

July 2, 2009

MEMORANDUM TO: Joseph Shea, Director
Division of Fuel Facility Inspection
Region II

Dan Dorman, Director
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Materials Safety
and Safeguards

FROM: Russell Gibbs, Team Leader **/RA/**
Revised Fuel Cycle Oversight Process
Region II

SUBJECT: MEETING BETWEEN U.S. NUCLEAR REGULATORY COMMISSION
AND NUCLEAR ENERGY INSTITUTE AND FUEL CYCLE FACILITIES
REPRESENTATIVES CONCERNING A REVISED FUEL CYCLE
OVERSIGHT PROCESS

On June 4 and 5, 2009, the U.S. Nuclear Regulatory Commission (NRC) staff met with representatives of the Nuclear Energy Institute (NEI), fuel cycle licensees, and certificate holders concerning a proposed Revised Fuel Cycle Oversight Process (RFCOP). Enclosure 1 lists the meeting attendees.

Introduction

A public meeting notice for this meeting was issued on May 20, 2009, and was posted on the NRC's external (public) web page (NRC's Agencywide Document Access and Management Systems [ADAMS] accession number ML0914003990). The notice included the meeting agenda, which was also available as a handout at the meeting. The NRC presentation material, "Meeting to Discuss a Revised Fuel Cycle Oversight Process," the NRC framework posters, and the NEI presentation material, "Fuel Cycle-Revisiting the Oversight and Inspection Programs" were presented at the meeting and are now available on the NRC's external (public) web page (ADAMS accession number ML091560448). Other additional material presented included the definition of a licensee performance deficiency and the industry's proposal for the Emergency Preparedness cornerstone performance indicator (PI). This information can be found in ADAMS under accession number ML091810650.

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The RFCOP is an attempt to implement a risk-informed and performance-based approach to regulatory oversight of NRC-licensed fuel cycle facilities. The RFCOP seeks to build on the lessons learned from previous attempts to revise the process, from the development and implementation of the Reactor Oversight Process (ROP), and from the implementation of the revised Title 10 of the *Code of Federal Regulations* Part 70 which included the requirement that all fuel cycle facilities prepare Integrated Safety Analyses (ISAs) to help quantify the risks at their facilities. This was the first of what is planned to be a series of public meetings.

The NRC expressed in its opening remarks its desire to improve the regulatory oversight process and the need to move forward. The NRC seeks to develop an oversight process that is more objective, predictable and transparent. The RFCOP, as envisioned, will more fully use the risk insights from licensees' ISAs. The NRC will use the lessons learned in the ISA development to risk-inform the oversight process to concentrate the NRC oversight on the most safety significant aspects of facility operation. The NRC further explained that the RFCOP will attempt to use objective measures and metrics for safety assessments of licensee performance and to make timely decisions on NRC's actions beyond baseline inspections.

NEI, representing the fuel cycle industry and those present at the meeting, stated in their opening remarks, that in general they were encouraged by NRC efforts to create a more risk-informed and performance-based regulatory environment. They understood that the goal was to create a process that was objective, predictable and transparent. However, industry remained concerned about both NRC and industry resources that would need to be devoted to this effort and they needed assurance that the RFCOP would be effective in considering the diversity in the design and operation of the different facilities affected by this project.

The NRC invited comments from NEI and industry representatives on what they would like to achieve during this meeting. The collective response was that the RFCOP needs to be clearly defined, and that realistic milestones need to be established. One licensee stated the need to agree on basic oversight principles, noting that the transition between the ROP and the RFCOP would be a challenge due to differences in the facility operations and processes. NRC staff and industry acknowledged that a probabilistic risk assessment, as used in the ROP, is very different from the fuel facilities' ISAs. Another representative stressed that the meeting should focus on the work done in the past and to revisit the material on which the NRC and the industry had reached mutual agreement. The group agreed to try to focus on areas where agreement may be achieved early, and use the lessons learned in that success to move forward.

Discussion

Process Benefits

NEI and the industry representatives asked NRC what advantages or benefits the industry could expect to receive from the RFCOP. The NRC was reminded that industry participation in both the development and implementation in the project is voluntary. The NRC expressed that there are many benefits, one of which is the likelihood that "baseline inspections" could be modified. The baseline inspection was described as the minimum inspections conducted in the RFCOP program which may not coincide with the current "core inspections." The goal would be to shift the baseline inspections to focus on the more risk-significant activities. The NRC used the example of the current Management Organization and Control Inspection as a core inspection activity that would likely be removed from the revised baseline inspection program. This

inspection and other more programmatic type inspections would likely become supplemental inspections and only inspected in response to a more risk-significant inspection finding.

