

**SCAPA PROGRAM TELECONFERENCE 05-02**  
**THURSDAY, FEBRUARY 24, 2005; 10:30 AM-11:45 AM**

**Participants:** Michelle Baker, WSMS Mid-America  
Larry Campbell, Fluor Hanford  
Jeng Cheng, NA-41  
Doug Craig, ATL International  
Dorothy Cohen, ORISE  
Cliff Glantz, PNNL  
Jerry Grantham, BNL  
Jim Jamison, SAIC  
John Harris, ORO  
Po-Yung Lu, ORNL  
Amber Martin, WSMS Mid-America  
Carl Mazzola, Shaw Environmental  
John Nasstrom, LLNL NARAC  
Rocky Petrocchi, WGI  
Brenda Pobanz, LLNL NARAC  
Courtney Ruster, WSMS Mid-America  
Jack Salazar, LBNL

**Teleconference Highlights**

**I. Roll Call**

Carl Mazzola acknowledged that 17 individuals involved in the SCAPA program were present and the teleconference was called to order. Carl thanked Dorothy Cohen for setting up the conference call.

**II. Administrative Matters**

Carl Mazzola led the discussion on various SCAPA administrative matters.

**Previous Teleconference Highlights:** Carl Mazzola stated that the final minutes from the 1/18/05 SCAPA Program Teleconference 05-01 has been issued. Carl thanked Cliff Glantz for preparing the first draft of the meeting minutes. He encouraged any additional comments to be provided to him by e-mail. Pending receipt of comments and their nature, the minutes may or may not be revised. Dorothy Cohen will post the minutes on the EMI SIG/SCAPA website.

**SCAPA Action Item Status:** Carl Mazzola briefly discussed the updated SCAPA Program Action Item (AI) listing, dated February 7, 2005. Progress on closure continues since the last teleconference. At the time of this teleconference, 22 action items still remained open.

**TEEL Advisory Group (TAG) Status:** There was no discussion on TAG matters as this group has its own teleconferences. Tom Tuccinardi is responsible for reporting TAG decisions and discussions directly to Jim Fairbent.

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**AI 04-02:** Carl Mazzola has provided a draft of the SCAPA program volunteer support letter to Al Feldt and Jim Fairbent. It is uncertain whether this letter has been issued. **ACTIVITY PROCEEDING.**

**AI 04-55:** Cliff Glantz mentioned that he has met with the PNNL education managers to identify a summer intern that could assist Doug Craig and Rocky Petrocchi in performing Software Quality Assurance (SQA) tasks on the TEEL and CMM software. The target is to have the intern aboard in the June 2005 timeframe. **ACTIVITY PROCEEDING.**

### **III. SCAPA Working Group Activities**

#### **Chemical Exposures (Doug Craig, Chairman)**

Doug Craig led the discussion and provided an update on the following Chemical exposure Working Group action items.

**AI 04-04:** Doug reported that he recently received a new list of 24 final and 60 interim Acute Exposure Guideline Limits (AEGs) from Po-Yung Lu. Previously, he had to consider only 18 final and 48 interim AEGs. This increased the amount of work that is needed in updating the macros to include the interim and final AEGs in the hierarchy. Moreover, the quality assurance of the update of the macros and the revised spreadsheet to include the interim and final AEGs into the hierarchy has run into some unexpected issues.

Within the limitations of the macro update issues, Doug is still proceeding with Revision 21 of the TEELs, which includes more than 430 new candidate chemicals. He intends to develop TEELs for a majority of those chemicals that do not have interim or final AEGs. However, due to the amount of work left in the macro revision effort and the quality assurance of the resultant TEEL values after the revised macros have been modified and have undergone Software Quality Assurance (SQA), it is unlikely that the new TEELs can be completed prior to the May 5, 2005 SCAPA meeting, which is the common goal of the annual TEEL development effort.

Ray Lux, who is assisting Doug with the macro update to include the AEGs in the hierarchy, is also currently working on another macro change that would add an output column "source of TEELs". This would provide the actual health effects indicator that was selected by the software to represent the TEEL value and will be a useful product. Doug is working on completing source of TEELs for as many chemicals as he can for TEELs Revision 21. **ACTIVITY PROCEEDING.**

**AI 04-22:** There was no additional discussion on the TEEL Methodology Paper review. Doug emphasized that completion of the "complete" TEEL-derivation Methodology paper was essential before any meaningful SQA could ever begin. **ACTIVITY PROCEEDING.**

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**AI 04-41:** At an earlier teleconference, Doug Craig provided an update on the TEEL-3/ Lower Explosive Limit (LEL) comparison. A comparison of the LEL and TEEL values is in progress. Doug's preference is to flag TEELs that were 50% and 90% of the LEL value as footnotes. The TAG has met on this matter but has not yet reached a consensus. If a consensus is reached prior to the completion of the Revision 21 TEELs, an attempt will be made to incorporate whatever necessary changes that have been recommended by TAG. **ACTIVITY PROCEEDING.**

