

**SCAPA PROGRAM TELECONFERENCE 06-02**  
**WEDNESDAY, FEBRUARY 22, 2006; 10:30 AM-11:30 AM**

**Participants:**

- Denny Armstrong, LANL
- Steve Arnold, TPMC - Portsmouth
- Larry Campbell, Fluor-Hanford
- Dorothy Cohen, ORISE
- Wayne Davis, WSMS
- Al Feldt, NA-41
- Cliff Glantz, PNNL
- John Harris, OROO
- Eva Hickey, PNNL
- Jim Jamison, SAIC
- Po-Yung Lu, ORNL
- Lori Manis, ORNL
- Pete Matonis, INL
- Carl Mazzola, Shaw Environmental
- Rocky Petrocchi, WGI
- Richard Thomas, Intercet
- Gustavo Vazquez, EH-41

**Teleconference Highlights**

**I. Roll Call**

Carl Mazzola conducted a roll call and acknowledged that 26 individuals involved in the SCAPA program were present. The teleconference was called to order and Carl thanked Cliff Glantz for setting up the teleconference call.

During the previous SCAPA conference call, 17 individuals participated in the SCAPA teleconference.

**II. Administrative Matters**

Carl Mazzola led the discussion on various SCAPA administrative matters.

**Previous Teleconference Highlights:** Carl Mazzola stated that the final highlights from the 1/11/06 SCAPA Program Teleconference 06-01 has been issued and Dorothy Cohen has posted it on the EMI SIG/SCAPA website.

**SCAPA Action Item Status:** Carl Mazzola briefly discussed the latest updated SCAPA Program Action Item (AI) listing, dated February 15, 2006. Progress on closure continues since the last teleconference and SCAPA meeting. At the time of this teleconference, 17 action items still remain open.

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**AI 05-06:** Carl Mazzola reported that the templates on SCAPA Position Papers and on Request for SCAPA Support that were provided to NA-41 have been approved. All future position papers and future requests for SCAPA support should use these templates for guidance. **Action Item is closed.**

**AI 05-08:** Carl Mazzola reported that the sessions at the American Nuclear Society (ANS) 1<sup>st</sup> Topical Meeting on Emergency Preparedness & Response and Robotics and Remote Systems were held last week at Salt Lake City, UT. SCAPA participants included Jim Fairbent, Jim Jamison, Cliff Glantz, Rocky Petrocchi, Richard Thomas, Po-Yung Lu, Rob Addis, Chuck Hunter, Greg Martin, Eva Hickey, and Carl Mazzola. Admiral Krol (NA-40) was the keynote speaker. An organizational meeting for the 2<sup>nd</sup> Topical Meeting on Emergency Preparedness & Response and Robotics and Remote Systems was held and this meeting is planned for Albuquerque, NM in March 2008.

**AI 06-04:** Carl Mazzola indicated that planning for the EMI SIG, SCAPA, and DMCC Meetings were moving forward rapidly. Cliff Glantz will be sending out a Request for Presentation. Accepted presentations will be used to populate the SCAPA Meeting agenda. The DMCC Meeting planning is about 95% complete. The following outlines the meetings in Las Vegas, NV:

- **Monday, May 1, 2006:** Hazards Assessment Working Group Meeting; DOE Meteorological Coordinating Council (DMCC) Meeting; Operational Emergencies Workshop; and, Screening Methodology Workshop;
- **Tuesday May 2, 2006:** Chemical Exposures and Chemical Mixtures Working Group Meeting;
- **Wednesday May 3, 2006:** Consequence Assessment Working Group Meeting; Biosafety Working Group Meeting; and, NARAC Users Group Meeting; EMI SIG session on the role of the biosafety officer; EMI SIG session on Software Quality Assurance (SQA); and SCAPA dinner; and,
- **Thursday, May 4, 2006:** SCAPA Meeting.

Carl Mazzola encouraged participation by all SCAPA members.

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**III. SCAPA Working Group Activities**

**Chemical Exposures Working Group (Doug Craig, Chairman)**

Rocky Petrocchi, for Doug Craig, led the discussion and provided an update on the following four Chemical Exposure Working Group action items and activities.

