MUG / NRC Information Exchange Meeting

Ken Canavan

Electric Power Research Institute

September 2004

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INTRODUCTIONS

Name	Role	Organization	Contact Info
Ken Canavan	Action Plan Project Manager	EPRI	704-717-6441 kcanavan@epri.com
Frank Rahn	MUG Project Manager	EPRI	650-855-2037 frahn@epri.com
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Jeff Gabor	MUG Steering Committee Chairman	Exelon	610-431-8260 jrgabor@erineng.com
Bob Henry	MUG Primary Contractor	FAI	630-323-8750 henry@fauske.com
Marc Kenton	Action Plan Contractor	Creare	603-640-2424 mak@creare.com
Barbra Schlenger-Faber	Independent Reviewer – Contractor	ERIN	610-431-8260 bjschlenger@erineng.com

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Agenda

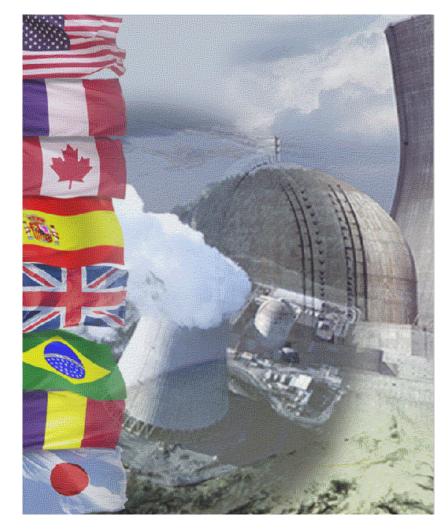| Time	Topic	Presenter
9:00 – 9:30	Opening Remarks and Introductions	Ken Canavan / NRC
9:30 – 10:00	Structure of the Meeting	Bob Henry (FAI)
10:00 – 10:20	Break	
10:20 – 12:00	MAAP4 calculations for the Manshaan station blackout.	Chan Paik (FAI)
12:00 – 1:00	Lunch	
1:00 – 2:00	Comparison of MELCOR, MAAP4 and SCDAP/ RELAP for PWR Station Blackout Calculations	Karen Vierow (Purdue)
2:00 – 3:00	Influence of MAAP4 models bypassed for the MELCOR and SCDAP/RELAP Comparison	Marc Kenton (Creare)
3:00 – 3:20	Break	
3:20 – 4:00	Use of MAAP4 results for station blackout-like sequences, i.e. what is sufficient	Jeff Gabor (Exelon)
4:00 – 4:30	Meeting Conclusion / Summary / Feedback	All

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Meetings Goals and Objectives

- MAAP Users Group (MUG) is sponsoring the meeting to:
  - Assist in improving the NRC perception of the MAAP code used in risk-informed submittals
    - Information exchange meeting. Determine the potential for future meetings or other methods of information exchange
    - One result of December 2003 meeting with NRC
    - Part of the "MAAP Action Plan"
  - Provide the results of benchmarking activities to the NRC and MAAP user community
  - Communicate on-going MUG activities

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Information Exchange Suggested Guidelines

- Please feel free to ask questions during the presentation. However, in the interests of ensuring adhering to the meeting agenda, questions or comments may be:
  - Held to end of presentation
  - Captured for future followup

- Meeting is planned for information exchange. No policy issues will be discussed or decided during this meeting.

- While every effort will be made to address participant questions, there is no formal commitment to provide a response.

- Any suggestions and/or future topics for exchange meeting can be provided to the EPRI project manager.

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MAAP 4 Action Plan - 2004

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MAAP 4 Action Plan – Overview

- On several occasions the NRC has requested the use of alternative thermal-hydraulic codes in risk-informed submittals that initially used MAAP.

- The industry position is that MAAP is the thermal hydraulic code of choice for risk-informed submittals.

- MAAP Action plan devised to eliminate these occurrences and address NRC concerns. (Any NRC feedback would be very useful in refining the effort.)

- Action plan is multi-year, living, plan comprised of three elements:
  - Improved Communication
  - Improved Demonstration of Technical Adequacy
  - Improved Code Documentation

- While MAAP is continually being improved, no new code development is planned as part of the action plan.

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MAAP 4 Action Plan – Improved Communication

- Improved communication with the user community and the NRC is achieved through the performance of three individual tasks.

  - Continued interaction on MAAP related issues.

    - December 2003 meeting to address use of MAAP.

      - MAAP is sufficient for use in SDP and should not, without technical justification, be rejected or an alternate requested.

      - A quality process similar to the process to assure PRA quality may be useful.

      - Further discussions would be useful.

  - Collection of MAAP benchmarks with experimental data, actual plant experience, and other codes (e.g., RELAP, etc).

  - MAAP user community and NRC familiarization with benchmarks through information exchange meetings.

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MAAP 4 Action Plan – Improved Demonstration of Technical Adequacy

- The technical adequacy of MAAP has been demonstrated many times over the years and in a variety of forums.

- The purpose of this element is to improve the technical adequacy demonstration.
  - Question and Trouble Report (Q&TR) activities.
  - Benchmarking Activities.
  - MAAP User Manual Updates. A multi-year endeavor to add to the users manuals additional information.
  - Develop a user desktop guide that contains a summary of precautions, limitations, typical uses of MAAP as well as additional parameter file guidance.

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MAAP 4 Action Plan – Application Guide Development

- In this element, a single task is performed, the development of a MAAP 4 Application Guide. The guide assists in the continued development of high quality MAAP support of risk-informed application as well as promotes consistency of MAAP code support.

- The MAAP Applications Guide becomes an input to the previous element by becoming part of the MAAP desktop guide.

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MAAP 4 Action Plan – Summary

- The purpose of the plan is to improve the quality of risk-informed applications supported by the MAAP code.

- The action plan is:
  - A multi year living plan.
  - Designed to improve "user friendliness" of the code documentation.
  - While code enhancements continue on MAAP, no new code development is planned as part of the action plan.
  - Produces a revised comprehensive set of documentation to aid the user in risk-informed application development.

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MAAP 4 Action Plan – Status

- MAAP 4 Action Plan developed January 2004
  - Element 1 – Improved Communication
    - Survey distributed to obtain existing benchmarks.
    - Meeting with NRC late summer 2004.
  - Element 2 – Demonstration of Technical Adequacy
    - Question and Trouble Report activities being accelerated.
    - RELAP comparison by Texas A&M and MUG members.
    - User manual enhancements planned to begin in late 2005 / 2006.
  - Element 3 – MAAP 4 Application Guide
    - Desktop / Application guide effort to begin in early 2005.

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