

  
**EMERGENCY  
MANAGEMENT  
ISSUES**

Emergency Management Issues (EMI)  
Special Interest Groups (SIG)

**Highlights**  
**SCAPA PROGRAM TELECONFERENCE 07-05**  
**TUESDAY, DECEMBER 4, 2007; 2:00 PM-3:00 PM EDT**

**Teleconference 07-05 Participants**

Andrea Barthel, Alpha-TRAC  
Tom Bellinger, Y-12  
Larry Campbell, Fluor-Hanford  
Jeng Chang, NA-41  
John Ciolek, Alpha-TRAC  
Bob Cornish, OST  
Gerry Gibeault, INL  
Cliff Glantz, PNNL  
John Harris, OROO  
Chuck Hunter, SRNL  
Jim Jamison, SAIC  
Po-Yung Lu, ORNL  
Carl Mazzola, Shaw Environmental  
Vern McDougall, ATL  
Rocky Petrocchi, WGI  
Bill Possidente, NTS  
Frank Roberto, INL  
Brad Salmonson, INL  
Richard Thomas, LLNL  
Tom Tuccinardi, Excalibur  
Gustavo Vazquez, HS-21  
Kerry Ward, INL  
Gary Winner, ANL  
Ken Young, LLNL

**Teleconference Highlights**

**I. Roll Call**

Carl Mazzola conducted a roll call and acknowledged that 24 individuals involved in the SCAPA program were present. The teleconference was called to order and Carl thanked Dorothy Cohen for setting up the teleconference call. During the previous SCAPA conference call, 25 individuals participated.

  
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**II. Administrative Matters**

Carl Mazzola and Cliff Glantz led the discussion on three SCAPA administrative matters.

**Previous Teleconference Highlights:** Carl Mazzola stated that the final highlights from the 9/20/07 SCAPA Program Teleconference 07-04 have been issued and Dorothy Cohen will soon be posting it on the EMI SIG/SCAPA website.

**SCAPA Action Item Status:** Carl Mazzola briefly discussed the latest updated SCAPA Program Action Item (AI) listing. Progress on closure continues since the last teleconference. At the time of this teleconference, 10 action items still remain open. The progress of these AIs was discussed during today's teleconference.

**American Nuclear Society (ANS) Topical Meetings on Emergency Preparedness & Response (EP&R):** Carl Mazzola updated the status of the 10<sup>th</sup> Emergency Preparedness & Response (EP&R) at the Hotel Albuquerque in Old Town Albuquerque, NM, on March 9-12, 2008. The program has been completed except for late-breaking submissions and panels which will add to the total number of sessions. The following sessions of interest to NA-41 have been established and chair people are shown in the parentheses:

1. Hazardous Materials Characterization for EP & R (Jim Fairobent and Dave Freshwater);
2. Biosafety Operations and Emergency Response (Frank Roberto and Dina Matz);
3. Emergency Response Systems & Equipment (Carl Mazzola and Steve Vigeant);
4. ENSEMBLE Atmospheric Modeling/Monitoring for EP & R in Europe (Bob Buckley and Stefano Galmarini);
5. Consequence Modeling & Assessment for EP & R – I (Rob Addis);
6. Consequence Modeling & Assessment for EP & R – II (Brad Schrader);
7. Consequence Modeling & Assessment for EP & R – III (Doug Osborn);
8. Software Quality Assurance for EP & R (Cliff Glantz);
9. Actual Events & Exercises – Lessons Learned (Pete Fledderman); and,
10. Severe Weather Planning for Key Facilities (Walt Schalk)

  
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**III. SCAPA Working Group Activities**

**A. Chemical Exposures Working Group (CEWG) -- Doug Craig, Chairman**

Carl Mazzola and Cliff Glantz, in Doug Craig's absence, led the discussion and provided an update on the following four CEWG action items and activities.

