

STATEMENT  
BY GREGORY B. JACZKO, CHAIRMAN  
UNITED STATES NUCLEAR REGULATORY COMMISSION  
TO THE  
HOUSE COMMITTEE ON ENERGY AND COMMERCE  
SUBCOMMITTEES ON ENERGY AND POWER, ENVIRONMENT AND THE ECONOMY  
MAY 4, 2011

Mr. Chairmen, Ranking Members Rush and Green, and Members of the Subcommittees, my colleagues and I are honored to appear before you today on behalf of the United States Nuclear Regulatory Commission (NRC). Commissioner Apostolakis has asked me to convey his regrets that he was not able to attend today. For the first time since 2007, the Commission is operating at full strength, with five members. I am grateful to my colleagues for the experience and expertise they have brought to our discussions, as well as the initiative and leadership they have shown throughout the time they have been on the Commission.

Today I would like to first provide an update on the Japan situation and the NRC's response to that tragedy, and then move into an overview of the NRC – our recent accomplishments and the challenges that lie ahead of us.

Update Related to Events in Japan, and NRC Response

Since I previously testified before you, I traveled to Japan to convey a message of support and cooperation to our Japanese counterparts there and to assess the situation. I also met with senior Japanese government and TEPCO officials, and consulted with our NRC team of experts who were sent to Japan as part of our assistance effort. Approximately a dozen NRC staff remain in Japan; our staff at headquarters continues to support them around the clock from our NRC Operations Center.

While meeting the demands of the Japan situation, I want to assure you that our staff has remained focused on our essential safety and security mission. I want to recognize their tireless efforts and their critical contributions to the U.S. response. In spite of the evolving situation, the long hours, and the intensity of efforts, staff has approached their responsibilities with dedication, determination, and professionalism, and we are incredibly proud of their efforts.

The NRC continues to characterize the status of the Fukushima site as static – meaning that while we have not seen or predicted any new significant challenges to safety at the site, we have only seen incremental improvements towards stabilizing the reactors and spent fuel pools. Given the devastating conditions at the site due to the earthquake, tsunami, and hydrogen explosions, progress at the site, while being made, is very challenging as important equipment and structures were either damaged or destroyed in the event, or are not accessible due to high radiation fields. The Government of Japan and the nuclear industry are providing significant resources and expertise to address the situation, and we will continue to provide support as needed.

The NRC has taken advantage of the lessons learned from previous operating experience to implement a program of continuous improvement for the U.S. reactor fleet. We have learned from experience across a wide range of situations, including most significantly, the Three Mile Island accident in 1979, as well as the events of September 11, 2001.

Our program of continuous improvement, based on operating experience, will now include evaluation of the significant events in Japan and what we can learn from them. We already have begun enhancing inspection activities through temporary instructions to our inspection staff, including the resident inspectors and the region-based inspectors in our four

Regional offices, to look at licensees' readiness to deal with both the design-basis accidents and the beyond-design-basis accidents.

The NRC also issued an information notice to licensees to make them aware of the events in Japan, and to remind them of the regulations and guidance for ensuring the capability to mitigate conditions that result from severe accidents, including the loss of significant operational and safety systems.

Licensees are verifying the capability to mitigate a total loss of AC electric power to the nuclear plant. They also are verifying the capability to mitigate problems associated with flooding and the resulting impact on systems both inside and outside of the plant. Also, licensees are confirming the equipment that is needed for the potential loss of equipment due to seismic events is appropriate for the site, because each site has its own unique seismic profile. The information that we gather from this inspection will be used for additional evaluation of the industry's readiness for similar events, and will aid in our understanding of whether additional regulatory actions may need to be taken in the near term.

Along with our confidence in the safety of U.S. nuclear power plants, our agency has a responsibility to the American people to undertake a systematic and methodical review of the safety of domestic facilities, in light of the natural disaster and the resulting nuclear situation in Japan.

Examining all available information is an essential part of the effort to analyze the event and understand its impact on Japan and its implications for the United States. Our focus is always on keeping nuclear plants and radioactive materials in this country safe and secure.

On Monday, March 21, my colleagues on the Commission and I met to review the status of the situation in Japan and identify the steps needed to conduct that review. We subsequently decided to establish a senior level agency task force to conduct a comprehensive review of our processes and regulations to determine whether the agency should make additional improvements to our regulatory system, and to make recommendations to the Commission for its policy direction.

The review is being conducted in both a short-term and a longer-term timeframe. The short-term review has already begun, and the task force will brief the Commission at 30 days, 60 days, and 90 days, to identify potential or preliminary near-term operational or regulatory issues that may need to be addressed. The NRC will begin the longer-term review as soon as we have more complete information and understanding of the events in Japan. The Commission will hold a public meeting on May 12<sup>th</sup> to receive the Task Force's 30-day status update, and will meet again on June 16<sup>th</sup> and July 19<sup>th</sup>.

