

State of Fuel Cycle Regulation
FCIX 2011

Good morning, and again welcome to the 2011 Fuel Cycle Information Exchange.

The past year has presented numerous challenges both for the NRC as we work to be efficient and effective in the protection of people and the environment in our licensing and oversight of nuclear fuel facilities, and for the fuel cycle industry in responding to changes in the environment in which they function. As we review the past year and look to the challenges of the future, let us focus together on the theme of this conference “Collaboration and Information Sharing in the Nuclear Fuel Cycle.”

While there have been specific challenges and identified Areas for Improvement, the operating fuel facilities continue to operate safely and securely while providing a stable supply of fuel to power one fifth of our nation’s electricity. This is the same observation that Dan Dorman made at the last Fuel Cycle Exchange in June of 2010. Now, however, additional challenges exist as both the NRC and the entire nuclear industry consider the implications of the Fukushima event. It will take some time to assess the actual impact on the nuclear industry including the fuel cycle and related facilities. At this point, it is too soon to predict what regulatory changes may be suggested by the lessons learned developed in the aftermath of this incident. However, we do know that as issues and changes are identified, that as an agency, we can continue to adhere to the principles of good regulation – independence, openness, efficiency, clarity, and reliability – by engaging in open dialogue, collaboration and clear information sharing.

The NRC and FCSS have long had a commitment to collaboration. We have long professed and practiced a commitment to “openness” in the conduct of our regulatory activities - “openness” with both the public and the regulated community. About 1996 we began to use the term safety-conscious work environment (SCWE) to describe an important component of the industry’s safety culture. As all of you know, this is an environment where employees are encouraged to raise concerns and those concerns are addressed and resolved. Evolving from SCWE is a challenge from our senior leaders to practice within the NRC, an Open, Collaborative Work Environment (OCWE), an environment that values diverse views and that encourages collaborative problem solving and decision making. We have extended our internal values for openness and collaboration to all our stakeholders and over the years we have engaged and are continuing to appropriately engage with the fuel facility industry on areas of mutual interest.

In keeping with the theme of this meeting, I will discuss some of the past and present that the NRC and industry and other stakeholders have been working on over the past several years.

Follow-up to Fukushima Event for Fuel Facilities

In March, as follow-up to the Fukushima event, the Office of Nuclear Reactor Regulation issued a Temporary Instruction, to independently assess the adequacy of actions taken by U.S. power reactor licensees in response to the that event. Similarly for fuel facilities, we are developing a process to independently verify that licensees are adequately prepared to prevent and/or mitigate the consequences of external events and to

evaluate the adequacy of emergency prevention or mitigation strategies. The results from the implementation of this process will be used by the staff to evaluate readiness for such events and to aid in determining whether additional regulatory actions are warranted. Since the process will include planning by the staff and be implemented over a period of time, we plan to reach out to the industry and stakeholders for insights on how to best implement this process and gather the needed information.

The Fuel Cycle Oversight Process

This past year, the Commission directed us to make modest adjustments to the fuel cycle oversight process (FCOP) to enhance its effectiveness and efficiency. The Commission said that we should: (1) continue to look for ways to improve stakeholder and licensee communication, (2) provide incentives for licensees to maintain strong corrective action programs, and (3) develop a set of cornerstones that could be applied to the FCOP. Consistent with the Commission's direction, we have taken a coordinated and integrated approach to enhancing our oversight process that engages stakeholders to gain their insights and develop recommendations for next steps. Over the last several months, and most recently yesterday, we have met with stakeholders to discuss the ISA/PRA comparison, cornerstones, corrective action program and other elements of a risk informed oversight process. We see alignment with our stakeholders as key to successfully developing and implementing a risk-informed, transparent and predictable oversight process. Therefore, we will continue to engage industry and other external stakeholders as we further develop the elements of an enhanced fuel cycle oversight process.

Design Features and NUREG-1520

We understand the need for licensees to have clear, consistent guidance on the implementation of the ISA requirements in 10 CFR Part 70, and for the past few years, we have been engaged with licensees and applicants on the use of design features or bounding conditions to establish the entry point for an ISA. In April 2011, staff from NMSS led a public meeting with representatives of the Nuclear Energy Institute and fuel cycle licensees and applicants. During this meeting the staff discussed initial thoughts on the use of bounding assumptions and design features for risk assessment in the licensees' integrated safety analysis or ISA. NMSS staff discussed how design features differ from IROFS and how they might be used to meet the regulatory requirements of 10 CFR Part 70. Staff also discussed the similarities of staff's proposed approach and text contained in the NEI's January 22, 2010, letter to the NRC. After much discussion, NEI indicated that they will consider the issues further and provide additional thoughts and information to the staff. While this is a difficult issue to get our arms around, we will continue to work with our stakeholders to get appropriate feedback as we develop our guidance and assure that the final position is consistent with and within the regulations.