**AI 05-03:** Cliff reported that the development of TEEL SQA documentation is virtually complete and it is now time to implement the plan. The procedure for TEEL development is in revision and various Quality Assurance (QA) procedures; as well as the SQA Plan, continues under development. In addition, there is a need to update the CMM Workbook and User's Guide, perform additional verification and validation (V&V) work on the Chemical Mixture Methodology (CMM). Lastly, a configuration management plan will be developed some time in FY08. **ACTIVITY PROCEEDING.**

**AI 07-02:** NA-41 provided specific direction to the PAC Revision 24 effort at its September 11-12, 2007 TEELs Advisory Group (TAG) meeting. The focus of Revision 24 of the PACs will be on quality assuring of the older PACs and developing PACs for new chemicals that have been requested from NA-41 since the publication of PAC Revision 23A. Revision 24, which will include columns for the derivation date and source of PACs, is targeted to be available for the May 2008 EMI SIG and SCAPA Meetings. This PAC revision will include Lower Explosive Levels (LELs) and NFPA Health Hazard Ratings (HHRs). **ACTIVITY PROCEEDING.**

**AI 07-11:** Carl mentioned that the Succession Plan that has been drafted by Tom Tuccinardi was briefly discussed. Cliff indicated that the mentorship position to work on the Health Code Numbers (HCNs) is a key element and should be filled as soon as possible, and that training materials should also be developed as rapidly as possible to train the protege and several others involved in these working groups. **ACTIVITY PROCEEDING.**

**AI 07-16:** Cliff indicated that PACs Revision 23A will be issued in the January-February 2008 timeframe after the new Acute Exposure Guideline Limits (AEGLs) and Emergency Response Planning Guidelines (ERPGs) have been released and integrated into the PACs (i.e., existing Revision 23 TEELs will be superseded by new or revised AEGLs and ERPGs). **ACTIVITY PROCEEDING.**

  
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**B. Chemical Mixtures Working Group (CEWG) -- Doug Craig, Chairman**

Carl Mazzola and Cliff Glantz led the discussion and provided an update on the following four CMWG action items and activities.

**AI 04-23/06-15**: At the CEWG/CEMG meeting in San Antonio, TX, it was reported that there is a backlog of 917 HCNs for the PACs Revision 20-23 chemicals and more resources would need to be applied to work on this backlog that is now approximately 700. Cliff mentioned that the future intern, who may come from Boulder, Colorado, should play an important role is working on the backlog of HCNs. Rocky Petrocchi will e revise the HCN development procedure. Cliff also mentioned that the Chemical Mixture Methodology (CMM) workbook has been revised and the improved version with a User Manual is now available on the EMI SIG web page. **ACTIVITY PROCEEDING.**

**AI 07-14**: Cliff stated that Doug Craig will be taking the lead in developing the CMM/HCN technical paper. **ACTIVITY PROCEEDING.**

**AI 07-15**: Carl indicated that Jim Fairobent stated at the SCAPA Program meeting that a White paper on the impact of the CMM on upcoming DOE STD-1189 needs to be undertaken, as the CMM is discussed in Appendix B of that pending DOE standard. **ACTIVITY PROCEEDING.**

**C. Consequence Assessment Modeling Working Group (CAMWG) -- Cliff Glantz, Chairman**

Cliff Glantz led the discussion and provided an update on the following six CAMWG action items and activities.

**AI 05-07**: At earlier teleconferences, Wayne Davis discussed the progress on determining an appropriate Dose Conversion Factor (DCF) to use in EPHAs and consequence assessment models and is developing a White Paper to provide a summary of the findings. Since that time, the issue has been mooted as all organizations have changed their DCFs to International Council on Radiation Protection (ICRP) 68/72 and Dr. Joel Rabofsky, DOE/HS, has concurred on its use throughout the DOE/NNSA complex. Moreover, the new Environmental Protection



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Agency (EPA) Protective Action Guides (PAGs) will also be using the ICRP 68/72 dosimetry.  
**ACTION ITEM IS CLOSED.**

**AI 06-01:** At earlier teleconferences, Cliff Glantz stated that the HOTSPOT code has been evaluated as the 8<sup>th</sup> model for inclusion in the DOE/EH Central Registry Toolbox. The five critical actions of the gap analysis should be complete by March 2008 when HOTSPOT Version 2.07 is issued. Once they are completed, HOTSPOT will become the 8<sup>th</sup> toolbox model. The remaining item, which is to incorporate a capability to determine the 95% meteorological wind speed/stability class is being funded by NA-41.