**AI 04-53:** There was no additional discussion on the upcoming session a future EMI SIG meeting regarding the effect of SQA guidance on TEEL and Chemical Mixture Methodology (CMM) software. The details of the session will emerge after the TEEL SQA effort and the updated TEEL methodology documentation has been essentially completed. Although this may not be completed in time to have a session at this year's EMI SIG meeting, the material can be covered within the purview of the SCAPA meeting. **ACTIVITY PROCEEDING.**

**AI 05-03:** Work on developing TEEL derivation documentation and traceability as part of SQA continues. An evaluation performed by a PNNL intern indicated that the TEEL software is more complex than previously thought with a large number of macros to be documented and tested. Therefore, a procedure for updating this product and a software custodian are both needed. Doug Craig and Ray Lux have also performed an independent review of the TEEL methodology macros. ATL International is assisting in defining the next phase associated with the TEEL SQA, in conjunction with its efforts on the TEEL derivation documentation. **ACTIVITY PROCEEDING.**

**AI 05-10:** The Revision 22 TEEL effort for almost 400 new chemicals is progressing. These new TEELs would likely not be ready for the 2006 SCAPA Meeting, but should be completed prior to the end of FY06. **ACTIVITY PROCEEDING.**

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

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

**AI 04-23:** Rocky indicated that he is 25% complete on the development of HCNs for the approximately 300 TEEL Revision 20 new chemicals, with a goal of finishing this work in the May 2006 time frame. Work on the TEELs Revision 21 chemicals will commence after the Revision 20 work is completed. **ACTIVITY PROCEEDING.**

**AI 04-44:** Rocky continues work on the HCN methodology paper. A draft should be ready for peer review by SCAPA members in March 2006. The paper will be submitted to the *Journal of Applied Toxicology* for publication once SCAPA has finished its review. Much of its text will come from the HCN Development procedure. **ACTIVITY PROCEEDING.**

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

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

**AI 03-08:** John Nasstrom is still working to create technical documentation for the NARAC system. **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 05-01:** At earlier teleconferences, there was discussion on the hazard assessment of uranium hexafluoride (UF<sub>6</sub>), which hydrolyzes into uranyl fluoride (UO<sub>2</sub>F<sub>2</sub>) and hydrofluoric acid (HF) in the presence of atmospheric moisture, and these hydrolysis products tend to dominate human health impacts. Guidance for the DOE/NNSA community on the appropriate atmospheric transport and dispersion models to use when attempting to accurately assess the impacts of a potential UF<sub>6</sub> release was provided in Jim Jamison's technical paper at the 1<sup>st</sup> Topical Meeting on Emergency Preparedness & Response and Robotics and Remote Systems. Jim's technical paper addresses the criteria aspects of this issue and provides a point of reference for planning and preparedness. The position is to use the UF<sub>6</sub> AEGLs. Jim's technical paper will also be posted on the SCAPA website.

During the analysis process, it was noted that Central Registry toolbox models (e.g., ALOHA, EPICODE) do not explicitly consider the hydrolysis of UF<sub>6</sub> and are likely to be inappropriate for assessing the phenomenology of a given release. This issue has not yet been resolved and will have to be addressed under another action item.

Michele Baker utilized the guidance provided in Jim's position paper in her EPHA analysis at Portsmouth. Michele used the NARAC code and worst case (i.e., F stability and winds of 1 meter/second) meteorological conditions. The analysis, which brought the Emergency Planning Zone (EPZ) size to a reasonable distance, is presently under DOE Portsmouth review and early indication is that DOE will find this technique acceptable.

John Nasstrom indicated that one drawback of using the NARAC code for this EPHA-type analysis is that it takes this code longer to run than other codes that address UF<sub>6</sub> chemistry. Cliff Glantz added that there are two matters that need to be considered: (1) NARAC slow execution time and SQA pedigree; and, (2) lower values obtained by using NARAC for EPHA work, as NARAC is noticeably non-conservative. Wayne Davis volunteered to develop a SCAPA support request to address these matters. **Action Item is closed**

