MARACOR Update

Ready for MSPI?

Welcome to the latest semi-annual issue of **MARACOR Update**, describing many of our recent and current activities such as support for self-assessment of PRA technical adequacy and resolution of outstanding technical issues. These topics are very relevant, due to the approaching Mitigating System Performance Index (MSPI) milestones for Basis Document development & NRC assessment.

MARACOR Software & Engineering, Inc. provides engineering consulting services and technical software development, primarily for the electric utility industry.

Our staff consists of experienced engineers with proven track records of technical capability, customer service, and on-time product delivery. Our service areas include Probabilistic Safety Assessment (PSA), Configuration Risk Management/Maintenance Rule support, PSA applications, reliability analysis, maintenance optimization, software applications, and cost-benefit analysis. We hope you continue to consider **MARACOR** to support your technical consulting needs.

Recent Activities

For more information about any of these projects, please see the contact information provided at the end of this newsletter

Configuration Risk Management (CRM)

Maracor recently completed a STARS Alliance joint project develop a common framework for shutdown Defense-In-Depth (DID) models, incorporating the best practices from each STARS plant. The project identified & resolved a number of inconsistencies in the current models. It also provided a documented basis for a standard DID model that could be used by all six STARS plants.

At DC Cook, an updated DID model is being developed for use with the Safety Monitor™. The Cook quantitative shutdown CRM model is also being updated.

Maracor continues to provide technical support to the EPRI CRMF (Configuration Risk Management Forum). A framework was recently developed for considering external events impacts in CRM evaluations (EPRI TR-1009675). In 2005, this framework should be tested at several power stations and further refined.

An initial EOOS™-based reactor trip model was recently developed for FPL to support a cost-benefit evaluation of generation risk models.

PSA Enhancement

As part of an ongoing multi-company project at San Onofre to address comments received from a pilot Certification to the ASME PRA Standard, Maracor performed a complete re-analysis of the initiating event & accident sequence portions of the PSA. The updated models include many new support system initiating events. Conservatism was also reduced in other areas. Other project tasks include an industry benchmarking survey and more extensive uncertainty & sensitivity analyses.

Other ongoing PSA update projects include:

- Support for Entergy's ANO PSA updates.

- Support for various Dominion PSA enhancement projects, particularly in support of MSPI preparation.

- Refinement of DC Cook's PSA success criteria and human error timing, using MAAP4.

Software Tools

Maracor develops and enhances software tools for PC Windows® desktop and Web-enabled applications. We provide several off-the-shelf products, and can develop custom tools to meet specific needs.

OPTIC™, a custom cost-benefit analysis tool for SCE's T&D Asset Management group, has been developed to help rank Load Growth and Infrastructure Replacement projects. Among other features, the software considers how equipment failure rates might increase over time, as aging occurs and loading on the equipment increases. Further enhancement of this tool is planned for 2005.

Our **SM-UNCERT™** software tool has been upgraded to accept input from the R-DAT™ data analysis package and the WinNUPRA™ PRA code suite. (Input from Safety Monitor™ is already supported.) SM-UNCERT uses the NRC-developed LHS and TEMAC codes to perform uncertainty analysis using various data distributions. With the new R-DAT interface, histograms of Bayesian-updated distributions can be directly input into the uncertainty analysis to provide a more precise analysis.

SM-UNCERT could be modified to support other PSA software tools, if desired.

OPTIC Data Entry Screen

P lease visit our Web Site, www.maracor.com, to obtain additional information about our products and services. On our Web Site, you can also review our most recent news releases and product announcements. Additional copies of **MARACOR Update** are also available there for downloading.

New Additions to our Staff…

Stan Guokas joined the Maracor staff last fall, providing primarily on-site support for various clients. Stan is an experienced Level 1 PRA consulting engineer and served as the Point Beach PRA engineer for many years before supporting various consulting projects for other utilities. Since joining Maracor, Stan has provided support for the Millstone flooding PSA project, and is currently assisting Entergy in various PSA update tasks on-site at their Jackson, MS offices.

How to Contact Us

MARACOR operates from three primary office locations, with additional personnel located in Delaware, Pennsylvania, Tennessee, and Washington. On-site support can also be provided. Please contact the office nearest to you for information about our capabilities and services:

Thomas Morgan	**Diane Jones**	**Ray Dremel**
MARACOR	**MARACOR**	**MARACOR**
3615 Westchester Court	175 – 57th Court	1007 Oak Creek Drive
Middletown, MD 21769	West Des Moines, IA 50266	Lombard, IL 60148
(301) 371-3260	**(515) 221-0096**	**(630) 652-3811**
tmorgan@maracor.com	djones@maracor.com	rdremel@maracor.com