The longer-term review will evaluate all technical and policy issues related to the event to identify if additional potential research, generic issues, changes to the reactor oversight process, rulemakings, and adjustments to the regulatory framework warrant action by the NRC. We also expect to evaluate potential interagency issues, such as emergency preparedness, and examine the applicability of any lessons learned to non-operating reactors and materials licensees. We expect to seek input from all key stakeholders during this process. A report with appropriate recommendations will be provided to the Commission within 6 months of the start of this evaluation. Both the 90-day and the longer-term final reports will be made publicly available. The final report will be reviewed by the ACRS.

I want to reiterate that we continue to make our domestic responsibilities for licensing

and oversight of the U.S. licensees our top priority. We continue to gather the information necessary to take a comprehensive look at the events in Japan and their lessons for us. Based on these efforts, we will take all appropriate actions necessary to ensure the continuing safety of the American people.

The NRC's primary responsibility is to ensure the adequate protection of the public health and safety of the American people. Review of the Japan information, combined with our ongoing inspection and licensing oversight, gives us confidence that the U.S. plants continue to operate safely. There has been no reduction in the licensing or oversight function of the NRC as it relates to any of the U.S. licensees.

Our agency has a long history of conservative regulatory decision-making. We have been using risk insights to help inform our regulatory process, and, for more than 35 years of civilian nuclear power in this country, we have never stopped requiring improvements to plant designs and operations as we learn from operating experience.

#### Recent Accomplishments and Future Challenges

I would now like to turn to the recent accomplishments and future challenges of the agency. The NRC is a relatively small, independent Federal agency, with approximately 4000 staff, but we play a critically important role in protecting the American people and the environment.

Our mission entails broad responsibilities. The NRC currently licenses, inspects, and assesses the performance of 104 operating nuclear power plants, as well as fuel cycle facilities and research and test reactors. Furthermore, nuclear materials are in use at thousands of hospitals, universities, and other locations around the country. Each of these facilities and materials users presents different challenges and requires that the NRC develop and sustain a

diverse array of regulatory capabilities. The safety and security of these facilities and materials is, and always will be, our number one priority.

The NRC's strategic goal for safety is to ensure adequate protection of public health and safety and the environment. The agency's safety program objectives are to prevent the occurrence of any nuclear reactor accidents, inadvertent criticality events, acute radiation exposures resulting in fatalities, significant releases of radioactive materials and significant adverse environmental impacts. The NRC's strategic goal for security is to ensure adequate protection in the secure use and management of radioactive materials. The security program objective is to prevent any instances in which licensed radioactive materials are used in a hostile manner in the United States.

Meeting our critical safety mission would not be possible without the hard work of the NRC staff. We have at least two inspectors who work full-time at every operating nuclear power plant in the country, and we are proud to have world-class scientists, engineers, and other professionals representing a broad array of disciplines.

At a time when the work of the federal government and federal employees is under scrutiny, there is no doubt in my mind about the dedication and professionalism of the women and men who work at the NRC. Whether at our Rockville headquarters, in one of the regions, at the technical training center, or in a telecommute location – whether a technical reviewer, inspector, manager, administrative professional or one of the many other disciplines that make up our staff – our staff is committed each day to protecting public health and safety and the environment. Their hard work and dedication are a continual inspiration. And the way they go about their work is a constant reminder that safety is something that we can all agree on.

The past year has been a challenging time. In 2010, we saw an increase in the number of automatic scrams for a second consecutive year, and at the current time, three plants still remain in Column 3 of the Reactor Oversight Process (ROP) Action Matrix. These plants are subject to increased NRC inspection oversight because of performance deficiencies.

We also have seen challenges with human performance and material degradation – incidents that have been more significant than have been seen in some time. For example, one of the most significant inspection findings last year identified fire protection, safety culture, and poor operator performance as major contributors to a significant plant event. Recent events, including the tragic experience in Japan, serve as a vivid reminder to the industry and to the agency that we cannot become complacent and that we have not encountered all the different types of natural occurrences, equipment failures, and human performance deficiencies that could impact safety.

Over the past year, the agency has made significant progress on a number of long-standing issues. This effort has been accomplished through increased interactions with a broad spectrum of stakeholders including academics, public interest groups, vendors, licensees, Congress, and the States. I would like to highlight just a few of these successes.