**AI 04-53:** Doug mentioned that there was a hold on the work on developing the TEEL derivation documentation, as this task and others were under a program prioritization review. Cliff indicated that he would call Tony Pierpoint, ATL International, to stress the importance of this task. Rocky mentioned that the effort will develop adequate documentation and traceability of the macros. **ACTIVITY PROCEEDING.**

**AI 04-58:** The development of TEELs for the 10 refrigerants per request of George Rusch of ASHRAE has been completed. George Rusch, who is also a toxicologist, and who also is the current AEGL Committee chairman, did a peer review and had some questions on the results, as some toxicological data was not used. Also, it was decided to abandon some questionable intravenous data. These questions were resolved and the TEELs have been finalized. Doug will include these new TEELs in Revision 21. **THIS ACTION ITEM WILL BE CLOSED.**

**Chemical Mixtures (Doug Craig, Chairman)**

Rocky Petrocchi led the discussion and provided an update on the following Chemical Mixtures Working Group action items.

**AI 04-05/AI 04-57:** Rocky Petrocchi reported that the TAG Exposure Limits & Chemical Mixture Methodology (CMM) Workshop is under development. The workshop will address threshold limits and consequence thresholds as well as the CMM and its automated workbook. At this stage, the training plan is complete and overheads are being prepared. A 90-minute pilot has been scheduled for the afternoon (3:00 PM – 4:30 PM) of May 2, 2005 at the EMI SIG meeting. After the pilot, Jim Fairbent will assess whether the workshop should be expanded and provided to DOE/NNSA emergency management personnel. **ACTIVITY PROCEEDING.**

**AI 04-23:** Rocky Petrocchi has developed some of the HCNs for the approximately 300 new chemicals in the latest TEEL Revision 20. However, the funding for this effort is in suspense due to a contract hold with ATL International. Cliff will also discuss this matter with Tony Pierpoint. **ACTIVITY PROCEEDING.**

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**AI 04-44:** At an earlier teleconference, Rocky Petrocchi indicated that he has started the HCN methodology paper, which will be published in the *Journal of Applied Toxicology*. Much of its text will come from the HCN Development procedure. This task is also on hold pending program prioritization review. **ACTIVITY PROCEEDING.**

**AI 04-48:** During earlier teleconferences, Rocky Petrocchi indicated that Doug Craig and he will be placing a note in the Excel spreadsheet regarding the revision of the older HCN 4.00 chemicals. The note will state that the results for HCN 4.00 (i.e., general acute health effects) may be over conservative. The note was added to the file, which is now available on the SCAPA website. Updating the older HCN 4.00 chemicals will be accomplished after HCN development of new chemicals in TEELs Revision 20 is completed. **ACTIVITY PROCEEDING.**

**Consequence Assessment Modeling (Cliff Glantz, Chairman)**

Cliff Glantz led the discussion and provided an update on the following Consequence Assessment Modeling (CAM) Working Group action items.

**AI 03-08:** At previous teleconferences, Cliff Glantz mentioned that there are not very many technical basis documents in the NARAC library that have been prepared to support the NARAC mission. Cliff will continue to compile a list of these documents which can be used by DOE/NNSA sites in their work. LLNL NARAC has made progress with the collection of relevant documents. **ACTIVITY PROCEEDING.**

**AI 04-39:** At earlier teleconferences there was discussion on the need to identify other issues that the CAM Working Group should address beyond the toolbox and the NARAC User's Advisory Group. The toolbox interface is a significant effort which is still dominating the work of the CAM Working Group. **ACTIVITY PROCEEDING.**

**AI 04-51:** At earlier teleconferences, there was discussion of a vastly improved NARAC interface in early 2005, with a beta version possibly ready by December 2004. In addition, another workshop for NARAC users is being planned by 2005. No additional discussion during this conference call. **THIS ACTION ITEM WILL BE CLOSED.**

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**AI 04-52:** Cliff Glantz had earlier mentioned that several candidate Emergency Preparedness Hazards Assessment (EPHA) and consequence assessment codes are being considered for the Toolbox by the SCAPA CAM Working Group once DOE O 414.1C and DOE G 414.1-1 are issued. A new draft of the order and guide was issued in February 2005 and are under review by a Subcommittee to the CAM WG (i.e., Cliff Glantz, Wayne Davis, Larry Campbell, and Carl Mazzola). The effort on resolving NNSA and DNFSB issues is beginning to crystallize. Once the review process is completed and the order and guides are formally issued, they will be placed on the Central Registry's website to assist the DOE/NNSA sites in determining the appropriate level of SOA for codes used at the sites that affect safety.

