renewal applications (19 units at 12 sites) for operating reactors.
- Continuous oversight of plants through the NRC's Reactor Oversight Process to verify that the 100 operating nuclear power reactors continue to operate safely and securely.
- Review of 18 high-priority rulemakings and three medium-priority rulemaking activities directed by the Commission, including policy development activities related to the NRC regulatory framework after the Fukushima event.
- Research to address recommendations from the lessons-learned evaluation of the Fukushima accident, fire safety, digital and electrical systems, materials degradation,

reactor safety code development and analysis, radiation protection, probabilistic risk assessment, and evaluation of hazards from natural events.
- Ensuring that the NRC Headquarters Operations Center is staffed around the clock and able to collect and disseminate event response information and coordinate NRC response, as is consistent with the NRC's responsibilities for events involving NRC-licensed material under the National Response Framework.

New Reactors

The New Reactors Business Line supports the licensing, oversight, rulemaking, international activities, and research associated with the safe and secure development of new power reactors from design, site approval, and construction to operational status. The FY 2015 budget request for New Reactors is $237.9 million, which represents an overall funding increase of $16.5 million when compared with the FY 2014 enacted budget. The major activities that the requested resources will support include the following:

- Review of the eight combined operating license (COL) applications that remain active.[1]
- Ongoing review of four design certifications (DCs) (Babcock & Wilcox mPower, U.S. Evolutionary Power Reactor, U.S. Advanced Pressurized Water Reactor, and Korea Hydro and Nuclear Power APR-1400), continue ongoing review of one DC renewal (Advanced Boiling Water Reactor), continuing pre-application activities for two projected DC applicants (Westinghouse and Holtec), and initiating the review of one new DC (NuScale).
- Construction inspection activities to support inspection of the reactors under construction (Vogtle Units 3 & 4, Summer Units 2 & 3, and Watts Bar Unit 2).
- Thirty vendor inspections to ensure integrity of the supply chain, which would be consistent with the expected increase in the number of suppliers and sites under active consideration.

NUCLEAR MATERIALS AND WASTE SAFETY

The Nuclear Materials and Waste Safety Program reflects the NRC's effort to license, regulate, and oversee nuclear materials and waste in a manner that adequately protects public health and safety and the environment. This program provides high assurance of physical

[1] Of the 18 total COL applications the NRC received, eight are under active review, two were issued licenses, six applicants requested that their reviews be suspended, and two applications were withdrawn.

security of the most risk-significant materials and waste and protection against radiological sabotage, theft, and diversion of nuclear materials. Through this program, the NRC regulates uranium processing and fuel facilities; research and pilot facilities; nuclear materials users (medical, industrial, research, academic); spent fuel storage; spent fuel and material transportation packaging; decontamination and decommissioning of facilities; and low-level and high-level radioactive waste. The program contributes to the NRC's Safety and Security goals through the activities of the Fuel Facilities, Nuclear Materials Users, Spent Fuel Storage and Transportation, and Decommissioning and Low-Level Waste Business Lines regulating byproduct, source, and special nuclear material.

Resources requested in the FY 2015 budget for the Nuclear Materials and Waste Safety Program are $232.2 million, which represents an overall funding decrease of $0.3 million when compared with the FY 2014 enacted budget.

Fuel Facilities

The Fuel Facilities Business Line supports licensing, oversight, rulemaking, international activities, research, generic homeland security, and event response associated with the safe and secure operation of various operating and new fuel facilities such as conversion, enrichment, and fuel fabrication facilities, and nuclear fuel research and pilot facilities. The FY 2015 budget request for Fuel Facilities is $61.1 million, which represents an overall funding increase of $6.2 million when compared with the FY 2014 enacted budget. The major activities that the requested resources will support include the following:

- Licensing actions for conversion/deconversion, enrichment, and fuel fabrication facilities, and possession of special nuclear material.

- Licensing support and reviews, including support to assist in the review of environmental reports and preparation of environmental impact statements, material control and accounting, safeguards, and criticality safety evaluations.
- Emergency preparedness licensing reviews for operating fuel cycle facilities.
- Environmental reviews for fuel cycle facility license applications, license renewals, amendments, and pre-application activities.
- Regulatory activities related to agency follow-up of the Fukushima event, including actions from the Fukushima Near-Term Task Force and inspections conducted under Temporary Instruction 2600/015, "Evaluation of Licensee Strategies for the Prevention and/or Mitigation of Emergencies at Fuel Cycle Facilities."
- Rulemaking in security-related areas, including enhanced security at fuel cycle facilities (CAT I and III), material categorization, the 10 Code of Federal Regulations (CFR) Part 26 Fitness for Duty Program, and fingerprinting for Safeguards Information access.
- Application of International Atomic Energy Agency safeguards to fuel cycle facilities, international coordination, and assistance on next generation safeguards designs.

