Mr. Anthony Pietrangelo, Vice President
Regulatory Affairs
Nuclear Generation Division
Nuclear Energy Institute
1776 I Street NW, Suite 400
Washington, D.C. 20006-3708

Dear Mr. Pietrangelo:

The Nuclear Regulatory Commission (NRC) staff, together with the Nuclear Energy Institute (NEI), industry representatives, and other stakeholders, have held a series of public meetings to discuss whether and how licensee probabilistic risk assessment (PRA) models that are updated to meet Regulatory Guide (RG) 1.200 can be factored into the NRC=s significance determination process (SDP). This activity stems from an action item from the public meeting of September 28, 2006, between the NRC PRA Steering Committee and industry representatives. The action from the September 28, 2006 meeting was to form task groups to investigate various options for the use of the standardized plant analysis risk (SPAR) models in the SDP.

A number of options were developed and discussed with the industry during the public meetings. In particular, the industry has recommended that licensee risk analysts should assess the risk of performance deficiencies, and provide the results to the NRC for review and action. After careful consideration of the merits of all of the options developed as part of this effort, the staff concludes that none of the options are acceptable alternatives to the current process for the SDP.

The staff recognizes that baseline PRA models that have undergone peer review and conform to the requirements of RG 1.200 are of relatively high quality. In many cases, the staff has found these baseline models to be superior in detail to its own SPAR models, particularly with regard to external event modeling. Nonetheless, the staff=s experience with the SDP is that the analysis outcome is not heavily influenced by differences between a licensee=s PRA model and the NRC SPAR model. Typically these differences are recognized and accounted for.

Our experience has been that differences in SDP outcomes between the NRC and the licensee are driven by factors other than the baseline PRA model used for the analysis. For example, virtually every event or degraded condition for which a phase III risk assessment is conducted requires engineering analysis and PRA model modifications to represent the performance deficiency or equipment degradation. Key assumptions regarding the extent and duration of equipment degradation are made, and human recovery actions and/or systems not modeled in the baseline PRA are often credited. The manner in which the risk analyst addresses these issues can significantly influence the risk estimate outcome. In that the NRC=s Reactor Oversight Process (ROP) provides an independent assessment of licensee performance, it would be inappropriate for licensee risk analysts to take the lead in assessing the significance of licensee performance deficiencies. We note that to the extent that licensees have unique

perspectives on the event or condition under NRC staff evaluation, the SDP allows for input from licensees regarding such risk insights.

The staff has also concluded that allowing licensees to take the lead on risk assessments would minimize the NRC staff=s ability to ensure that issues are assessed in a timely manner.

Additionally, at present, the industry lacks a standardized approach to performing risk analysis that would ensure uniform application across the spectrum of industry PRA models. In this regard, the NRC=s use of the SPAR model together with the on-going development of guidance on conducting phase III risk assessments, commonly referred to as the risk assessment standardization process (RASP), ensures greater uniformity.

The staff also seriously considered the alternative to the current process whereby the staff would be provided with the licensee PRA models that meet RG 1.200. Under this option, the staff would perform the assessment of risk significance using a standardized approach. While this second option has merit, the staff has concluded that the logistical and resource needs to maintain the many licensee PRA models in-house is not feasible. Altogether, the 70-plus industry PRA models on some four software platforms would require significant NRC resources, including the addition of risk analysts, who might otherwise be more effectively utilized for other tasks. This alternative, while perhaps holding promise for the future as PRA software platform standardization advances, is not a viable solution for the near-term.

In summary, the staff believes that continued improvement to the standardization of PRA modeling methods in SPAR and industry PRA models is the most effective use of resources, commensurate with the need for the staff to maintain its own methods for confirmatory and independent analysis. The NRC independent oversight of licensee performance is also an important aspect of maintaining public confidence in the process.

We look forward to working with the industry to continue development of guidance for the standardized application of risk assessment models to operating event analysis.

Sincerely,

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

The staff has also concluded that allowing licensees to take the lead on risk assessments would minimize the NRC staff=s ability to ensure that issues are assessed in a timely manner.

Additionally, at present, the industry lacks a standardized approach to performing risk analysis that would ensure uniform application across the spectrum of industry PRA models. In this regard, the NRC=s use of the SPAR model together with the on-going development of guidance on conducting phase III risk assessments, commonly referred to as the risk assessment standardization process (RASP), ensures greater uniformity.

The staff also seriously considered the alternative to the current process whereby the staff would be provided with the licensee PRA models that meet RG 1.200. Under this option, the staff would perform the assessment of risk significance using a standardized approach. While this second option has merit, the staff has concluded that the logistical and resource needs to maintain the many licensee PRA models in-house is not feasible. Altogether, the 70-plus industry PRA models on some four software platforms would require significant NRC resources, including the addition of risk analysts, who might otherwise be more effectively utilized for other tasks. This alternative, while perhaps holding promise for the future as PRA software platform standardization advances, is not a viable solution for the near-term.

In summary, the staff believes that continued improvement to the standardization of PRA modeling methods in SPAR and industry PRA models is the most effective use of resources, commensurate with the need for the staff to maintain its own methods for confirmatory and independent analysis. The NRC independent oversight of licensee performance is also an important aspect of maintaining public confidence in the process.

We look forward to working with the industry to continue development of guidance for the standardized application of risk assessment models to operating event analysis.

Sincerely,

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

DISTRIBUTION:
DRA r/f

ADAMS Accession No.: ML071990509

OFFICE	NRR/DRA/APOB	NRR/DIRS/IRIB	NRR/DIRS	NRR/DRA	NRR/ADES	NRR/ADRO
NAME	MFranovich	TReis	SRichards	MCunningham	JGrobe	BBoger
DATE	07/ /2007	07/ /2007	07/ /2007	07/ /2007	07/ /2007	07/ /2007

OFFICIAL RECORD COPY