

September 12, 2011

MEMORANDUM TO: Margie Kotzalas, Acting Chief  
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and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

FROM: Jonathan DeJesus, Chemical Engineer **/RA/**  
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and Safeguards  
Office of Nuclear Material Safety  
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SUBJECT: SUMMARY OF MEETING BETWEEN THE U.S. NUCLEAR  
REGULATORY COMMISSION STAFF, NUCLEAR ENERGY INSTITUTE,  
AND FUEL CYCLE FACILITIES REPRESENTATIVES CONCERNING  
ENHANCEMENTS TO THE FUEL CYCLE OVERSIGHT PROCESS

On August 18 – 19, 2011, U.S. Nuclear Regulatory Commission (NRC) staff met with representatives of the Nuclear Energy Institute (NEI) and fuel cycle licensees and certificate holders to discuss enhancements to the Fuel Cycle Oversight Process (FCOP). Enclosures 1 and 2 list the meeting attendees on August 18, 2011, and August 19, 2011, respectively.

The notice for this public meeting was issued on July 29, 2011, and was posted on the NRC's public web page under the Agencywide Documents Access and Management System (ADAMS) accession number ML112092060. The meeting slides were published on August 17, 2011, under the ADAMS accession number ML112290136 and were provided to the meeting attendees. In addition, a package (ML112241308) with background documents for the meeting was published on August 15, 2011. The package contains the following documents: attributes of an effective corrective action program, Accident Sequence Initiators cornerstone characteristics, and safety controls cornerstone characteristics.

#### Opening Remarks

The NRC staff stated that inspection of fuel cycle facilities is expected to increase because of new facilities while at the same time senior Federal Government officials are seeking budget reductions that would likely include inspection staff. The NRC staff also stated its desire to be a good steward of the public, taxpayers, and the NRC's mission and that the way to effectively accomplish the NRC's mission is to enhance the FCOP. In addition, the NRC staff stated that it was important to recognize that industry is identifying and correcting their own problems.

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NEI expressed industry's concerns regarding the use of performance deficiency and the same colors for inspection findings in the significance determination process. Also, NEI stated that there had been progress made regarding the work on the corrective action program (CAP), but there is work that remains to be done.

### Proposed Enhancements to the FCOP

The NRC staff explained the changes made to the conceptual enhancements to the FCOP (slide 6) since the previous public meeting on June 6, 2011. Industry representatives expressed concern that the diagram looked like radical changes instead of enhancements and it seemed that outcomes from the enhanced FCOP would be different from the outcomes in the current process. The NRC staff stated that the enhanced process is not that different from the current process and that it would add predictability. Also, the NRC staff used a hypothetical example to explain how the enhanced process would work and stated that the enhanced FCOP would address potential safety issues and it would be rare to have civil penalties. Industry representatives also expressed concern about the significance levels using the same colors as in the reactor oversight process. The rationale for the concern was that it would give the perception that the hazards from a reactor and fuel cycle facility are similar. The NRC staff agreed to remove the reference to the colors.

The NRC staff explained the differences between the recommended enhancements to the FCOP (slide 6) and one of the alternatives (slide 76). The other alternative to enhance the FCOP is to do minimal enhancements such as including the credit for an effective corrective action program. The difference is that the first alternative (i.e., slide 76) does not have cornerstones and the significance determination process. However, the first alternative would use what the NRC staff learned from the development of cornerstones to risk-inform the inspection program. Instead of the significance determination process, the NRC staff would use the current issue disposition process (i.e., traditional enforcement) to assess the safety or security significance of inspection findings.

After the discussions, industry was supportive of the NRC staff's recommendation. However, industry representatives stated that much work needs to be done. The NRC staff agreed with this statement.

