WRITTEN STATEMENT
BY STEPHEN G. BURNS, CHAIRMAN
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
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Good morning, Chairman Inhofe, Ranking Member Boxer, and distinguished Members of the Committee. 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) 2016 budget request and the agency's current activities.

In January, the NRC marked its 40th anniversary as the independent Federal agency responsible for licensing and regulating the Nation's civilian use of radioactive materials to ensure protection of public health and safety, common defense and security, and the environment. The regulatory responsibilities assigned by Congress when the NRC was newly formed remain the same today, to protect public health and safety and to safeguard nuclear materials.

Our first years in existence as an agency, newly separated from the former Atomic Energy Commission and solely focused on safety and safeguards, were a period of transition. Even as we were establishing our regulatory footing as a new agency, we were quickly challenged by a destructive fire at the Browns Ferry plant, which led to the development of a new set of fire protection regulations, and by the accident at the Three Mile Island plant. As a result of that accident, the NRC placed greater emphasis on a variety of safety enhancements, including operator training and human factors engineering, emergency planning, and the collection and analysis of operating experience.

The civilian nuclear regulatory environment today is no less dynamic than it was 40 years ago. The terrorist attacks on September 11, 2001 marked another seminal event in the agency's history. Following the attacks, the NRC ordered nuclear plants to implement enhanced security measures designed to protect against an increased threat and increased public education of our emergency preparedness capabilities. More recently, the Fukushima Dai-ichi accident has caused the NRC and the industry to take significant actions to enhance the safety of nuclear reactors in the United States, which I will discuss in more detail in a moment. Today the NRC's regulatory program has been substantially strengthened, based in part on what we have learned from domestic and international operating experience. Our highly trained staff continues to provide extensive oversight of our reactor and materials licensees and perform comprehensive safety and environmental reviews of many, very complex licensing actions to determine that the proposed activities satisfy our regulatory requirements and are adequate to protect public health, minimize danger to life and property, and protect the common defense and security.

The resources that we are requesting for FY 2016 will allow the NRC to continue its licensing and oversight activities for commercial nuclear power reactors, research and test reactors, decommissioning and waste management activities, uranium recovery facilities, fuel facilities, and radioactive materials users, including those overseen directly by the 37 states, known as "Agreement States," that have agreements with NRC to assume regulatory responsibility for the use of certain radioactive materials. The funding request would support nuclear safety and security through our rulemaking, research, and enforcement efforts.

In FY 2016 the NRC has requested funding to review nine new reactor license applications and complete three of these reviews. Additionally, the FY2016 budget supports conducting inspections for four new reactors under construction -- Vogtle Electric Generating Plant, Units 3 and 4, and Virgil C. Summer, Units 2 and 3 – and to begin review of an anticipated small

modular reactor application. In FY 2016, the NRC also expects to complete the review of one construction permit application for a medical isotope production facility and conduct environmental and safety reviews of construction permits for two additional medical isotope production facilities.

A DYNAMIC REGULATORY ENVIRONMENT

Before I get into the specifics of the NRC's FY 2016 budget request, I wanted to briefly address the environment in which we now find ourselves. The September 2001 terrorist attacks emphasized the importance of security at nuclear facilities, and we experienced the expansion of our regulatory authority and an increase in security-related activities as a result of the passage of the Energy Policy Act of 2005. Since 2001, the agency has also grown significantly to prepare for the large projected growth in the use of nuclear power in the United States. The agency aggressively built the technical capability and infrastructure required to support the projected wave of new reactor license applications. While the NRC initially received applications seeking construction of 26 new reactors, most applicants have either withdrawn their applications or have requested that the NRC delay or suspend the licensing reviews of their applications. The NRC has also adjusted its forecast for new reactor activities downward in response to continuing changes in the nuclear industry.

Concurrently, as a result of other developments, the NRC began shifting resources to respond to changing priorities. Among our top priorities have been implementing lessons learned from the Fukushima Dai-ichi accident, resuming the review of the Yucca Mountain high-level waste repository with available carryover funding as required by the U.S. Court of Appeals for the District of Columbia Circuit, and addressing the unexpected number of nuclear power reactors that prematurely shut down and began decommissioning.

To address the 2012 D.C. Circuit ruling, the Commission established a special directorate with a dedicated group of staff and directed that a rule and a generic environmental impact statement on the environmental impacts of continued storage of spent nuclear fuel be completed within 24 months. The NRC met its deadline, after considering more than 33,000 written public comments, and issued a final "Continued Storage Rule" in September 2014 that addressed the generic effects of storing spent fuel at reactor and away-from-reactor sites following the expiration of a reactor's operating license until a permanent geologic repository for high-level radioactive waste becomes available. Once the rule was completed, the Commission lifted a suspension on final licensing decisions for applications for new reactors licenses, license renewals, and spent fuel storage facility renewals that rely on the rule.

