

SCAPA PROGRAM TELECONFERENCE 05-06
WEDNESDAY, SEPTEMBER 7, 2005; 10:30 AM-11:45 AM

Participants:

- Denny Armstrong, LANL
- Michele Baker, WSMS Mid-America
- Larry Campbell, Fluor Hanford
- Jeng Cheng, NA-41
- Dorothy Cohen, ORISE
- Doug Craig, ATL International
- Wayne Davis, WSMS
- Jim Fairobent, NA-41
- Al Feldt, NA-41
- Glen Funk, LLNL
- Jerry Giveault, INL
- Cliff Glantz, PNNL
- Courtney Haggard, WSMS Mid-America
- John Harris, OROO
- Michael Heitkamp, WSRC
- Chuck Hunter, SRNL
- Jim Jameson, SAIC
- Po-Yung Lu, ORNL
- Amber Martin, WSMS Mid-America
- Pete Matonis, INL
- Carl Mazzola, Shaw Environmental
- Rocky Petrocchi, Washington Group
- Tony Pierpoint, ATL International
- Jim Powers, NA-41
- Brad Salmonson, INL
- David Seidel, LANL

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 Dorothy Cohen for setting up the teleconference call. The largest number of SCAPA members participated in this call.

II. Administrative Matters

Carl Mazzola led the discussion on three SCAPA administrative matters.

Previous Teleconference Highlights: Carl Mazzola stated that the final highlights from the 7/28/05 SCAPA Program Teleconference 05-05 has been issued. He encouraged any additional

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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 has been requested to post the 7/28/05 SCAPA Program Teleconference 05-05 highlights on the EMI SIG/SCAPA website.

SCAPA Action Item Status: Carl Mazzola briefly discussed the updated SCAPA Program Action Item (AI) listing, dated August 29, 2005. Progress on closure continues since the last teleconference and SCAPA meeting. At the time of this teleconference, 17 action items still remain 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 Fairobent. Until mid-October, Rocky Petrocchi will be the acting TAG Chairman until October 15, 2005.

AI 05-06: The status of the templates on SCAPA Position Paper and SCAPA Support that were provided to NA-41 is still under review by Jim Fairobent and comments would be soon forthcoming. **ACTIVITY PROCEEDING.**

AI 05-08: Carl Mazzola reported that SCAPA had submitted seven abstracts to the American Nuclear Society (ANS) 1st Joint Topical Meeting on Emergency Preparedness & Response and Robotics to be held February 12-15, 2006 at Salt Lake City, UT. Jim Fairobent and Carl Mazzola, who are on the Technical Program Committee, have used these and several other abstracts to construct at least three technical sessions. ANS informed the authors of the acceptance of the abstracts and full papers are due on October 15, 2005. Michele Baker will be integrating the consequence modeling results of RASCAL into Jim Jamison's UF₆ paper.

III. SCAPA Working Group Activities

Chemical Exposures Working Group (Doug Craig, Chairman)

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

AI 04-04: Doug has completed all of his work on the Revision 21 TEELs which will include all chemicals that have interim or final AEGLs. TEELs have been developed for 424 new chemicals, which have undergone a quality assurance (QA) review by Rocky Petrocchi. For these new chemicals, a "source of TEELs" column will be added. TEELs Revision 21 will have 2,950 chemicals, be completed before the end of September, and posted on the DOE/EH and SCAPA web sites.

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Tony Pierpoint indicated that Chad Ogden, ATL International, will be updating the searchable TEELs data base once the Revision 21 TEELs have been posted. Since there is a new column on source of TEELs, Tony will have to make a minor modification to the searchable TEELs data base formatting. **THIS ACTION ITEM CAN BE CLOSED.**

AI 05-10: Approximately 350 remaining chemicals will now become part of the Revision 22 TEEL effort to be initiated in October 2005 and completed in early 2006. Doug requested all DOE/NNSA site participants to submit requests for new chemicals now that the next cycle of TEEL development has begun. **ACTIVITY PROCEEDING.**

AI 04-22: At an earlier teleconference, Doug indicated that the TEEL Methodology Paper review activity has been assigned to Jim Weeks, ATL International, who has now met with Doug to review the scope of the task. Tony Pierpoint mentioned that Jim Weeks will have his revised section to the paper by early next week and that a QA report was being generated for him and Dorothy Cohen. **ACTIVITY PROCEEDING.**

AI 04-53: There was no additional discussion on the upcoming session at the 2006 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 derivation documentation SQA effort is essentially completed. **ACTIVITY PROCEEDING.**

AI 05-03: Work on developing the TEEL derivation documentation and traceability of the macros, as part of the SQA effort is moving forward. Eduardo Donoso, PNNL summer intern, has integrated his findings into a report which is under review by Doug Craig, Ray Lux, Rocky Petrocchi, and Jim Weeks. All comments will be forwarded to Cliff Glantz for incorporation. The SQA process revealed that the TEEL software is more complex than previously thought with a large number of macros to be documented and tested. Based on the work of the summer intern, it has been concluded that these macros are working correctly. With respect to documentation, it was determined that not all issues are discussed and a procedure for updating this product is needed. In addition, a software custodian is required. The report, when finalized, will be discussed by the TAG at its next meeting, and will become an internal NA-41 report. **ACTIVITY PROCEEDING.**

Chemical Mixtures Working Group (Doug Craig, Chairman)

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

AI 04-23: Rocky continues the development of HCNs for the approximately 300 new chemicals in the latest TEEL Revision 20, and that updating the older HCN 4.00 chemicals will be accomplished after HCN development of new chemicals in TEELs Revision 20 is completed.