There still is a significant need to identify what level of quality assurance is needed for emergency response models (e.g., Level B or Level C models) that will satisfy the Central Registry, and what criteria this graded approach would involve. Larry Campbell indicated that the emergency management group at Hanford has made a determination that Level B applies to some emergency planning and preparedness codes. No other individuals on the call indicated that any decision of this nature has been made at their sites. **ACTIVITY PROCEEDING.**

**AI 05-01:** There was considerable discussion on the hazard assessment of uranium hexafluoride ( $UF_6$ ) that was requested earlier during our January conference call by Wayne Davis. Since  $UF_6$  hydrolyzes into  $UO_2F_2$  and hydrofluoric acid (HF) in the presence of atmospheric moisture, it appears that the AEGL for  $UF_6$  may not be very useful since there is little to no  $UF_6$  left to impact workers and the public. However, Doug and Rocky both mentioned that the ERPGs and AEGLs for  $UF_6$  do take the hydrolysis reaction products into account. However, Rocky said that comparing HF and  $UO_2F_2$  concentrations to the AEGL  $UF_6$  concentrations is like comparing apples to oranges and may lead to over conservatism or under conservatism, particularly for the HF component of the release. Therefore, HF and  $UO_2F_2$  concentrations must be converted to  $UF_6$  equivalent concentrations first before comparing them to the AEGL  $UF_6$  concentrations.

A second issue associated with the use of atmospheric transport and dispersion models that do not address this hydrolysis reaction was discussed in detail. Central Registry toolbox models (e.g., ALOHA, EPICODE) are likely to be inappropriate for the required phenomenology of the analysis. Carl Mazzola mentioned that there were at least 3 models that addressed the hydrolysis reaction: (1) TRIAD; (2) RASCAL; and, (3) HGSYSTEM- $UF_6$ . Amber Martin indicated that these were not in the Central Registry Toolbox and that DOE-Portsmouth was directing them to use a toolbox model, such as ALOHA which does not have technical modules to address the hydrolysis reaction. **ACTIVITY PROCEEDING.**

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*Note: After the teleconference, Carl Mazzola asked Wayne Davis to develop a SCAPA Information Request form that stated the details of the problem. This will be used to form a special working committee to develop a position paper on the topic. Individuals willing to work on the special working committee include Jim Jamison, Rocky Petrocchi, Doug Craig, Cliff Glantz, and Carl Mazzola.*

**Biosafety (Cliff Glantz, Acting Chairman)**

Cliff Glantz led the discussion and provided an update on the following Biosafety Working Group action items.

**AI 04-12:** Cliff indicated that there has been some progress relative to the recruitment of individuals to populate the Bioagents Working Group and that members of the group will be at the EMI SIG Meeting and possibly the SCAPA Meeting. **ACTIVITY PROCEEDING.**

**AI 04-14:** At an earlier teleconference, it was noted that Jim Powers (NA-41) met with the CDC in late-November to discuss its biosafety levels and how they can be used in the DOE Biosafety community. **ACTIVITY PROCEEDING.**

**IV. SCAPA Web Page Report**

Cliff Glantz will be providing various updates to Dorothy Cohen to post on the SCAPA web page over the next month. These include TEEL information request forms, SCAPA information request forms, the agenda of the upcoming annual SCAPA meeting and information on the Consequence Assessment Modeling Toolbox.

**V. EMI SIG/SCAPA May 2005 Meeting Planning**

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

**AI 04-54:** The biosafety session during the EMI SIG meeting is taking shape and will focus on the new biosafety requirements in DOE O 151.1. The Biosafety Officers (BSOs) are also getting engaged in the review of the new biosafety requirements of DOE O 151. **THIS ACTION ITEM WILL BE CLOSED.**

**AI 04-56:** The SCAPA agenda is essentially complete and will be posted on the web page. Jim Jamison agreed to provide a topic for his talk. It will likely be on hazardous materials screening. **ACTIVITY PROCEEDING.**

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**VI. EPA AEGLs/PAGs Status**

**AEGLs:** Po-Yung Lu reported that there are new final AEGLs for 24 chemicals and new interim AEGLs for 60 chemicals, which he forwarded to Doug Craig. Po-Yung also indicated that there is also an upcoming National Academy of Sciences (NAS) meeting which will be approving between 5-10 new AEGLs.

**PAGs:** During an earlier conference call Gustavo Vazquez, EH-412, indicated that he has heard from Andy Wallo that there is a committee working on the new EPA PAGs, but it is not yet available for outside review. Gus indicated EH is tracking the progress of this technical document. A list of SCAPA reviewers is being compiled once DOE/NNSA review is requested.

**VII. AIHA ERPGs Status**

There was no discussion on any recent AIHA activities with respect to the development of ERPGs.

**VIII. New Business**

Due to the extensive discussion on the open items, there was no remaining time to discuss any new business items.

**IX. Next SCAPA Conference Call**

Carl Mazzola tentatively scheduled the next SCAPA Conference call for **March 24, 2005 at 10:30 a.m.**

**X. Adjournment**

The teleconference was adjourned at 11:47 A.M.

**XI. SCAPA Program Action Item Status**

Based on the information exchange from this teleconference Action Items **04-51, 04-54** and **04-58** will be closed. There were no new Action Items resulting from this Teleconference.

Carl Mazzola will update the action items list based on this conference call. The number of action items has been reduced to 18.