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**AI 05-05:** At an earlier teleconference, there was significant discussion on NARAC ingestion of the ARCON96 model. John Nasstrom plans to use this information and combine it with other work associated with a Department of Homeland Security (DHS) urban diffusion program that he is working with Jerry Allwine, PNNL. The modeling will consider initial plume spreading when intersecting the near-field buildings, with additional spreading as it encounters far-field buildings in an urban complex environment. **ACTIVITY PROCEEDING.**

**AI 05-07:** At previous teleconferences, Wayne Davis discussed the need to determine an appropriate dose conversion factor (DCF) to use in EPHAs and consequence assessment models was discussed. Many sites use the ICRP-30 DCFs, while some use the ICRP-68/72 DCFs, while others are considering using the upcoming ICRP-90 DCFs. Wayne just had a conference call with Ed Tupin, EPA, who will soon be issuing the draft revision to EPA-400. According to Ed Tupin, EPA appears to be sticking with ICRP-30.

Separately SRS is considering adopting ICRP-68/72 for several applications which would reduce consequences. Wayne shared that any change from ICRP-30 DCFs will require the concurrence of Joel Rabofsky, DOE/EH-52, Office of Worker Protection Policies and Programs. Concurrences would be on a case-by-case basis.

John Nasstrom mentioned that the Federal Radiological Monitoring and Assessment Center (FRMAC) Assessment Working Group was evaluating the same question and may provide their insights, if requested. **ACTIVITY PROCEEDING.**

**AI 06-01:** At earlier teleconferences, Cliff Glantz indicated that the Central Registry has rolled out DOE O 414.1C and DOE G 414.1-1, but is remaining in a reactive mode. Cliff Glantz has established a March 13, 2006 conference call with Debra Sparkman, Central Toolbox Registry, to determine the Registry's implementation plans and what it takes to become compliant with the new SQA order and guide. Cliff mentioned that it may cost upwards of \$400,000 for certain codes to meet these criteria.

Cliff indicated that the SCAPA web page will soon be updated to include an SQA web page that discusses recent events, provides convenient links to the DOE order and guide and other useful SQA web pages, explains the drivers and focus for SQA and additional links to the SQA work being performed at Hanford on the APGEMS code. When the SQA documentation for the APGEMS effort is finalized, it will provide a blueprint for other DOE/NNSA sites to pursue their SQA activities.

Cliff also discussed the planned 90-minute session on SQA at the EMI SIG meeting. **ACTIVITY PROCEEDING.**

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**AI 06/02:** At an earlier teleconference, it was noted that as part of the UF<sub>6</sub> effort, Michele Baker noted that NARAC does not use a straight-line Gaussian model for F-stability classes at very low wind speeds. Brenda Pobanz and Michelle Baker are separately running simulations with NARAC to determine the differences between NARAC and other codes at stable low wind speed conditions. No further discussion at this meeting. **ACTIVITY PROCEEDING.**

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

Cliff Glantz led the discussion and provided an update on the following Biosafety activity.

**AI 06-03:** The latest draft of the Biosafety Emergency Management Guide (EMG) is under review and comments will be accepted by NA-41 from the Biosafety Officers through March 17, 2006. After the comments are resolved, the final draft Biosafety EMG will be posted on the DOE web page for full DOE-wide review. **Action Item is closed.**

Frank Roberto stated that 42 CFR 73 requires that biosafety programs be integrated with emergency response programs and he is working with the INL emergency management organization to accomplish this. A future biosafety tabletop exercise is planned.

Cliff Glantz mentioned that Clark Hyder is working on putting together the special SCAPA 90-minute session on Biosafety at the EMI SIG meeting, and described the technical elements of the session.

**IV. TEEL Documentation and Database Project**

**AI 05-09:** Tony Pierpoint reported on the TEEL documentation and database project. Tony indicated that an initial draft of the TEEL publication was distributed for comments to additional members of the TEEL Advisory Group (TAG) in December, 2005, and a copy of the draft was also provided to the Office of Emergency Management. TAG comments have been incorporated. When Doug Craig returns from South Africa, he will provide one final review before the document goes out to Jim Fairbent for wider SCAPA review in March 2006. The target is to have the document completed in time for presentation at the EMI SIG meeting. **ACTIVITY PROCEEDING.**

**V. SCAPA Web Page Report**

Cliff Glantz mentioned that the SCAPA web page SQA link is almost ready and that a future biosafety web page is being developed. In addition, information on the upcoming DMCC, EMI SIG and SCAPA meetings have been posted.