The NRC described an additional benefit related to how the NRC may treat inspection findings of very low safety significance. In the event an inspection finding of very low significance is identified by either the licensee or the NRC, the finding if associated with regulatory requirements would be treated as a non-cited violation as long as the licensee places the violation in its corrective action program in which the NRC has determined to be sufficiently robust. This treatment of these very low safety significant issues would improve regulatory efficiency and effectiveness and lessen unnecessary regulatory burden.

Oversight Process and Regulatory Frameworks

This section attempts to capture many discussions that centered on the oversight process. These discussions included discussions on the development of ISAs, the Significance Determination Process (SDP), the PI program and the Licensee Performance Assessment and Regulatory Response Process.

The NRC led a focused discussion on the foundation of the RFCOP by referring to two posters: the "Fuel Cycle Facility Oversight Process Framework" referred to during the meeting as the "mono-chromatic chart" and the "Regulatory Framework," referred to during the meeting as the "rainbow chart" both of which were shown as posters and within the handout with the same titles. One goal of the meeting was to begin to understand these frameworks.

Oversight Process Framework

There was significant discussion on the fuel cycle oversight process framework. The chart represents the roadmap to how the RFCOP would be used for licensee oversight. It contains several key elements, specifically: an SDP and the inspection inputs that feed the SDP; PIs and associated thresholds; and the Overall Assessment Process which the NRC has designated in the ROP as the "Action Matrix." The Action Matrix uses SDP and PI inputs to form the basis for NRC actions. The NRC explained that the process is meant to focus efforts by NRC and industry on important areas of plant operation. Thus, an inspection issue (presented as a licensee performance deficiency and discussed later) is first evaluated for risk-significance using the SDP. If it is determined that the performance deficiency is either minor or of very low risk-significance, each licensee would be expected to disposition the issue using their corrective action program. The same would be true for PIs. It is the intent that PIs developed be key measures of facility performance, and each must be tied to a process cornerstone (proposed cornerstones are shown on the "Regulatory Framework" poster and discussed later). The PIs are meant to be significant, higher level indicators, of licensee performance that reveal adverse trends needing correction. It is envisioned that the PIs be specific enough that when a threshold is exceeded it is an indication of the need for increased regulatory attention. Industry expressed continued concern that it may not be possible to develop PIs that could be equally applied to the different facilities. Staff agreed that this was a challenge, however NRC continues to believe that by using the ISAs to risk-inform the process, meaningful PIs and there associated thresholds, could be developed for certain cornerstones with a recognition that some cornerstones would likely be more deterministic in nature.

An NEI representative stressed the need to process specific examples through the SDP and the associated Action Matrix early in the project so that they would have a clear understanding of the process. An NRC representative stated that the NRC had already started to compile

historical inspection findings of the facilities to allow the findings to be analyzed by the SDP once the process and associated guidance was completed.

The NRC described the SDP in detail explaining the three phases used in the ROP with a focus on how Phase 1 of the SDP screens most inspection findings (>90 percent) to very low safety significance. The NRC also described how SDP Phase 2 notebooks are used as both a screening tool for inspection findings and a way to help both licensees and NRC better understand the risk profile for each facility. In this discussion, the industry questioned the need to develop the SDP notebooks for fuel cycle facilities because of the relatively low number of inspection findings that exceed the threshold for the Enforcement Policy's severity level IV violations. The NRC therefore agreed to further evaluate the need for Phase 2 notebooks in the RFCOP.

An issue discussed regarding licensee performance assessment was that the industry hoped to receive from the NRC positive feedback from inspections as opposed to only reporting on negative outcomes. The industry expressed that NRC inspection reports do not currently provide the public with the appropriate perspective of overall licensee performance. The industry noted that the current process simply describes the deficiency found instead of putting the single deficiency in the context of how many records and procedures were reviewed. The industry stated that they understand the NRC input and inspection reports, but the public may not have a complete understanding. NRC stated that this is an area that could possibly be addressed in a future revision to the licensee assessment process or Licensee Performance Review.

An NEI representative suggested that the NRC consider including non-traditional information into the assessment program. He suggested including employee feedback, public involvement, INPO assessments, and input from other government agencies (State, Environmental Protection Agency and Occupational Safety and Health Administration). The NRC questioned whether this would be feasible and whether it would provide valuable input considering its mission being limited to those activities involving radioactive material.

Regulatory Framework

There was a focused discussion on framework cornerstones. Both the NRC and industry had independently identified similar cornerstones. The industry had several questions on the framework layout such as why radiological and hazardous materials safety was differentiated from facility operation safety and why chemical safety was assessed under the cornerstones of "Chemical Safety" and "Occupational Safety." The industry representatives also expressed their desire to have each cornerstone defined to help in future discussions. The NRC mentioned that a basis document would be needed for the RFCOP and that it would attempt to have the cornerstones defined in the basis document. The NRC and industry agreed to revise the framework with the goal of reaching further understanding at the next public meeting.