Cliff also discussed the development of SQA Guidelines and consequence assessment modeling which is being performed by John Ciolek and Reed Hodgins through their Data Quality Objectives (DQOs) effort. This work is based on meeting DOE O 414.1C and DOE Guide 414.1-4, with an emphasis on configuration management V&V and preparation of a SQA Plan. Reed Hodgins' product is essentially complete, and will be released to the DOE/NNSA emergency management community soon. Once the SQA procedures are available, the SQA work can move forward in earnest. Cliff noted that this alternate approach was derived since the DOE G 414.1-4 process was very expensive and much too restrictive. **ACTIVITY PROCEEDING.**

**AI 07-06:** At the May 2007 CAMWG Meeting, Chuck Hunter indicated he would provide information that SRNL has on its RAMS-LPDM model and its V&V with SRS field studies. Chuck will present this information in a paper at the 10<sup>th</sup> EP & R Topical Meeting. **ACTION ITEM IS CLOSED.**

**AI 07-07:** At the May 2007 BWG Meeting, John Nasstrom indicated willingness to share documentation that has been prepared regarding NARAC biowarfare modules with the working group. There was some discussion on non-weaponized biological material source term information and its decay rates in the environment in an Official Use Only (OUO) report. No information has been received from NARAC. **ACTIVITY PROCEEDING.**

**AI 07-10:** Carl Mazzola and Gus Vazquez recently spoke with Ed Tupin, EPA Headquarters, and determined that the PAGs are at the Office of Management and Budget (OMB) and may be released soon. However, there is a possibility that they may also undergo another 60-90 day review if OMB determines that this is necessary. Gus indicated that since that call, he

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has heard that the PAGS will be placed in the Federal Register in 2008 for public comment.  
**ACTION ITEM IS CLOSED.**

**AI 07-12:** Carl suggested that a succession plan should also be developed for the Consequence Assessment Modeling Working Group (CAMWG) since the Software Quality Assurance (SQA) and DOE/HS/SCAPA Toolbox efforts are blossoming. **ACTIVITY PROCEEDING.**

**D. Biosafety Working Group (BWG) Frank Roberto, Chairman**

Frank Roberto led the discussion and provided an update on the following BWG action item.

**AI 06-06:** NA-41 requested BWG to address the transport and dispersion of biological agents/toxins released from DOE/NNSA biosafety facilities, which was left as an open subject in the Biosafety EMG. NA-41 indicated that there is a need to determine what models are available and appropriate for predictions, especially for laboratory-size source terms. In addition, NA-41 stated a need to define the limitations of the Gaussian models, and to identify other modeling tools available or being developed. Lastly, because a level of severity will not likely be available for defining a PAC, there is a need to determine how the modeling results will be applied.

There was discussion on several indoor air quality models, including the PNNL CONTAM indoor air quality model. LBNL also has a mature indoor modeling capability and a model named COMIS, which is highly dependent on building configuration and HVAC design. INL has examined the CONTAM code and a presentation will be made at the 10<sup>th</sup> EP & R Topical Meeting.

At an earlier teleconference, Dina Matz volunteered to develop a one-page SCAPA project plan for submission to NA-41 to move forward with this project which may result in the development of infective dose values, or ranges, for various infectious agents. A proposal to obtain some funding to resolve the difficult issues is in preparation.

Frank mentioned that INL had an exercise that was supported by biosafety and it used the HPAC atmospheric transport and dispersion code to model a biowarfare event. This code has the capability of changing the physical state of the agent. Chuck Hunter shared that the HPAC code had some user-friendliness issues.

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Frank also shared that he and several other BWG members recently attended the American Biological Safety Association (ABSA) meeting and the BWG is considering becoming an affiliate group within this organization. **ACTIVITY PROCEEDING.**

**E. Source Term Working Group (STWG) -- Carl Mazzola, Acting Chairman**

Carl Mazzola led the discussion and provided an update on the following two STWG action items and activities.