### Performance Deficiency and Minor Screening Process

The NRC staff discussed the definition of performance deficiency (PD) and the minor screening process. Industry representatives expressed concerns with the use of the phrase "self-imposed standards" and questioned the intent of using this phrase in the definition. The NRC staff stated that the intent was to include non-regulatory requirements that have a clear connection to the safe and secure operation of a facility. Also, an NEI representative questioned whether the nuclear power reactor industry has issues with the PD definition. The NRC staff stated that the nuclear power reactor industry had issues, but there was a significant amount of piloting in the use of the definition. Industry also expressed concern with the minor screening process questions. For example, industry representatives asked about the meaning of the word "significant" in the first question. The NRC staff stated that "significant" is defined as an issue that would be categorized as at least very low safety significance. An industry representative stated that industry could figure out what is minor, but not in the context of the PD definition. The NRC staff stated that the PD definition and the minor screening process are related and that it would be hard to move away from that definition. Industry representatives stated that if it

was hard to move away from the PD definition, then the concern would be in how the definition is applied.

Even though the NRC staff stated that it would be hard to move away from the PD definition and after listening to industry's concerns, the NRC staff stated it would recommend using a definition proposed by industry. The NRC staff recognized that using a proposed industry definition might result in changes to other parts of the enhanced FCOP. The NRC staff stated that the definition proposed by industry in 2009 (see slide 10) was not acceptable because it included the minor threshold and the minor threshold determination process would come after the issue has been determined to be a PD. Industry representatives appreciated the NRC's staff willingness to listen and stated that they would provide a revised definition that incorporates the NRC staff's feedback.

### Corrective Action Program

The NRC staff explained the attributes of an effective CAP. Industry representatives questioned what the NRC staff meant by stating "staff can submit issues by several methods." The NRC staff stated that the intent with this phrase was that an effective CAP must have more than one method to receive issues. Also, the NRC staff stated that the attributes do not specify which methods to use. In addition, industry representatives questioned the NRC staff's rationale for including trends of corrective actions because industry trends the issues not the corrective actions. The NRC staff stated that the reason to trend corrective actions is to ensure that they are effective and timely, but the focus of trending corrective actions is for timeliness. An industry representative suggested including the phrase "trended for timeliness" in this attribute. The NRC staff agreed with the suggestion. An industry representative asked why an attribute of an effective CAP is to keep licensee management informed. The NRC staff stated that licensee management has the ability to make changes and fix issues if they are brought to their attention. The NRC staff also clarified that a graded approach may be used to inform licensee management.

The NRC staff also explained the conceptual process of obtaining credit for an effective CAP. The process would begin with NEI developing a document that describes an effective CAP. The NRC would then endorse it and issue a generic communication describing how licensees would obtain the credit. An NEI representative stated that there are advantages for industry developing the CAP document, but was concerned about getting into the "bring me a rock" situation. An industry representative stated that the background document for this meeting that describes the attributes of an effective CAP is a good start and questioned the reason for not building up from that document. The NRC staff stated that it is preferable to have a single CAP standard coming from industry because it would avoid having different CAPs at each facility. Another industry representative stated that adopting a CAP standard would increase inspection hours, but the credit for it would not be worth the effort for that specific licensee and suggested that inspection frequencies be reduced due to having an effective CAP. The NRC staff stated that the cornerstone development would consider a possible reduction in the current core inspection program.

Industry representatives stated that they, along with NEI, would consider developing a CAP standard document for NRC endorsement. However, industry needs to further discuss with the licensees that were not present at the meeting.

### Significance Determination Process

The NRC staff started this topic by indicating that there has been significant interest from internal and external stakeholders on the significant determination process (SDP). Consequently, the NRC staff discussed the three conceptual types of an SDP and the pros and cons of each type. The first SDP type would be based on the licensees' probabilistic risk assessment of their respective facilities. Industry representatives stated that the Type 1 SDP is a non-starter given the resources needed to develop it and the little value that it would add to the licensees' safety bases. The type 2 SDP is a case-by-case evaluation informed by the licensee's integrated safety analysis. The type 3 SDP is a deterministic evaluation. An industry representative asked whether types 2 and 3 would include all barriers and safety controls. The NRC staff stated that there would need to be further discussions on what should be given credit. An industry representative stated that it seemed counter intuitive that type 3 SDP is the most objective of the conceptual SDP types. The NRC staff stated that the rationale for believing that type 3 SDP is the most objective is because it is not based in numbers. Also the NRC staff envisions multiple tables with guidance on how to do the significance evaluation and what should be given credit. An industry representative asked how the difference in risk profiles and operation would be taken into consideration in the SDP. The NRC staff stated that these differences might be taken into consideration early in the decision process. Also, the NRC staff acknowledged that there might exist other ways to take the differences into consideration, but the NRC staff has not worked on the SDP yet.