Separately, to address the 2013 D.C. Circuit decision, NRC resumed its review of the Yucca Mountain license application using previously appropriated carryover funds. In January 2015, the staff completed and published the final volumes of the Safety Evaluation Report. In the report, the staff concluded that the Department of Energy's (DOE) application met regulatory requirements, except for certain requirements related to ownership of land and water rights. A supplement to DOE's environmental impact statement has not yet been completed. Accordingly, the NRC staff recommended against the Commission authorizing construction of the repository at this time. Now, at the direction of the Commission, the staff has begun work on a supplement to DOE's environmental impact statement to address the impacts of the proposed repository at Yucca Mountain on groundwater as well as the impacts from groundwater discharges to the surface. We expect to publish that supplemental environmental impact statement in the spring of 2016.

Before any decision can be made on the Yucca Mountain application, the supplemental environmental impact statement would have to be completed, a 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. The agency's preliminary cost estimate for completing the license review and making a decision on whether to authorize construction of the repository is approximately $330 million. This estimate does not include any costs that DOE might incur as the applicant.

Another new development in the area of spent fuel storage is the notification to the NRC by Waste Control Specialists, LLC (WCS) that it plans to file, by April 2016, an application to construct and operate an independent spent fuel storage facility. WCS's notice to NRC came after our planning for the FY2016 budget, but NRC could reprioritize work to support a review of the application.

Oversight of decommissioning reactors is another area where NRC has experienced an unanticipated increase in workload. After 15 years without a power reactor permanently shutting down, five reactors recently closed before the end of their operating license term. While the NRC has extensive experience with regulating decommissioning -- 11 reactor licenses have been terminated since 1982 -- the NRC's current regulatory framework could be tailored to more specifically address the decommissioning of reactors. The transition to decommissioning has resulted in licensees' requests for exemptions from certain NRC regulations once their plants permanently ceased operations and have been defueled, to reflect the risk that is commensurate with the plant being permanently shut down.

In December 2014, the Commission directed the staff to proceed with a rulemaking on reactor decommissioning and set an objective of completing it by early 2019. The staff has begun work

on the regulatory basis for a decommissioning rulemaking. In order to complete the rulemaking, the agency may need to reallocate resources in FY 2016 and beyond. In the meantime, the staff will continue to process applications for decommissioning license amendments and exemptions until the rulemaking is completed.

FUKUSHIMA-RELATED ENHANCEMENTS

The requested FY 2016 resources support continued work on the highest-priority actions for post-Fukushima related activities, including seismic and flooding hazard reevaluations.

The NRC expects that most licensees will complete implementation of the majority of the most safety-significant enhancements by, or before, 2016. These include safety enhancements in the following areas: mitigation strategies; spent fuel pool instrumentation; flooding and seismic reevaluations and interim actions; and enhancements to emergency preparedness communications and staffing.

A key element of the post-Fukushima safety enhancements is the NRC's 2012 Mitigation Strategies Order, which requires licensees to ensure that sites are prepared to respond to beyond-design-basis external events. The Order includes requirements to procure additional equipment to maintain or restore core cooling, containment integrity, and to provide spent fuel pool cooling for all units at each site. In the past year, both of the industry's National Response Centers (in Phoenix, Arizona and in Memphis, Tennessee) have become operational. Both centers contain multiple sets of emergency diesel generators, pumps, hoses, and other backup equipment that can be delivered to any nuclear power plant in the United States within 24 hours. These response centers address a key element of the 2012 Mitigation Strategies Order, which is to provide sufficient offsite resources to sustain plant safety functions indefinitely.

Last year, the first plants completed implementation of the mitigation strategies requirements. More than half of nuclear power plants are scheduled to achieve full implementation by the end of 2015, with most of the remaining plants to be completed by 2016, as previously noted. Eight boiling water reactors have requested schedule extensions for parts of the mitigation strategies affected by the NRC's revision to the order on containment venting. During and after implementation of the mitigation strategies requirements, the NRC will conduct inspections to verify that nuclear power plants have put appropriate strategies in place to mitigate beyond-design-basis events.

