

October 18, 2004

MEMORANDUM TO: James E. Dyer, Director
Office of Nuclear Reactor Regulation

FROM: Carl J. Paperiello, Director /RA/
Office of Nuclear Regulatory Research

SUBJECT: USER NEED REQUEST, "INDUSTRY TRENDS PROGRAM"
(NRR# 2004-09)

I am writing to respond to your user need request, dated September 21, 2004, concerning the Industry Trends Program. As stated in your request, we have discussed this need with the staff of the NRC's Office of Nuclear Reactor Regulation (NRR), and we will be able to support NRR on the three requested tasks, based on the scope and schedule discussed in the remainder of this memorandum.

Task 1: As stated in your memorandum, the RES staff has already issued a draft report concerning the Baseline Risk Indicator of Initiating Events (BRIIE). Since the RES Operating Plan does not currently include continued development and implementation of BRIIE, we will meet with the NRR staff to establish due dates for the following milestones associated with this task:

- Address the stakeholder comments and finalize the draft report.
- Finalize the BRIIE methodology, including implementation details.
Address the following considerations:
 - ▶ differences between the BRIIE calculations and the comparable Mitigating Systems Performance Index (MSPI) methodology
 - ▶ presentation of results in relative and absolute values
 - ▶ methods for deriving short- and long-term thresholds
 - ▶ responses to exceeding established short- and long-term thresholds
- Provide updates concerning the status of development at periodic meetings with stakeholders.

When agreed upon, these milestones will be included in the RES Operating Plan.

Contact: Anne-Marie Grady, RES/DRAA
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Task 2: We agree to periodically update the available data concerning industry trends related to system and component reliability, common-cause failures, and fire studies. Toward that end, the RES staff will prepare periodic reports containing updated data and graphs, including statistical trend lines fitted to the data, which we will submit to NRR under cover of a memorandum at the branch level. We will provide the first of these reports in mid-December 2004, followed by annual reports thereafter to support the issuance of the annual Industry Trends Commission paper. The RES Operating Plan already includes the necessary resources for this task.

Task 3: We will provide occurrence rates per reactor-year for all Accident Sequence Precursor (ASP) events with a conditional core damage probability (CCDP) or change in core damage probability ($\Delta\text{CCDP} \geq 10^{-6}$). This task will include identifying any statistically significant trend(s) and the cause(s) of any increase(s). We will begin providing the ASP trends data in mid-December 2004, followed by annual reports thereafter to support the issuance of the annual Industry Trends Commission paper. We will also work with NRR to investigate the nature of the short-term variation in the number of precursors in 2000 and 2001, compared with the relatively low number of precursors between 1997 and 1999. In so doing, we will provide a draft report for NRR review and comment by August 2005. The RES Operating Plan already includes the necessary resources for this task.

cc: M. Virgilio

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