

January 30, 2006

Dr. Charles Shepherd
Nuclear Installations Inspectorate
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Merseyside, UK
L20 3LZ

SUBJECT: USE OF RISK INFORMATION IN THE REGULATORY PROCESS
QUESTIONNAIRE (WGRISK TASK 2003-2)

Dear Dr. Shepherd:

The U.S. Nuclear Regulatory Commission (NRC) has reviewed the questionnaire identified above and your request for NRC's completion of the same. In lieu of completing the questionnaire, we agreed to provide you with examples of the NRC's use of risk information in the regulatory process. The purpose of this letter is to provide you with those examples.

The NRC Commission, by publishing its Final Policy Statement on the Use of Probabilistic Risk Assessment Methods in Nuclear Regulatory Activities (*Federal Register*, Vol. 60, p. 42622, August 16, 1995), reflected its belief that an overall policy on the use of probabilistic risk assessment (PRA) methods in nuclear regulatory activities should be established so that the many potential applications of PRA would be implemented in a consistent and predictable manner that would promote regulatory stability and efficiency. Furthermore, the Commission stated its belief that the use of PRA technology in NRC regulatory activities should be increased to the extent supported by the state-of-the-art in PRA methods and data, and in a manner that complements the NRC's deterministic approach. With implementation of this policy statement, the Commission also recognized, and encouraged, continuation of industry initiatives to improve PRA methods, applications, and data collection to support increased use of PRA techniques in regulatory activities.

Since the PRA Policy Statement was issued, a number of risk-informed activities have been undertaken, and a number of documents have been written by both the staff and industry that provide guidance on the use of PRA information in risk-informed reactor regulatory activities. Risk information has been used for activities like rulemakings, technical specification changes, reactor oversight and enforcement. The table shown below provides additional information on regulatory activities undertaken by the NRC that use risk information. As the list of activities suggests, the NRC is committed to the appropriate use of risk information in its regulatory activities.

Risk-Informed Regulatory Activities	
Category	Activity
Rulemakings	50.69 (Risk-Informed Categorization and Treatment of Structures, Systems and Components)
	50.46a (Acceptance Criteria for RCS Venting Systems - Proposed Rule)
	50.44 (Combustible Gas Control)
	50.65(a)(4) (Risk Assessment of Maintenance Activities)
	50.61 (Fracture Toughness Requirements for Protection Against Thermal Shock Events)
	NFPA 805 (Performance-Based Standard for Fire Protection)
	Pressurized Thermal Shock
Risk-Informed Technical Specifications	Regulatory Guide (RG) 1.174 (Approach for Using PRA in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis) activities
	RG 1.177 (Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications) activities (e.g., Tech Spec Initiative 4b for extension of allowed outage times, etc.)
	Risk Informed In Service Inspection
	Risk Informed In Service Testing (e.g., code cases)
Phased Approach to PRA Quality	RG 1.200 Pilots for Internal Events
	American Nuclear Society (ANS) Fire Standard
	ANS Low Power & Shutdown Standard
	Treatment of Uncertainties
	External Event Standard
Reactor Oversight Process (ROP) & Significance Determination Process (SDP)	ROP (e.g., Risk Assessment Standardization Project, Mitigating Systems Performance Index)
	SDP (e.g., SDP notebooks for scenarios not previously addressed, rev. 2 notebooks, pre-solved worksheets)
	External Events (e.g., fire, seismic, etc.)
Notices of Enforcement Discretion (NOED)	NOED Evaluations
Risk-Informed Topicals	Integrated Leak Rate Testing
Office Instructions	Integrated Risk Informed Decision Making Process for Emergent Issues (LIC-504)
Miscellaneous	Technology Neutral Framework

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We appreciate the opportunity to provide you with a sample of NRC's regulatory activities that are based on risk information. We want to acknowledge the probabilistic safety assessment work led by the WGRisk Group as it provides benefits to the US NRC and other Member States. We hope the information we provided in this letter assists you in your endeavor to understand how risk information is used in nuclear regulatory processes.

Sincerely,

Michael D. Tschiltz, Deputy Director
Division of Risk Assessment
Office of Nuclear Reactor Regulation

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Division of Risk Assessment
Office of Nuclear Reactor Regulation

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