

June 11, 2002

MEMORANDUM TO: Christopher I. Grimes, Program Director  
Policy and Rulemaking Program  
Division of Regulatory Improvement Programs, NRR

FROM: Joseph L. Birmingham, Project Manager */RA/*  
Policy and Rulemaking Program  
Division of Regulatory Improvement Programs, NRR

SUBJECT: SUMMARY OF MAY 16, 2002 PUBLIC MEETING WITH THE NUCLEAR  
ENERGY INSTITUTE (NEI) TO DISCUSS THE PUBLIC RADIATION  
SAFETY CORNERSTONE

On May 16, 2002, Nuclear Regulatory Commission (NRC) staff met with representatives of NEI and the nuclear power reactor industry in a publicly observed meeting at NRC headquarters in Rockville, Maryland. Also, representatives from industry and the NRC regions participated via teleconference. A list of meeting participants is attached. The meeting was held to continue discussions concerning potential changes to the Radioactive Material Control portion of the public radiation safety cornerstone, including defining what constitutes a minor inspection finding, and to discuss industry examples/scenarios involving radioactive material control at nuclear power plants. Ralph Andersen, of NEI, asked for a correction to the meeting summary for the April 24, 2002 meeting; the correct position is that hypothetical risks should not lead to an inspection finding.

Steve Klementowicz, of NRC, began the meeting with introductions and a summary of issues. He noted that industry has voiced its concerns about the significance determination process (SDP) of the radioactive material control (RMC) branch of the Public Radiation Safety cornerstone. The industry believes that the NRC inspection guidance for determining what is a minor violation is vague, subjective, and not applied in a consistent manner. In addition, they believe the SDP is compliance based rather than performance based, there is no risk-based criterion for entering the SDP, the SDP allows the aggregation of occurrences that are of low or no risk significance to lead to a "white finding", and the SDP in effect creates a disincentive for licensee's programs that go beyond regulatory requirements for monitoring and controlling radioactive material. In summary, NEI believes that recent industry experience with this SDP at Comanche Peak Nuclear Power Station indicates that its use can lead to outcomes that do not properly reflect risk significance and may result in unintended consequences. Thus, there is a need for guidance to better define the process for more clarity and consistency. Steve reminded participants that NEI had submitted a proposal for what inspection findings should be considered minor during the previous public meeting held on April 24, 2002. He stated that the staff wished to incorporate risk-informed criteria for characterizing items of noncompliance but that this may not be possible for all events. He mentioned that while there was criteria for release limits in Part 30 materials licenses, there is no corresponding criteria for Part 50 reactor licensees. Power reactors, in the absence of a regulatory limit, are held to a "no detectable licensed radioactive material" release criterion. This guidance put constraints on the flexibility the staff can use to apply risk for events involving the control of licensed radioactive material at power reactors. This has been a long standing policy in the Office of Nuclear Reactor

Regulation and has been discussed at public workshops dealing with NRC's efforts to determine whether there is a need for a regulation on Clearance (also called, control of solid material). The Public Radiation Safety cornerstone was not developed solely on a risk-informed basis, but includes "public confidence" weighting factors to assess the significance of findings. NRC staff proposed to use the numerical criteria in a IE Circular 81-07, "Control of Radioactively Contaminated Material," to define the threshold for a minor violation. The guidance states that, "contamination control limits should not be set below 5000 dpm/100 cm<sup>2</sup> total and 1000 dpm/100 cm<sup>2</sup> removable." Therefore, NRC staff proposed that licensed radioactive material, below these levels, found anywhere within the owner controlled area, except for the radiological control area, would be considered a minor violation. For any licensed radioactive material detected beyond a licensee's property and not controlled by the licensee, the finding would be considered more than a minor and assessed through the SDP, even if the risk to the public was negligible.

Ralph Andersen said there was a need to better understand the NRC's proposal; specifically the definitions for areas described as "radiological control area," or "protected area." He asked if there were definitions in the regulations for these areas. He recommended the use of "restricted area," as defined in 10 CFR 20.1003. The staff acknowledged that they were not using precise regulatory definitions, and they were not attempting to define new areas not in the regulations, but to base the draft inspection guidance on the location defined by each licensee as the point at which licensed radioactive material is controlled. The staff said that, typically licensees and the staff understood, and agreed on, the definition of "radiologically controlled areas" as being those areas that had defined boundaries within which radioactive contamination was controlled and for which surveys were conducted at exit points to prevent the release of licensed radioactive material. Owner-controlled areas were not typically radiologically control areas but typically had controls on access.