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**VI. EPA AEGLs/DHS PALs Status**

Po-Yung Lu reported on EPA/AEGL and DHS/PAL activities:

- **AEGLs:** The 15 chemicals under National Academy of Sciences (NAS) preparation will now be moving forward as the human toxicology issue has been resolved during meetings conducted during February 1-3, 2006. EPA has published its position in the Federal Register (i.e., Volume 71, Number 24, pages 6131-6178). A public meeting on this work is still planned for April 2006.
- **PALs:** Due to the resolution of the human toxicology issue, the Department of Homeland Security (DHS) effort on Provisional Advisory Levels (PALs) for evacuation and re-entry will also begin to move forward again. These are exposure-related (e.g., inhalation, oral) and are acute (less than 1 day), longer-term (1-30 days) and long-term (30 days to 2 years). The pathways are oral ingestion and inhalation. At an earlier teleconference, Po-Yung mentioned that Oak Ridge National Laboratory (ORNL) and Argonne National Laboratory (ANL) will be developing the PALs, and that a peer review committee has been established to review the draft report in the April-June 2006 timeframe.

**VII. PAGs Status**

Gustavo Vazquez was not available to report on the two initiatives regarding PAGs. From earlier teleconferences, the following is the latest information on the PAGs:

- The PAGs for Improvised Nuclear Devices (INDs) and Radiological Dispersal Devices (RDDs) were issued by DHS in a Federal Register notice on January 3, 2006 (FR 71 No. 1), as draft guidance for interim use. Andy Wallo and Steve Domotor of EH-41 were on the working group.
- The EPA PAGs have been drafted, and will soon be released, now that the DHS IND/RDD PAGs have been issued.

**VIII. AIHA ERPGs Status**

Richard Thomas was not available to report on the ERPG Committee activities. However, he sent a report soon afterwards which is captured below:

The AIHA ERPG Committee had a very productive year in 2005 with the completion or updating of 17 chemical substances, bringing the total number of substances with ERPGs to 125.

The final editing of the new 2006 Handbook of ERPG Values was completed in January and the Handbook is now for sale from AIHA ([www.aiha.org](http://www.aiha.org)) with the shipping of new copies of the

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handbook by the end of February. The ERPG Handbook also contains a list of approximately 40 substances that are under consideration for developing new ERPGs this year.

The next ERPG Committee meeting is scheduled for March 21-22, 2006 in Park City, UT.

**IX. New Business**

**AI 06-05**: Carl Mazzola asked whether there would be any individuals interested in reconstituting the Source Term working group which has been dormant about 10 years. Wayne Davis indicated that caution should be taken to not address the same issues that the Hazard Assessment Subcommittee is working on. Carl stated that the Source Term working group would look into different aspects of source term inclusive of quantifying source terms for a full spectrum of releases, the five-factor formula (ANSI/ANS-5.10), particle size distribution work being performed at Sandia National Laboratory (SNL), chemical phenomenology for pressurized liquid, non-pressurized liquid and pressurized gas releases, choked flow, etc. The following individuals expressed interest in populating this working group: (1) Larry Campbell; (2) Robert Gee; and, (3) Wayne Davis. **An action item will be opened up to track the progress.**

**X. Next SCAPA Conference Call**

Carl Mazzola tentatively scheduled the next SCAPA Conference call for **March 28, 2006 at 10:30 a.m.** This is about the halfway point to the next SCAPA meeting and will provide one last opportunity to consolidate DMCC, EMI SIG and SCAPA meeting planning activities.

**XI. Adjournment**

The teleconference was adjourned at **11:33 a.m.** Carl thanked everyone for their time and their contributions.

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

Based on the information exchange from this teleconference, no new AIs were closed, and no new AIs were opened.

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.

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Carl Mazzola will update the action item list based on the information exchange from this conference call. The number of open action items is reduced to 14 due to the closure of 4 AIs (AI 05-01, AI 05-06, AI 05-08, AI06-03) and the opening of one AI (AI 06-05).

Respectfully Submitted,

*Carl Mazzola*

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