SCAPA
Consequence Assessment Modeling Working Group (CAMWG)

Highlights
CAMWG Annual Meeting
May 4, 2010, 5:00 p.m. PDT

Participants

Fernando Aluzzi (LLNL NARAC)
Dennis Armstrong (WSMS)
Kevin Birdwell (ORNL)
John Ciolek (Alpha-TRAC)
Dan Conners (Hanford)
Kirk Clawson (ARL FRD)
Wayne Davis (WSMS)
Dave Freshwater (NA-41)
Cliff Glantz (PNNL)
Courtney Haggard (WSMS)
Aprill Jivelekas (WSMS)
Erik Kabela (SRNL)
Greg Martin (SAIC)
Peter Martin (EOTA)
Carl Mazzola (Shaw Environmental)
John Nasstrom (LLNL NARAC)
Mike O'Keeffe (NTS/NSTec)
Jeremy Rishel (PNNL)
Phil Pfeiffer (INL)
Chuck Rives (Pantex)
Kip Smith (ARL/SORD)
Melissa Thornton (WSMS)
Steve Vigeant (Shaw Environmental)
Sue Vosburg (SNL)
Michele Wolfgram (ORNL)
Jamie Wright (Y-12)
Ken Young (LLNL)
Xiao-Ying Yu (PNNL)

Roll Call

Carl Mazzola conducted a roll call and noted that 28 individuals participated in the Las Vegas meeting of the working group.

Administrative Matters

Jeremy Rishel welcomed everyone and outlined the topics to be discussed.

Old Business

SCAPA SQA Guidance and the SCAPA Toolbox: Jeremy Rishel provided a discussion on the SCAPA Software Quality Assurance (SQA) initiative. He mentioned that DOE O 414.1C and DOE G 414.1-4 were issued in 2005 to address SQA requirements for safety software. The DOE/HS Central Registry was created to manage codes that are in its safety software toolbox. Models in this toolbox include ALOHA, EPICODE, CFAST, MACCS2, GENII, MELCOR, GENII, and IMBA. HOTSPOT is in the final evaluation phase and will soon be included in the Central Registry Toolbox.

Jeremy stated that applying the SQA requirements and guidance for safety software to consequence assessment models that only perform safety-related or non-safety functions would have negative implications in terms of the usage and continuing technological innovation of these models. To overcome this situation, significant work has been done to develop a separate SCAPA SQA guidance document for safety-related and non-safety software.

This guidance would apply an appropriately graded approach for consequence assessment software that supports emergency preparedness and response functions at DOE/NNSA sites and will provide the SQA requirements for accepting software into a SCAPA Toolbox for Consequence Assessment Models that perform safety-related or non-safety functions.

Jeremy stressed that legacy codes with a proven track record of performance would be grandfathered into the SCAPA Toolbox. However, all future model development would have to be conducted in accordance with the SCAPA SQA guidance. For all models entering the SCAPA Toolbox, an SQA gap analysis will be conducted. **ACTIVITY CONTINUING**

SQA Guidance Document: Cliff Glantz and Jeremy Rishel discussed the draft SQA Guidance Document, which provides a basic and consistent set of SQA expectations that all software products could meet and that model developers could supplement with additional site, company, and programmatic requirements.

They stated that this SCAPA SQA guidance will be posted on the CAMWG web site in the June 2010 timeframe. As the SQA guidance is being used, Jeremy expects areas for improvement will be noted by the user community, and the authors will revise the SQA document as warranted. This feedback process should benefit all of the document's users and enhance the quality and usability of the guidance document itself.

As soon as the SCAPA SQA guidance is issued, consequence assessment model developers will be asked to perform an SQA gap analysis on their software. The CAMWG would like to receive this gap analysis by the end of CY2010. Each software product's gap analysis will be reviewed by two or three members of the working group, and feedback will be provided to the software developers on the adequacy and completeness of their gap analysis. The long-range plan is to have the software developers take steps to close all of their substantial SQA gaps. It is also hoped that other software products supported by NA-41 will adopt the SCAPA SQA guidance, including:

- Codes associated with the development and presentation of PAC/TEEL and the Chemical Mixture Methodology information; and,
- Meteorological data acquisition, processing, and communication software that is used to provided input for consequence assessment models.

ACTIVITY CONTINUING

Populating the SCAPA Toolbox: The development team for each consequence assessment model will be asked to provide summary technical information on their models. This information will be posted on the SCAPA Toolbox web page and will include summary descriptions of models

and capabilities, a link to model websites and its SQA documentation, a self-evaluation of how well the software complies with SQA requirements, and a review of where SQA gaps exists and how they will be filled.

In addition to the most frequently used consequence assessment models in the DOE/NNSA complex (i.e., NARAC, CAPARS, APGEMS, RASCAL, HYSPLIT, RAMS-LPDM, PUFF PLUME, MIDAS), other models will also be considered for inclusion in the SCAPA Toolbox (e.g., RSAC-7, DUSTRAN, and CONTAM). As we go through the SCAPA Toolbox development process, feedback will be used to revise and upgrade the selection, evaluation, acceptance, and posting of information on the toolbox models. **ACTIVITY CONTINUING**

New Business

Peter Martin announced the availability of the web-based consequence assessment course ECA-101W.

NARAC News

John Nasstrom reported on the progress being made to qualify HOTSPOT as the newest code in the DOE/HSS Central Registry. Acceptance of HOTSPOT into the Toolbox is expected within the next few weeks. **ACTIVITY CONTINUING**

News from Other Model Developers

Jeremy briefly discussed the DUSTRAN code that ingrates CALPUFF/CALMET as its meteorology and atmospheric dispersion engine. There are plans to incorporate AERMOD as a dispersion modeling option within DUSTRAN. This work is being supported by the Department of Defense.

Round Robin

There was insufficient time remaining to conduct a round robin.

Adjournment

Jeremy indicated that next SCAPA CAMWG teleconference is scheduled for June 24, 2010 at 3:00 p.m. EDT. Additional teleconferences will be scheduled for August 5, October 7, and December 2, 2010.

The meeting was adjourned at 6:00 p.m. PDT. Jeremy thanked everyone for their time and contributions.