I am pleased to report that the Commission revised and finalized the Waste Confidence rule, providing a measure of certainty in an important and high-visibility area. We believe the Waste Confidence Rule has a solid legal foundation that is clearly explained in the Commission's decision and is in full accord with earlier court decisions interpreting the Commission's obligations under NEPA. The Commission found that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impact for at least 60 years beyond the licensed life for operation.

In addition to this important rulemaking, the NRC has also recently taken steps towards closing out long-standing safety issues like fire protection and the containment sump issue known as GSI-191. By definitively resolving these issues, we will be in an even stronger position to move forward on other existing priorities and proactively plan for emerging issues. I have focused on two issues I believe are important – fire protection and GSI-191. There are others, however – submerged cables, updated seismic hazards, and spent fuel pool criticality – to name just a few. These are examples of issues we need to focus on today in order to ensure that they do not become the long-standing issues of tomorrow.

At the same time, we have proceeded with a number of new reactor issues, including moving to public comment the ABWR and AP1000 design certification amendments, as well as significant progress on the ESBWR design certification, ITAAC maintenance, and new reactor risk metrics. Whether ensuring that the right testing is performed to determine the in-vessel effects of debris generation in a loss of coolant accident, or the appropriate ductility requirements were satisfied for the shield building, the work in this area has been done with the focus first and foremost on safety.

In the past year, our staff has accomplished impressive work in leading the interagency Radiation Source Protection and Security Task Force. The Task Force's 2010 Report to the President and Congress outlined the steps taken since 2006 to enhance source security and provided recommendations on how to make additional progress in this area. The agency also completed a comprehensive revision of its Enforcement Policy, one of the agency's key tools for ensuring compliance with our regulations. We also made substantial progress in evaluating our Alternative Dispute Resolution enforcement program and initiating enhancements that will ensure that we use it judiciously, consistently, and as openly as possible.



In keeping with our historic commitment to openness and transparency, the NRC moved forward with implementing the President's Open Government Directive, adding new tools to strengthen and broaden public input and engagement. These types of efforts will ensure that the NRC remains an effective safety regulator and that our nation's nuclear safety record remains strong.

We are pleased that the international community recognizes the fine work done by the NRC. During the last year, an Integrated Regulatory Review Service (IRRS) mission was completed at the NRC. This is the first time the NRC has hosted such a mission, and I believe it provided an invaluable exchange of best regulatory practices.

We are proud of our strong track record and its recognition by the international community. It is important, however, that we not rest upon our past successes but rather strengthen our commitment to continuous improvement. That has long been a defining value of the NRC and a key to our success in meeting our important safety mission. We have a responsibility to the public to always try to do better – whether by planning, prioritizing and communicating better to allow for more timely implementation of agency actions by licensees, or speaking in simpler language to facilitate stakeholder participation in agency decisions.

We also, however, have an additional imperative, in light of the prevailing budgetary climate and the strong desire by many to see federal agencies do more with less. Consequently, the agency must continue focusing on the critical task of how to make the most efficient and effective use of our funds. The NRC must be in the strongest possible position to efficiently and effectively use our financial resources to meet our mission.

In accordance with the Government Performance and Results Act, the NRC is working to improve our strategic planning and annual performance plans in order to achieve greater alignment of goals and performance across the agency. As part of the NRC's efforts to build a Strategic Acquisition Program, we are taking steps to ensure agency contracting initiatives are implemented in a more timely and efficient manner. We have resources dedicated to other business process improvements including Transforming Assets into Business Solutions (TABS), a task force focused on identifying the most efficient, effective, and cost-conscious manner for the NRC to accomplish its corporate support functions.

These initiatives allow us to fully meet our safety and security responsibilities while also effectively reviewing applications associated with a renewed interest in the construction of new nuclear power plants and applications to construct and operate facilities that are part of the nuclear fuel cycle. The NRC is actively reviewing 12 combined applications to construct and operate new nuclear power reactors. Five different reactor designs are referenced in these applications; the NRC is currently reviewing the design applications for certification or amendments. If these design certifications or amendments are approved, they will be available to be referenced in future COL applications, and thereby make those reviews more straightforward. The NRC is also performing safety, security, and environmental reviews of facility applications, a uranium deconversion facility application, and applications for new uranium recovery facilities.

Although there is a substantial workload and considerable challenges facing the agency, I am confident the NRC's leadership team is up to the task. I believe these efforts will be enhanced by our investments in our physical infrastructure, including the current construction of an additional building at our Rockville, MD headquarters. We expect the addition of Three White Flint North to improve and strengthen communications and coordination throughout the agency.

While the agency staff continues their focus on the safety and security of existing facilities, much of the Commission's focus and effort in the coming year will be centered around the policy issues associated with the infrastructure and decision-making related to new reactor activity and a possible new direction for spent fuel management for the nation.