Nuclear Materials Users

The Nuclear Materials Users Business Line supports the safe and secure possession, processing, handling, and use of nuclear materials (for the many and diverse uses of these materials) with associated licensing, oversight, rulemaking, international activities, research, generic homeland security, event response, and State, Tribal, and Federal Program activities. The FY 2015 budget request for Nuclear Materials Users is $86.5 million, which represents an overall funding decrease of $3.7 million when compared with the FY 2014 enacted budget. The major activities that the requested resources will support include:

- Completion of approximately 2,000 materials licensing actions (new applications, amendments, renewals, and terminations).
- Completion of approximately 900 routine health and safety inspections, reciprocity and reactive inspections, and a registration and follow-up inspection program for certain general licensees.
- Work on approximately 3 to 4 active materials waste safety rulemakings as well as continued interactive liaison with industry and professional societies to develop new codes and consensus standards and to address petitions for rulemaking submitted to the agency.
- Reviews and decisions on import/export authorizations of nuclear components and radiological materials, Executive Branch Subsequent Arrangements and Proposed 10 CFR Part 810 Licenses, control and tracking of imports and exports of sources, and bilateral and multilateral activities initiated for the exchange of technical information for the safe handling, storage, transport, and disposal of nuclear waste.

- Support of the Generic Homeland Security portfolio, which has integrated the three systems that license and track sources and radioactive materials under one management mechanism.
- Support for the Agreement State program to conduct 10 to 12 Integrated Materials Performance Evaluation Program reviews to ensure that Agreement State programs are adequate to protect public health and safety and are compatible with NRC programs; conduct outreach to one potential new Agreement State and process new agreements; process 50 Agreement State incidents/events; participate in, and coordinate State participation in, regulatory development; coordinate, and fund State participation in, NRC training courses (including Agreement State training and travel funds); respond to State technical assistance requests; respond to and coordinate responses to allegations about Agreement State licensees or regulatory programs; interact with the Conference of Radiation Control Program Directors, Inc., and the Organization of Agreement States, Inc. and develop and maintain policies and procedures for the program. This activity includes the statutory requirement for the NRC to make a determination that all applicable standards and requirements have been met before an uranium milling license termination by the Agreement State and that alternate standards, defined in Section 11e(2) of the Atomic Energy Act of 1954, as amended, are adequate before they are implemented by the Agreement State (1 or 2 cases per year).

Spent Fuel Storage and Transportation

The Spent Fuel Storage and Transportation Business Line supports the licensing, oversight, rulemaking, international activities, research, and generic homeland security associated with the safe and secure storage and transportation of spent nuclear fuel and other radioactive materials. The FY 2015 budget request for Spent Fuel Storage and Transportation is $45.3 million, which represents an overall funding decrease of $2.3 million when compared with the FY 2014 enacted budget. The major activities that the requested resources will support include:

- Review of approximately 65 radioactive material transportation package design applications and approximately 22 spent nuclear fuel (SNF) cask and facility applications, including initiating the review of the renewal of Certificate of Compliance storage applications to ensure the safe and secure storage of SNF.
- Renewal of the Prairie Island independent spent fuel storage installation (ISFSI) license and related environmental assessment support and legal advice and representation on SNF and radioactive material transportation matters.
- Completion of 16 regional and headquarters safety inspections of storage and transportation cask vendors, fabricators, and designers and of ISFSI pad construction, dry-run operations, initial loading operations, and routine operations.
- Continued identification and implementation of near term improvements to the storage and transportation licensing program including a comprehensive review of licensing guidance and regulations.