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Further work will be undertaken on the TEELs Revision 21 chemicals once the Revision 20 work is completed. **ACTIVITY PROCEEDING.**

AI 04-44: Rocky continues work on 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. A first draft is being developed and will undergo peer review by selected SCAPA members. **ACTIVITY PROCEEDING.**

AI 04-48: This action item was combined with AI 04-23. **THIS ACTION ITEM CAN BE CLOSED.**

AI 05-02: At an earlier teleconference, it was noted that Jim Fairbent is presently assessing whether the workshop should be expanded and provided to DOE/NNSA emergency management personnel in Washington DC, Germantown, MD, or at a DOE/NNSA site. Preliminary indications are that some form of an expanded workshop will be moving forward. **ACTIVITY PROCEEDING.**

Consequence Assessment Modeling Working Group (Cliff Glantz, Chairman)

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

AI 03-08: At an earlier teleconference, LLNL NARAC had reported that they are working to create technical documentation for their system and will make these documents available to the NARAC user community and SCAPA as soon as they are available. Cliff Glantz mentioned that due to the lack of technical documentation some NARAC initiatives are being delayed or given to other sources (e.g., a dispersion experiment will use the HPAC code). This is providing an incentive to complete the technical documentation. **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. No additional discussion during this conference call. **ACTIVITY PROCEEDING.**

AI 05-01: At earlier teleconferences, there was considerable discussion on the hazard assessment of uranium hexafluoride (UF₆), which hydrolyzes into UO₂F₂ and hydrofluoric acid (HF) in the presence of atmospheric moisture, and these hydrolysis products tend to dominate human health impacts. There is still a need on developing 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 UF₆ release.

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Central Registry toolbox models (e.g., ALOHA, EPICODE) do not explicitly consider the hydrolysis of UF₆ and are likely to be inappropriate for assessing the phenomenology of a given release.

Jim Jamison has developed an excellent draft White Paper which has received comments from many SCAPA members. The White Paper indicated that the AEGL-2 for uranium hexafluoride represents the best toxic endpoint value. Concurrently, Wayne Davis, Amber Martin, and Michele Baker are involved in a comparison study of the HGSYSTEM-UF₆, RASCAL, ALOHA, and EPICODE models to determine which transport and dispersion model is most appropriate to the solution of this problem. HGSYSTEM-UF₆, and RASCAL have algorithms that account for uranium hexafluoride hydrolysis. Concurrently, Po-Yung Lu and Robert Gee have been involved in discussing the technical approach with the stakeholders.

The ultimate end product of this effort is to develop a SCAPA Position Paper that can advise the affected DOE/NNSA emergency management organizations on which approach is most technically sound and defensible. Mike Lazaro, Gus Vazquez, Rocky Petrocchi, and Richard Thomas requested to be copied on the next set of deliverables.

During this discussion, Michele Baker indicated that she will be integrating her results into Jim's paper that will be presented at the February 2006 Emergency Preparedness & Response Topical Meeting. Michele is running the latest version of RASCAL (Version 3.0.4). It was determined that a meeting of the working group that has formed around this activity is needed.

ACTIVITY PROCEEDING.

05-04: There was some additional discussion on the candidate toolbox models for the Central Registry. Cliff Glantz indicated that the Central Registry has rolled out the order and guide but is remaining in a reactive mode and that the full SQA process may take several years.

Cliff also stated that the SQA efforts relative to NARAC will be discussed during the next NARAC conference call. Larry Campbell mentioned that there is an effort at Hanford on development of SQA documentation for the MetView and APGEMS codes. A Revision 0 draft of this evaluation is expected shortly. **ACTIVITY PROCEEDING.**

05-05: There was no additional discussion on NARAC ingestion of the ARCON96 model. Cliff Glantz mentioned that NARAC will be releasing a new iClient version within the next few months. **ACTIVITY PROCEEDING.**

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AI 05-07: At a previous teleconference, the need to determine an appropriate dose conversion factor (DCF) to use in EPHAs and consequence assessment models was discussed. Many sites (e.g., SRS, Y-12) and NARAC use the ICRP-30 DCFs, some use the ICRP-68/72 DCFs, while others are considering using the upcoming ICRP-90 DCFs. Ed Tupin, EPA, who is involved in the upcoming revision of the EPA-400 PAGs indicated to Wayne that EPA may “leap frog” to the ICRP-90 DCFs. Dick Englehart, DOE/EH, who oversees the production of Design Safety Analyses (DSAs) to meet 10 CFR 830, has affirmed the use of ICRP-68 DCFs. It is difficult to determine which of these DCFs is more conservative since the results depend on the particle size distribution, types of radionuclides, and other factors.