**AI 06-12:** Carl Mazzola developed a scope of work and an estimate for the compendium. The projected cost would be in the range of \$700,000. Since there are still no Federal agencies (e.g., DHS, DOC, DOD, DOA, DOI, EPA) that wish to partner in such an endeavor, this action item will be closed. If interest is renewed, a new action item will be opened. **ACTION ITEM IS CLOSED.**

**AI 07-13:** The STWG is in need of a champion and Carl asked the conferees to provide a candidate. **ACTIVITY PROCEEDING.**

**IV. SCAPA Web Page and Emergency Management Update Report**

Cliff discussed the progress of the EMI SIG web page which is continually improving and covering more timely topics. Cliff emphasized that the web page looks the way it does today due to the hard work by Dorothy Cohen and her staff at the Oak Ridge Institute for Science and Education (ORISE). Carl mentioned that he received a nice compliment from Gus Vazquez, HS-21 on its content and navigability.

Cliff mentioned that some of the planned upgrades will include the posting of CMM request forms similar to the PAC request forms and a tracking system for CMM downloads to determine the frequency of usage by the DOE/NNSA emergency management user community. EMI SIG members will be requested to provide new topics for web site expansion.

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Tom discussed the two Emergency Management Updates that have been issued. The first update discussed the removal of oxygen from the Revision 23 PACs and the second update presented information on the release of the new Revision 23 PACs. Future updates are being planned to present the new CMM updates, the SCAPA and DOE-HS toolboxes, and the SQA Plan. The updates will also be used to announce new SCAPA products.

**V. EPA AEGLs Status**

Po-Yung Lu reported on EPA/AEGL activities. He indicated that the National Advisory Committee (NAC) will meet next in Orlando, FL on December 5-7, 2007, and plans to review 37 new chemicals. Po-Yung will coordinate AEGL activity relative to PACs Revision 24. As of November 27, 2007, there are eight new chemicals with AEGLs for a total of 38, 36 new chemical with interim AEGLs for a total of 127, 51 proposed chemicals with AEGLs and 16 chemicals in a holding pattern.

**VI. AIHA ERPGs Status**

Richard Thomas reported on the Emergency Response Planning (ERP) Committee activities. A teleconference took place on December 3, 2007 and the next meeting is planned for Park City, Utah on March 13-14, 2008. Carl Mazzola suggested that the possibility of having the ERP Committee meet in conjunction with the 10 EP & R Topical Meeting be explored. It is expected that as many as 20 substances will have new or updated ERPGs by the end of 2007 that will be published in early 2008. Uranium trioxide is likely to be on that list, while formic acid may be, but is not as likely. Richard will coordinate ERPG activities relative to PACs Revision 24.

**VII. EPA PAGs Status**

Gustavo Vazquez' status on the PAGs was presented during AI 07-10 discussion.

**VIII. Round Robin**

**Pete Matonis (INL):** Pete indicated that he has uncovered several glitches in EPICode execution and wanted to know who to inform. Carl mentioned that since EPICode has been recognized as a safe harbor model by the DOE Central Registry, Pete should document his

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findings and provide this information to Debra Sparkman. Cliff indicated that he would get back to Pete with the exact protocol to be followed. Pete was also concerned about what effect this would have on the embedded EPICode in NARAC and will contact John Nasstrom to resolve. Larry Campbell stated that the library of this code is out of date and the emergency management people at Hanford usually resort to workarounds.

**John Ciolek (Alpha-TRAC):** John suggested that a web-based forum for SCAPA topics be developed; archiving both the questions and answers. Cliff Glantz will follow up and indicated that this forum may also be useful for the DOE Meteorological Coordinating Council (DMCC).

**IX. Next SCAPA Conference Call**

Carl Mazzola tentatively scheduled the next SCAPA Conference call for **Wednesday, January 31, 2008 at 2:00 p.m. EDT.**

**X. Adjournment**

The teleconference was adjourned at **3:00 p.m. EDT.** Carl thanked everyone for their time and their contributions.

**XI. SCAPA Program Action Item (AI) Status**

Based on the information exchange from this teleconference and the SCAPA Meeting, four AIs were closed, and six new AIs were opened, since the previous teleconference, making a total of 14 AIs that remain (Note: Two additional AIs were opened during the November 15, 2007 SCAPA Program Meeting).

The color-coding system used in the teleconference highlights are as follows:

- Existing AIs that are not closed are colored green;
- New AIs are colored yellow; and,
- AIs to be closed are colored blue.