Decommissioning and Low-Level Waste

The Decommissioning and Low-Level Waste Business Line supports the licensing, oversight, rulemaking, international activities, and research associated with the safe and secure operation of uranium recovery facilities, removal of nuclear facilities from service and reduction of residual radioactivity to a level that permits release of the property and termination of the NRC license, and disposition of low-level radioactive waste from all civilian sources. The FY 2015 budget request for Decommissioning and Low-Level Waste is $39.3 million, which represents an overall funding decrease of $0.5 million when compared with the FY 2014 enacted budget. The major activities that the requested resources will support include:

- Licensing reviews for decommissioning 14 power and early demonstration reactors, seven research and test reactors, 23 complex materials facilities, and 38 uranium recovery facilities. Resources also support licensing for up to 40 military Naturally Occurring and Accelerator-Produced Radioactive Materials (NARM) sites and depleted uranium sites.
- Eight to 10 environmental and safety reviews (hearings included) for uranium recovery licensing applications as well as licensing activities associated with seven operating uranium recovery facilities.
- Oversight of decommissioning and uranium recovery inspections, Low-Level waste (LLW) program activities, and Waste Incidental to Reprocessing (WIR) activities at two U.S. Department of Energy sites.
- Research assistance on complex licensing cases, such as application of codes for decommissioning reviews and site reviews employing bio-remediation as the remediation process chosen for site cleanup at shallow sites with uranium contamination and *in situ* leach uranium recovery facilities.
- Continued maintenance of a framework of rules and guidance that promote compliance with safety principles and requirements, including development of a more risk informed approach for disposal of low level waste.

PROPOSED RULE TO ESTABLISH THE FY 2014 OPERATING REACTOR ANNUAL FEES

The Omnibus Budget Reconciliation Act of 1990 (OBRA 90) requires the NRC to collect approximately 90% of its budget *in the year appropriated* through fees from its licensees. Annual fees (10 CFR Part 171) are billed to the classes of NRC licensees to collect their recoverable budget not collected from fees for services (10 CFR Part 170). The changing

financial environment for the NRC Reactor Safety Program resulted in a low annual fee in FY 2013 ($4.159 million) and a high annual fee in FY 2014 ($5.104 million).

On April 14, 2014, the NRC published its FY 2014 Proposed Fee Rule in the *Federal Register* for public comment. The Proposed Rule calls for an increase in the annual fee of $945,000 per reactor compared to the FY 2013 amounts. The FY 2014 Operating Reactor Annual Fees increased from the FY 2013 amount for three principal reasons.

First, the agency entered FY 2014 with funding uncertainty, prepared for a potential sequester, which would have significantly reduced anticipated NRC available resources, similar to the FY 2013 sequester-level funding. Fortunately, however, the sequester was not imposed and resources were appropriated to the NRC at essentially the requested level. Receiving this additional funding late in the year resulted in the NRC Reactor Safety Program realizing a recoverable budget increase of $64.6 million, which equates to a proposed increase of approximately $650,000 in annual fees per operating reactor from the FY 2013 level. These additional funds are not expected to be expended and billed in FY 2014 through fees for service work (10 CFR Part 170) and therefore must, by law, be recovered through annual fees *in the year appropriated*. Since the majority of the Reactor Safety Program budget must be collected from the 100 reactor licensees, this increased funding caused approximately 65% of the increase in the FY 2014 Proposed Annual Fees per reactor. It should be noted that some of these funds are expected to be recovered after FY 2014 through fees charged for services which could reduce future year annual fees.

Second, in FY 2013, there was a one-time prior-period collection resulting in an increase of $20.9 million in collections of fees for services (10 CFR170). This additional collection caused a reduction in the FY 2013 annual fees, which will not recur during FY 2014. The lack of

this one-time increase in fees for services collections caused approximately 21% of the increase in the FY 2014 Proposed Annual Fees per reactor above the FY 2013 level.

Finally, in FY 2014, there are 100 operating reactors being billed annual fees, a decrease of two reactors from FY 2013 due to the permanent shutdown of San Onofre Nuclear Generating Station Units 2 and 3. This reduced reactor population from which to collect fees caused approximately 11% of the increase in the FY 2014 Proposed Annual Fees per reactor. An additional 3% of the increase is attributable to the margin for uncertainty.

ENSURING EFFICIENT USE OF RESOURCES

The NRC faces a different future from what we expected just a few years ago when substantial new reactor construction was projected, and no licensees had yet announced intentions to permanently cease operations at particular reactors. Anticipating a significant increase in demand for licensing services based on information provided by the industry, we responded with an aggressive effort to build staff capability and the infrastructure to support the projected workload increase. However, the workload has not materialized as anticipated. While the number of operating plants has decreased, the need for NRC engagement has grown in other unanticipated areas. We have therefore been adjusting NRC staffing in the nearer term to respond to these changing priorities. Implementing Fukushima lessons learned to further protect against an accident, addressing the two court mandates on the waste confidence rulemaking and resuming the development of the Safety Evaluation Report for the Yucca Mountain repository, and decommissioning of nuclear power reactors are examples of recently changing demands to which the agency has had to respond.