Gus Vazquez had earlier indicated that his office (e.g., Office of Air, Water, and Radiation Protection) may be able to assist in this project.

Wayne Davis has submitted a 2-page Statement of the Problem to Cliff Glantz, SCAPA Coordinator. The Statement of the Problem will become part of a Position Paper if it is determined a SCAPA Position paper is merited. Wayne Davis’ abstract was accepted for presentation at the February 2006 Topical Meeting. Wayne suggested that SCAPA’s role is to provide a consensus on which DCFs to use DOE/NNSA-wide. To do this, this effort needs to be focused and energized. **ACTIVITY PROCEEDING.**

Biosafety Working Group (Cliff Glantz, Acting Chairman)

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

Glen Funk, LLNL Biosafety Officer (BSO) indicated that the biosafety working group has been active in providing its integrated comments to Jim Powers, NA-41, on DOE Order 151.1C and the Biosafety EMG, and added that the DOE/NNSA BSOs were generally satisfied with the changes in the order and the EMG; as many of their concerns were appropriately addressed.

Glen also indicated that at LLNL, the BSO has become more integrated with the emergency preparedness and response program. He is also grateful that SCAPA is putting forth an effort to unify the BSOs, similar to what universities are undertaking.

Jim Powers gave an update on DOE Order 151.1C and the EMGs. The order is being held up to resolve various Defense Nuclear Facilities Safety Board (DNFSB) comments. Once they are resolved the Order and its EMGs will be sent out for review again sometime in October 2005.

Cliff Glantz mentioned that there will be a BSO conference call once the Order and Biosafety EMG have been issued.

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IV. SCAPA Web Page Report

Cliff Glantz mentioned that the EMI SIG/SCAPA web page has been managed very well by ORISE with all of the recent changes being implemented.

V. TEEL Documentation and Database Project

AI 05-09: Tony Pierpoint reported on the TEEL documentation and database project.

Tony indicated the sections on the development of TEEL methodology and the use of TEELs are progressing. Jim Weeks met with Doug in August to work with him on these sections. A focused review by TAG is scheduled for September 15, with a wider SCAPA review planned for September 30. A first draft of the entire document is targeted for November 15, with Chapters 1-6 to be completed before October 20.

ACTIVITY PROCEEDING.

VI. EPA AEGLs/DHS PALs Status

AEGLs: Po-Yung Lu reported on EPA/AEGL activities. The next National Academy of Sciences (NAS) meeting is scheduled for mid-September in Woods Hole, MA and the next National Advisory Committee (NAC) for AEGLs will be held on September 28-30 in Washington, DC. Ten to fifteen chemicals are under review and will be discussed at this meeting.

PALs: The Department of Homeland Security (DHS) is developing Provisional Advisory Levels (PALs) for evacuation and re-entry. 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). Po-Yung mentioned that Oak Ridge National Laboratory (ORNL) and Argonne National Laboratory (ANL) will be developing the PALs.

VII. PAGs Status

Gustavo Vazquez was not available to report on the two initiatives regarding PAGs. At an earlier teleconference, Gustavo mentioned that the PAGs for Improvised Nuclear Devices (INDs) and Radiological Dispersal Devices (RDDs) have been developed for DHS and are to be published for review and comment in August, and are expected to be released at the end of the summer. The EPA PAGs have been drafted, but will not be released until the DHS IND/RDD PAGs have been released. The target for the release of the EPA PAGs is early fall.

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VIII. AIHA ERPGs Status

The next ERPG Committee meeting will be in September 2005 at Nantucket, MA. At this meeting, AIHA will finalize which substances it will look at in 2006, ensuring that it will not look at new chemicals in which AEGLs are being developed.

The ERPG Committee had a meeting in Washington, DC, at FEMA/HQ and will publish ERPGs for 7-8 chemicals and revised ERPGs for 6-7 chemicals by the end of the year.

IX. New Business

No new business was brought to the floor.

X. Next SCAPA Conference Call

Carl Mazzola tentatively scheduled the next SCAPA Conference call for **October 11, 2005 at 10:30 a.m.**

XI. Adjournment

The teleconference was adjourned at **11:38 a.m.**

XII. SCAPA Program Action Item Status

Based on the information exchange from this teleconference, two Action Items (**04-04, 04-48**) will be closed, and one new Action Item (**05-10**) will be opened. Existing action items that are not closed are colored green, new action items, yellow, while action items to be closed, blue.

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 16.

Respectfully Submitted,

Carl Mazzola

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