Recently, the Commission approved the staff's recommendation that operating reactor licensees be required to address the reevaluated flooding hazards within their mitigation strategies for beyond-design-basis external events, including addressing specific flooding scenarios that could significantly damage the power plant site. The Commission also affirmed its intention to ensure that flooding hazards are fully understood for every site, but directed the staff to use a graded approach for determining the need for further assessments and to focus attention on plants where there is the greatest opportunity for additional safety enhancements. All but nine power plant sites have submitted their flooding hazard reevaluations.

Also in March, the NRC staff received the seismic hazard reevaluation reports and interim actions for the three western U.S. nuclear power plants – Columbia, Diablo Canyon, and Palo Verde. Plants in the central and eastern U.S. had previously submitted seismic hazard reevaluations. The NRC is reviewing these interim evaluations and actions. As part of its review, the staff is establishing a prioritization schedule for the seismic risk evaluations for the plants where the reevaluated seismic hazard exceeds its facility's design basis. This is the same process that the staff used in March 2014 when screening submittals for the central and

eastern U.S. plants. Plants that needed to perform additional analyses submitted their additional analyses in December 2014.

The NRC continues to assess the remaining Fukushima lessons learned items, the so–called Tier 2 and 3 issues. The Commission will be hearing from the NRC staff on the status of these activities during a Commission meeting scheduled for April 30.

REACTOR AND MATERIALS ACTIVITIES

NRC's budget request provides funding for the agency's oversight of the nuclear power reactor fleet to ensure it is operating safely and in accordance with NRC's rules, regulations, and license requirements. Currently, 96 reactors are operating in the highest two performance categories of NRC's reactor oversight process. Eighty of the 96 reactors were in Column 1 of NRC's Action Matrix because they fully met all safety and security performance objectives and are receiving a "baseline" level of NRC inspection. Sixteen reactors are in Column 2 and have an increased level of NRC oversight. One reactor is in Column 3, which is a performance category with a degraded level of performance. Two reactors are in Column 4 because of multiple instances of degraded performance with significant safety implications. Plants in Column 2 and higher receive increased levels of oversight.

The budget request also includes funding for a rulemaking to revise the regulations related to the medical use of byproduct material. These regulations were last amended in 2002. Over the past 12 years, stakeholders and members of the medical community have identified certain implementation issues. As a result, the NRC has proposed updates to its regulations to address technological advances and changes in medical procedures.

Separately, the agency has budgeted to continue research to confirm the safety basis for the release of patients who have received radiation treatment from medical facilities. While there is analytical information that our current requirements are protective of public health and safety, there is little empirical data on the doses actually received by members of the public exposed to treated patients. These gaps relate to internal doses to members of the public from close physical contact with patients or radioactive contamination from bodily fluids, and internal and external doses to members of the public from patients who go to locations other than their primary residences. In response to Commission direction, the staff is collecting limited empirical data to fill in any regulatory gaps. Also, the NRC staff is developing guidance related to patient release and evaluating whether regulatory changes to the patient release program are warranted. The staff anticipates holding multiple public meetings around the country to obtain input from stakeholders on these matters.

In FY 2016, the agency has budgeted for eight to 10 major license reviews of uranium recovery facilities. In February, Wyoming Governor Matthew Mead submitted a letter of intent to NRC, indicating that Wyoming had recently passed enabling legislation allowing it to become an Agreement State. Governor Mead stated that Wyoming intends to pursue an agreement with NRC to regulate byproduct material, specifically tailings or wastes produced by the extraction or concentrations of uranium or thorium from ore. Once the agreement request is submitted, the NRC staff will review the request and engage with the State to resolve any outstanding items. Prior to Commission approval and the signing of a final agreement, the NRC staff would prepare an assessment and issue a proposed agreement in the Federal Register for public comment.

FY 2016 BUDGET REQUEST

I would now like to highlight the specifics of the FY 2016 budget request.

The agency's proposed budget is $1,032.2 million, which includes the equivalent of 3,754 full-time employees (FTE).

The NRC is requesting $601.7 million for operating reactors, which represents an overall funding decrease of $10.4 million compared with the FY 2015 available resources. This funding level supports completing the highest-priority work related to implementation of the lessons learned from the nuclear accident at Fukushima, and reducing the number of pending licensing actions.

The budget request for new reactors is $191.7 million, a decrease of $5 million compared with the FY 2015 available resources. The decrease is a result of delays in application submittals and project slowdowns or suspensions of work on license applications.

The request for nuclear material users is $87.4 million, a decrease of $1.7 million compared with the FY 2015 available resources. The proposed budget also includes $43.8 million for spent fuel storage and transportation, a decrease of $2.4 million compared with the current funding level.