We have addressed these challenges by directing available resources to the highest-priority safety and security mission work. As the NRC moves toward a new environment, we

are reviewing our human capital requirements. Additionally, the NRC has adjusted its human capital strategies to ensure the agency is focused on personnel with essential critical skills as well as fine-tuning the skills of our employees to meet current and future mission needs. We also are continuing a robust effort to ensure that knowledge critical to the agency's mission is preserved.

We have an obligation to protect the public, respond to Congress, license and regulate the use of nuclear materials, and to do so in the most effective and efficient manner. In light of the reality that our agency is on the cusp of a different future than we expected just a few years ago, it is appropriate that for the longer term, we examine the size and organizational structure of our workforce. Accordingly, the Executive Director for Operations has initiated a fresh and realistic look at each of the business lines and where the agency will be in five years. The Commission will be working with the NRC staff to continue to adjust, refine, and redirect human capital, hiring, and succession planning strategies as appropriate.

The staff has been assembling a "best estimate scenario" of the NRC in 2019 that, among other things, includes a thorough understanding of where we will be in the new large light water reactor application and review process, a realistic view of what advanced reactors will have applications under review or be in construction, a best estimate of the size of the operating fleet, a vision for our other key program areas, and an assessment of our various corporate support functions. This information can facilitate the development and execution of the strategies necessary to achieve our mission, while continuing to monitor the internal and external environments, and also working to enhance our agility and organization capacity. We understand the need to be proactive about our future, addressing challenges as they arise, and maintaining a focus on the mission.

Finally, and very importantly, we have been actively streamlining the agency's support functions and overhead drivers. Over the past five years, for example, we have taken steps to reduce overhead by centralizing the delivery of administrative support services. Because of these efforts our FY 2015 budget reflects a reduction of $7 million in overhead from FY 2014 alone. Overall, our efforts to control agency costs have resulted in a net reduction of 192.4 FTE in support personnel, which equates to approximately $37.2 since 2010 in constant dollars, or a 16.8% decrease. Additionally, we are in the process of consolidating our personnel from satellite buildings into a contiguous three-building campus. This effort has caused some efficiencies and avoided costs but we are still adjusting the placement of functions and these actions will determine out-year savings.

UNDERSTANDING THE CUMULATIVE EFFECTS OF REGULATION

The Atomic Energy Act mandates the NRC to protect public health and safety, and the requirements the NRC imposes are intended to meet this mandate. We recognize that important safety and security enhancements will be most effective if necessary, regulatory measures are paced appropriately so that licensees can maintain focus on ensuring day-to-day safety and security. To ensure that our regulatory programs have the intended effect and that we are being an efficient and effective regulator, we are carefully working to understand and address, as needed, any cumulative effects of our regulations.

In particular, we are interacting closely with various groups, including industry, government, and members of the public, to ensure that we understand and manage the impacts on licensees of regulatory initiatives and activities that are being implemented concurrently. We are addressing implementation timelines for new or revised regulations, the priority associated with each action, and the availability of critical skills to complete implementation.

The NRC has also engaged the operating reactor industry to perform 'case studies' reviewing regulatory cost and schedule estimates. In addition, we are working with other parts of the regulated community and with our Agreement State regulatory partners to assess and control cumulative effects. The NRC has received feedback from industry indicating that estimating costs is difficult and that the industry is challenged to provide feedback on NRC's costs estimates during the development of a proposed regulatory requirement that is still in formulation. On the other hand, we believe industry acknowledges that it needs to providing provide better cost estimates to NRC at the appropriate points in the regulatory process. The NRC has put in place enhancements made to the rulemaking process since 2011.

The NRC is also currently exploring applying those enhancements to other processes, such as a process that would further permit licensees to propose plant-specific adjustments to priorities and schedules based on risk significance.

Chairman Upton, Ranking Member Waxman, Chairman Whitfield, Ranking Member Rush, and distinguished Members of the Subcommittee, this concludes my formal testimony on the NRC's FY 2015 budget request. On behalf of the Commission, thank you for the opportunity to appear before you. I look forward to continuing to work with you to advance the NRC's important safety and security missions. I would be pleased to respond to any questions that you may have. Thank you.