Ralph Andersen, pointed out that there was a crossover between the areas. For example, many licensees perform routine periodic radiation surveys of areas outside the radiological control areas. These surveys are not required by regulation but are performed as a defense in depth approach. Because of the inherent detection limitations of radiation surveys, it is not possible to detect all radioactive material and/or discrete radioactive particles. This material may be found later as a result of the licensee performing a survey using much more sensitive radiation detection instruments. Thus, the NRC's proposal could have the unintended consequence of punishing a licensee for doing more than was required. He said that the SDP needed to consider the ability or level of technology to detect items leaving the controlled area when setting up the definition of minor.

Ron Nimitz, from NRC Region I, pointed out there could be pathways for contamination on items within the owner-controlled area to get offsite and that this possibility should not be ignored. NEI agreed that such pathways could exist and that guidance needed to be developed to evaluate those situations.

Ralph Andersen proposed consideration of use of the licensee's area within the security fence, commonly called the "protected area", as the boundary for consideration of whether licensed radioactive material represents a hazard to a member of the public. Because this area is protected by fencing with razor-wire, electronic surveillance, and armed-guard patrols, it effectively eliminates unauthorized public entry into the area. Ralph Andersen asked if it made sense for this area to be assessed under the Public Radiation Safety cornerstone, since the public could not reasonably be exposed to licensed radioactive material. NEI suggested that a

noncompliance involving licensed radioactive material within the protected area would be more correctly evaluated using the Occupational Radiation Safety Cornerstone SDP. A discussion point was made to consider putting this area under the Occupational Radiation Safety cornerstone.

After considerable discussion on these points, the NRC staff said they understood the rationale for the industry's concerns. However, the staff stated that there is still a considerable gap in reaching consensus on a definition of a minor violation. Additional meetings are needed to fully explore and discuss various options.

The group then proposed four items to be discussed in a future meeting (1) discrete radioactive particles, (2) transfer of radioactive material from licensee to licensee, (3) volumetric contamination (eg., soil, sludge), and (4) noncompliances that are not deficiencies because there is no reasonable corrective action a licensee can implement to correct the deficiency. No date was set for the next meeting. The meeting was adjourned.

Project No. 689

Attachment: As stated

cc w/att: See list

**List of Attendees for May 16, 2002 Meeting  
Public Radiation Safety Cornerstone**

<b>NAME</b>	<b>ORGANIZATION</b>
Ralph Andersen	NEI
Ted Quay	NRC/NRR/DIPM/IEHB
Steve Klementowicz	NRC/NRR/IEHB
Roger Pedersen	NRC/NRR/IEHB
Audrey Hayes	NRC/NRR/IEHB
Jim Wigginton	NRC/NRR/IEHB
Joseph Birmingham	NRC/NRR/RPRP
Ron Nimitz	NRC R-I
Dave Nelson	NRC R-III
Mike Shannon	NRC R-IV
Danny Wilder	TXU
Sun Lee	First Energy
Richard Doty	PPL Susquehanna
Mike Lantz	APS
Mike Russell	SCE
Lee Thomason	Dominion
Doug Noble	American Electric Power

Nuclear Energy Institute

Project No. 689

cc: Via email

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**Memo Accession#**  
**NRC-001**

Distribution: Mtg. Summary w/NEI re Public Radiation Protection SDP Dated 6/11/02  
ADAMS/PUBLIC OGC ACRS

Email

SCollins/JJohnson	BSheron	WBorchardt	DMatthews/FGillespie
CGrimes	SWest	SKlementowicz	BBoger
RPedersen	JWigginton	AHayes	MShannon, R-IV
RNimitz, R-I	TQuay	DNelson, R-III	KGibson
SMorris, EDO	MFields	AHsia, RES	

**ADAMS Accession No.: ML**

OFFICE	RPRP	IEHB	RPRP
NAME	JBirmingham:	KGibson/JLB for/	SWest
DATE	06/11/2002	06/11/2002	06/11/2002

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