Quantitative Dermal Exposure Standard for Workers

In 2007, the fuel cycle industry, through the Nuclear Energy Institute (NEI), recommended the NRC reconsider quantitative soluble uranium (U) intake criteria used in Integrated Safety Analyses (ISAs). According to NEI, new and additional data existed that warranted this reconsideration.

The NRC, in conjunction with NEI, formed a working group which included technical staff from the NRC, NEI and industry. The working group reviewed reports and other data that could affect the criteria used for a worker that may be impacted by a high and intermediate consequence accident sequence and a member of the public that may be impacted by an intermediate consequence accident. Many of the discussions among the participants occurred in meetings that were open to the public. Considering all available information, the NRC staff will develop a Draft Regulatory Guide (DRG) containing a standard set of soluble uranium chemical toxicity exposure criteria for use in ISAs. These may or may not be different than what is currently being applied to existing ISAs. The criteria will take into consideration all potential exposure pathways and potential exposures to hazardous substances, such as HF, produced as a result of an accident sequence involving a release of soluble uranium.

Recently, the Department of Health and Human Services published an FRN (April 27, 2011) announcing the availability of the Draft Toxicological Profile for Uranium for review and comment. The document addresses in part dermal exposures to uranium, and may be of interest to those of you following this subject. Comments must be received no later than July 29, 2011.

Safety Culture Implementation by Program Offices

After extensive public discussion and comment, a proposed Final Safety Culture Policy Statement was submitted to the Commission (SECY 11-0005), on January 5, 2011. The Commission approved the Statement with some changes in March 2011. In the SRM, the staff was directed to continue to engage with all stakeholders to communicate the contents of the policy statement, to educate stakeholders, and to ensure they have the necessary support to effectively employ the policy statement as they deem appropriate.

Currently, the Statement is being reviewed under the Congressional Review Act (CRA), but that review should conclude soon, leading to publication of the Policy. After publication of the Statement, the NRC staff will continue to actively engage with all stakeholders.

Draft Guidance on 70.72

Following FCIX 2007, a workshop was held to discuss a number of issues involving the implementation of the then 'new' Part 70 requirements. At the time, a number of working groups were formed to fully address the issues identified. The working groups included NRC staff, industry representatives, and public stakeholders. Among the work done to address these issues, was draft guidance on 10 CFR 70.72, which allows licensees,

under certain conditions, to make changes to their programs without prior notification to the NRC. These work groups operated under the Federal Advisory Committee Act oversight provided by the Advisory Committee for Nuclear Waste and Materials (ACNWM) until dissolution of the ACNWM and merging of its responsibilities into the Advisory Committee on Reactor Safeguards. At this point, NRC took the draft document and continued to develop it through the normal process for developing and completing an NRC position. Through this process, it has been determined that the current position must be incorporated into a draft Regulatory Guide and go back out for public comments. The staff has prepared the draft Regulatory Guide and plans to provide it to industry and the public for comment.

CLOSING

As we look back on each of these examples of collaboration with the industry, internal to the NRC, and with the public has not been, nor has it appeared to be perfect or completely satisfying. The process is not always transparent, but we are working to make it more transparent, and the additional time and effort involved in collaboration, although difficult at times, have contributed to better regulatory products and improved mutual understanding. We will keep working at it.

In conclusion, let me reiterate that the fuel facilities are operating safely, and the NRC remains vigilant and effective in its oversight to ensure the safety of workers and the public. Effective communication within and among our respective organizations, and with the stakeholders around the facilities, is key to sustaining, and enhancing, this record of success. I appreciate the frequent involvement of NEI, other industry stakeholders, and members of the public in addressing the many issues during public meetings over the last year. I hope that the discussions in the sessions and during the networking breaks over the next two days will be valuable to you as we Collaborate and Share Information in the Nuclear Fuel Cycle and that you fully utilize the opportunity to communicate with the NRC staff as well as others who are interested in these issues.

Thank you.