Two areas where the budget request has increased is for decommissioning and low-level waste activities -- $44.1 million, or $1.5 million above the FY 2015 budget – and fuel facilities activities -- $51.5 million, or an increase of $0.8 million above the FY 2015 level. The increases reflect greater resource needs to support oversight of decommissioning of power reactors and licensing activities for uranium recovery facilities.

In furtherance of our cost-saving efforts, the NRC has made cuts in overhead over the last five years. These cost-saving measures have resulted in an FY 2016 budget that accounts for

workload changes and allows the agency to fund inflationary and other necessary increases without an increase to the overall budget. The NRC's FY 2016 budget request reflects the Office of Management and Budget guideline of a 1.3 percent increase in salaries and benefits for a cost of living increase and accommodates routine contract cost escalations. The budget also adheres to commitments made for NRC's usage of building space for our employees.

The NRC Office of Inspector General's (OIG) component of the FY 2016 proposed budget is $12.1 million, including 63 FTE. The OIG budget includes approximately $11.2 million for auditing and investigation activities for NRC programs, and $1.0 million for the auditing and investigations services for the Defense Nuclear Facilities Safety Board.

FEE RULE

Under the provisions of the Omnibus Budget Reconciliation Act of 1990, as amended, the NRC must recover 90 percent of its budget through fees assessed to applicants and licensees, with the remaining portion of its budget appropriated for waste incidental to reprocessing activities, generic homeland security activities, and Inspector General services for the Defense Nuclear Facilities Safety Board. Accordingly, approximately $910 million of the FY 2016 budget request would be recovered from fees. This would result in a request for a net appropriation of $122.2 million.

The NRC's proposed FY 2015 fee rule, which was published on March 23, 2015, for public comment, includes estimates for reductions in licensee annual and hourly fees that we expect to be included in our final fee rule. For power reactors, the estimated annual fee is $4.75 million per reactor, which is down 5 percent from FY 2014. The NRC hourly rate is estimated at $268 in FY 2015, down from $279 in FY 2014. These decreases reflect a reduced FY 2015

appropriation from the requested level and the use of the carryover funding to supplement the FY2015 appropriations.

LOOKING AHEAD

Perhaps one of the most significant NRC undertakings to address our changing regulatory environment is the "Project Aim 2020" initiative. The NRC launched Project Aim 2020 in June 2014 to enhance the agency's ability to plan and execute its mission while adapting in a timely and effective manner to a dynamic environment.

The Project Aim 2020 team gathered perspectives from internal and external stakeholders to forecast the workload and operating environment in 2020. Based on analyses of these perspectives, and an evaluation of the NRC's current state compared with the anticipated future state, the staff identified key strategies and recommendations to transform the agency over the next five years to improve our effectiveness, efficiency, and agility.

The Commission considers this report to be an important step in the dialogue about the future of the NRC. We are currently deliberating on the report and are taking a hard look at how to ensure the agency maintains the ability to perform our safety and security mission while also being more efficient. We need to retain the appropriate skill sets to accomplish our mission, but we can improve on how we reprioritize activities based on emergent needs and can respond more quickly to changing conditions.

Project Aim 2020 is only one part of the self-assessment the NRC has undertaken in recognition of the changing regulatory environment. For instance, over the last several years, the Commission has revised its rulemaking processes to understand, and where possible, reduce, the cumulative effects of regulations. These processes include increased opportunities for

stakeholder interactions and feedback, publishing draft supporting guidance concurrent with proposed rules, requesting specific comment on the cumulative effects of regulations in proposed rules, and developing better-informed implementation timeframes.

In addition, the NRC has sought industry volunteers to perform case studies on the accuracy of cost and schedule estimates used in NRC's regulatory analyses. Based on those results, additional regulatory analysis process enhancements should improve cost estimating. We believe that applying these process enhancements will result in a better understanding of the implementation costs associated with new regulations for operating reactors.

With respect to cost-benefit analyses, the Government Accountability Office (GAO) recently completed a report that concluded the NRC needs to improve its cost estimating practices. Although the NRC did not agree with all of GAO's specific recommendations, we did agree generally that the NRC's regulatory analyses practices could be improved, and we have started to take steps, as described above, to do so.

In sum, as these examples have shown, the Commission is cognizant of our changing environment and is committed to taking a hard look at agency operations to ensure that we are prepared for the future.

CLOSING

Chairman Inhofe, Ranking Member Boxer, and distinguished Members of the Committee, this concludes my formal testimony on the NRC's FY 2016 budget request. On behalf of the Commission, I 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 mission. I would be pleased to respond to any questions that you may have. Thank you.