Industry representatives supported the NRC staff's proposal to recommend the type 3 SDP. However, industry representative stated that the details need to be worked out.

A consultant to the Advisory Committee on Reactor Safeguards (ACRS), clarifying that he does not speak for the ACRS, stated that he could not understand industry and NRC staff's move into the deterministic SDP, except for the amount of resources it would take to develop a type 1 SDP. Also, the ACRS consultant stated that numbers are not less objective. The NRC staff clarified that in the regulatory application, numbers could make the process of dispositioning the significance of inspection findings more cumbersome because of the likely arguments about the numbers, thresholds, and validity of the data.

### Cornerstones

The NRC staff discussed the changes made to the cornerstones since the last public meeting on June 6, 2011 (slide 55 or Option A). In addition, the NRC staff introduced a new option (slide 56 or Option B) that the staff developed in response to comments from internal stakeholders. Also the NRC staff further discussed the Accident Sequence Initiators (slides 57 – 67) and Safety Controls (slides 68 – 71) cornerstones, and the pros and cons of each cornerstone options.

Industry representatives expressed concerns with Option B because it seemed to complicate the oversight and inspection processes, and it would be difficult for licensees to communicate to their stakeholders (i.e., public living near their facilities and plant operators). Also, an industry representative asked about the differences in inspections using the Option B. The NRC staff stated that there would not be any differences in the inspection program under Options A and B. However, there might be differences in the assessment process.

The NRC staff explained that the Accident Sequence Initiators cornerstone is related to the licensees' safety basis and that recent inspection findings were related to this cornerstone. An

industry representative stated that this cornerstone does not seem to give credit to the licensing process. The NRC staff stated that the licensing and inspection processes are based on sampling. Another industry representative stated that he was surprised about not seeing management measures. The NRC staff acknowledged the comment and will consider it. The Safety Controls cornerstone was easily understood by industry representatives.

The NRC staff stated that it would recommend using Option B. The NRC staff and industry representatives acknowledged their disagreement regarding the cornerstones. However, the NRC staff will acknowledge industry's position in the Commission paper due in October 2011.

Enclosures:

1. Meeting attendees (August 18, 2011)
2. Meeting attendees (August 19, 2011)
3. Mailing List

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3. Mailing List

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**SIGN-IN SHEET**  
**Public Meeting on Fuel Cycle Oversight Enhancements**  
**Thursday, August 18, 2011**  
**8:30 a.m. – 5:00 p.m.**  
**6003 Executive Boulevard, Rockville, MD – E-1 B13/15**

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Michael Greeno	Honeywell
Calvin Manning	AREVA NP, Inc. – Richland, WA
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Zeechung (Gary) Wong	NRC/RES
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**SIGN-IN SHEET**  
**Public Meeting on Fuel Cycle Oversight Enhancements**  
**Friday, August 19, 2011**  
**8:30 a.m. – 12:30 p.m.**  
**6003 Executive Boulevard, Rockville, MD – E-1 B13/15**

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Pete Habighorst	NRC/NMSS/FCSS
Gerard Couture	Westinghouse
Terry Sensue	USEC, Inc. LCF/ACP
Jay Henson	NRC/NMSS/FCSS
Eugene Cobey	NRC/Region II/DFFI
John Kinneman (on the phone)	NRC/NMSS/FCSS
Marissa Bailey	NRC/NMSS/FCSS
Michael Boren	USEC, Inc. – Paducah
Michael Greeno	Honeywell
Calvin Manning	AREVA NP, Inc. – Richland, WA
Robert Link	AREVA NP, Inc. – Richland, WA
Anthony Gody	NRC/Region II/DFFI
John Miller	International Isotopes
John Flack	NRC/ACRS
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