Enforcement Policy and Corrective Action Programs

There was considerable discussion on licensee corrective action programs (CAPs). The NRC stated that robust CAPs are a critical element to the success of the RFCOP recognizing that there is no regulatory requirement for fuel cycle facilities to maintain one. An industry representative proposed an inspection of the CAP. The representative proposed that the licensees who chose to not maintain a corrective action program or one sufficient to the NRC inspection standard be inspected in a different manner. The NRC plans to include an inspection

on the CAP as part of the baseline inspection program and would likely conduct the inspection for all facilities as an initial inspection activity to confirm that licensee CAPs are adequate.

As discussed earlier in the Process Benefits section, there was additional discussion on how Enforcement Policy guidance would need to be revised to give credit for licensees who have robust CAPs by the NRC issuing non-cited violations for those violations of very low safety significance.

Licensee Performance Deficiency

The NRC introduced the concept of a licensee performance deficiency to be added to the RFCOP. The definition from the ROP was presented (see Enclosure 2) and the definition was discussed with particular emphasis on licensees meeting both regulatory and licensee self-imposed standards. Both NEI and industry representatives expressed concern regarding the concept of the NRC developing an inspection finding for issues not tied to regulatory requirements. It was agreed that the topic would be further discussed at the next public meeting.

Path Forward

The NRC proposed a three-phase approach to moving forward. The first phase would focus on the development of the process framework, SDP, PIs, and Action Matrix by the end of 2009. The second phase would begin to implement applicable parts of the program at select facilities in 2010 and the third phase would implement the program in its entirety across the industry in 2011.

The NRC originally proposed the selection of one or more lead facilities in which the RFCOP would be piloted. This proposal was related to available resources, program scope, and perceived overall efficiency. The basis for this approach was that the NRC could deal with potential issues on a smaller scale before incorporating the entire industry into the program. The industry objected to the NRC proposal as it felt the lead facilities approach could bias the program and not include all facilities causing some licensees to not be engaged. The industry proposed that the NRC consider an approach that was more cornerstone centered including all facilities. The NRC agreed to the industry's path forward proposal with the next meeting to focus on the Emergency Preparedness and Criticality Safety cornerstones.

The NRC and industry agreed to hold the next meeting at the NRC Headquarters at the Executive Boulevard Building in Rockville, MD on June 22, 2009.

Enclosure:

1. Meeting attendees list
2. Definition of a licensee performance deficiency

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List of meeting attendees

June 4, 2009

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Janet Schlueter	NEI
James Miller	NFS
David Wise	NFS
Jennifer Foster	NRC/RII
Alphonsa Gooden	NRC/RII
Douglas Collins	NRC
Jose M. Diaz Velez	NRC/RII
Lori Butler	GM EHS GE Hitachi
Scott Murray	Licensing Manager GE Hitachi
Charlie Vaughan	NEI
Mike Borden	USEC
Joey Ledford	NRC
Doug Fogel	USEC Ports
Rudolph Bernhard	NRC/RII
Felix Killar	NEI
Russell Gibbs	NRC/RII
Janice Kirby	NRC/RII
Victor McCree	NRC/RII
Dan Dorman	NRC/NMSS
Joe Shea	NRC/RII
HQ: VTC	
Jonathan DeJesus	NRC/ NMSS
June Cai	NRC/ OE
Jim Smith	NRC/ NMSS
Dennis Damon	NRC/ Senior Level Risk Assessment
Michael Raddatz	NRC/ Senior Project Manager
Patricia Silva	NRC/NMSS
Dennis Morey	NRC/ Inspector
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John Nagy	NFS
Robert Bari	BNL
Vinod Mubayi	BNL
Park Overall	Member of Public; Erwin, TN

June 5, 2009

Name	Title/ Affiliation
Region 2: Atlanta	
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Janet Schlueter	NEI
James Miller	NFS
David Wise	NFS
Jennifer Foster	NRC/RII
Alphonsa Gooden	NRC/RII
Douglas Collins	NRC
Jose M. Diaz Velez	NRC/RII
Lori Butler	GM EHS GE Hitachi
Scott Murray	Licensing Manager GE Hitachi
Charlie Vaughan	NEI
Mike Borden	USEC
Doug Fogel	USEC Ports
Rudolph Bernhard	NRC/RII
Felix Killar	NEI
Russell Gibbs	NRC/RII
Dan Dorman	NRC/NMSS
Joe Shea	NRC/RII
HQ: VTC	
Jonathan DeJesus	NRC/NMSS
Michael Raddatz	NRC/NMSS
Patricia Silva	NRC/NMSS
Dennis Morey	NRC/NMSS
On the Phone	
John Nagy	NFS
Robert Bari	BNL
Pranab Samanta	BNL
Linda Modica	Member of Public; Erwin, TN
Barbara O'Neil	Member of Public; Erwin, TN
June Cai	NRC/ OE
	B&W NOG