One of the regulatory areas in which we have seen the most dramatic developments in recent years concerns the heightened interest in new reactors. Due to the staff's hard work and the applicants' responsiveness, there has been significant progress over the past year on both design certification and COL applications. In fact, as early as late summer, the Commission may conduct the first mandatory hearings on new reactor licenses since the 1970s. This will mark the first time that the Commission, rather than the licensing boards, conducts the mandatory hearings required by the Atomic Energy Act. To ensure that we conduct open, fair, and efficient hearings, the Commission has been working to develop procedures that will focus our attention on the most safety-significant issues. Our goal is to serve as an effective check on the staff's work without needlessly replicating what they have done. But even as we approach the finish line on a decision related to the first new reactor COLs, we have a number of other emerging issues that may significantly alter our regulatory landscape.

Among the most dynamic and rapidly evolving areas is the development of small modular reactors. Just a few years ago, these projects remained largely conceptual. Today, they have advanced to the point that the agency anticipates receiving the first SMR design certification application as early as next year. Work is already underway to resolve important technical, licensing, and policy issues related to SMRs. The agency has plans to publish a proposed rulemaking establishing a variable annual fee structure for small and medium-sized reactors. Additionally, the Commission will be exploring policy options over the coming year to

resolve issues such as offsite emergency preparedness, decommissioning funding, control room staffing, and the license structure for multi-module facilities. At the Commission's direction, the staff has also undertaken a broader review of the licensing process to develop risk-informed approaches for reviewing SMR applications.

In considering potential rule changes in this area and others, the agency has to ensure that we make the best use of the time and resources we dedicate to these efforts. Rulemaking is an important agency responsibility; we expect our licensees and stakeholders to actively participate and contribute meaningfully to the process. If that happens, the agency will be in the best possible position to weigh diverse stakeholder views, work through possible concerns, and definitively resolve policy questions.

I have no doubt that we are up to the challenge of addressing the significant policy issues ahead of us. One such issue concerns our approach towards regulating interim and extended spent fuel storage. As part of our Waste Confidence decision, the Commission initiated a comprehensive review of this regulatory framework. This multi-year effort will (1) identify near-term regulatory improvements to current licensing, inspection, and enforcement programs; (2) enhance the technical and regulatory basis for extended storage and transportation; and (3) identify long-term policy changes needed to ensure safe extended storage and transportation. As the question of permanent disposal is for the Congress or the courts to decide, the Commission has been clear that it was neither assuming nor endorsing indefinite, onsite storage by ordering these actions.

As we all know, issues related to Yucca Mountain have garnered considerable attention in recent months. The 2011 appropriations bill has been signed into law, and provides \$10

million for the NRC staff to complete the effort to thoroughly document the staff's technical review and preserve it as appropriate for publication and public use.

As I hope my testimony has made clear, the NRC has had a very productive past year, and it has a very full agenda for the year ahead. There will be significant technical and policy decisions that the agency will have to work through, and the findings and recommendations of the Japan Task Force will be high priorities for our attention and response. All of these issues will elicit a broad range of viewpoints, both inside and outside the agency. That type of debate is healthy and productive, and helps to ensure that we reach the best decisions for nuclear safety. In the midst of these debates, however, it's important that we do not lose sight of the ground we share and of our ability to bridge whatever differences there are through our common commitment to safety.

The development of the NRC's Safety Culture Policy Statement in recent years is a testament to that common ground and commitment to safety. When the Commission initiated the process to develop this Policy Statement more than three years ago, many people thought that there were too many stakeholders, with too many different perspectives, to allow for meaningful agreement or progress. I doubt if anyone could have anticipated the broad spectrum of stakeholders – from our licensees to some of their strongest critics – who today actively support the Policy Statement.

It is important to build public confidence in the agency and its decisions, even if there is not always public agreement or acceptance. The process of developing the Safety Culture Policy Statement has demonstrated that we can go beyond public confidence and gain public acceptance even on a highly controversial issue like safety culture. It demonstrates that it's possible, *if* we go about our work in the right way – by proactively engaging the public and our

stakeholders at an early stage, and by involving them in a way that gives them a sense of ownership over the process and its ultimate decisions. The Safety Culture Policy Statement should remain an enduring symbol of our shared commitment to nuclear safety and an example of how the NRC can draw strength from that shared spirit to bridge differences and build consensus in order to enhance safety.

Mr. Chairmen, Ranking Members Rush and Green, and Members of the Subcommittees, this concludes my formal testimony today. On behalf of the Commission, thank you for the opportunity to appear before you. We look forward to continuing to work with you to advance the NRC's important safety mission. We would be pleased to respond to any questions that you may have. Thank you.