

SCAPA PROGRAM TELECONFERENCE 05-07
WEDNESDAY, OCTOBER 19, 2005; 10:30 AM-11:30 AM

Participants:

- Denny Armstrong, LANL
- Michele Baker, WSMS Mid-America
- Shawn Bond, Hanford
- Cindy Brizes, SRS
- Larry Campbell, Fluor Hanford
- Jeng Cheng, NA-41
- Dorothy Cohen, ORISE
- Doug Craig, ATL International
- Wayne Davis, WSMS
- AI Feldt, NA-41
- Cliff Glantz, PNNL
- Courtney Haggard, WSMS Mid-America
- John Harris, OROO
- Eva Hickey, PNNL
- Chuck Hunter, SRNL
- Jim Jamison, SAIC
- Mike Lazaro, ANL
- Po-Yung Lu, ORNL
- Pete Matonis, INL
- Carl Mazzola, Shaw Environmental
- Margaret MacDonnell, ANL
- Rocky Petrocchi, Washington Group
- Frank Roberto, ID
- Peter Stand, NA-41
- Richard Thomas, Intercet
- Kerry Ward, INL

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.

Last month, 26 individuals participated in the SCAPA teleconference.

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II. Administrative Matters

Carl Mazzola led the discussion on four SCAPA administrative matters.

Previous Teleconference Highlights: Carl Mazzola stated that the final highlights from the 9/7/05 SCAPA Program Teleconference 05-06 has been issued. Dorothy mentioned that late comments from Doug Craig were included.

Carl 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 has posted the 9/7/05 SCAPA Program Teleconference 05-06 highlights, with Doug's comments addressed, on the EMI SIG/SCAPA website.

SCAPA Action Item Status: Carl Mazzola briefly discussed the latest updated SCAPA Program Action Item (AI) listing, dated September 13, 2005. Progress on closure continues since the last teleconference and SCAPA meeting. At the time of this teleconference, 16 action items still remain open. These AIs will be updated, based on reports and decisions made during this teleconference.

EMI SIG 2006 Presentation Proposals: Dorothy Cohen has sent out a call for presentation proposals to be given at the upcoming EMI SIG Meeting in Las Vegas, NV, May 1-4, 2006.

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 Fairbent and comments would be soon forthcoming. **ACTIVITY PROCEEDING.**

AI 05-08: Carl Mazzola reported that SCAPA members had submitted seven abstracts to the American Nuclear Society (ANS) 9th Topical Meeting on Emergency Preparedness & Response and Robotics to be held February 12-15, 2006 at Salt Lake City, UT. Jim Fairbent and Carl Mazzola, who are on the Technical Program Committee, have used these and several other abstracts to construct at least three technical sessions. Rob Addis, SRNL, has stimulated four additional technical sessions, for a total of seven sessions that would interest SCAPA membership.

Carl briefly discussed the seven sessions: (1) E-01: Consequence Assessment Modeling at DOE Facilities; (2) E-02: The European ENSEMBLE Program; (3) E-03: Modeling Atmospheric Consequence Assessments in Europe; (4) National Emergency Response; (5) E-11: Emergency Planning and Response; (6) E-12: Hazard Assessment and Risk Management; and, (7) E-17: Health Effects Criteria for Hazards Assessments. SCAPA participants that have had papers accepted include Jim Jamison, Cliff Glantz, Doug Craig, Rocky Petrocchi, Richard Thomas, Po-Yung Lu, Wayne Davis, Rob Addis, and Chuck Hunter.

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Full papers have been submitted for some of the authors, and all full papers are due later in October for review by the Technical Program Committee. The deadline for the development of the Proceedings is in December 2005. Michele Baker will not be integrating the consequence modeling results of RASCAL and HGSYSTEM-UF6 into Jim Jamison's UF₆ paper since the modeling results are so far inconclusive.

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 the last of the work on the Revision 21 TEELs which has been posted on the SCAPA web page. There were some last-minute changes due to changes in AEGLs that were captured in Revision 21. **THIS ACTION ITEM IS CLOSED.**

AI 04-22: At an earlier teleconference, Doug indicated that the TEEL Methodology Paper activity has been assigned to Jim Weeks, ATL International, who met with Doug to review the scope of the task. Jim Weeks was not available to discuss his progress on the paper. **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 has been essentially completed. **ACTIVITY PROCEEDING.**

AI 05-03: Work on developing the TEEL derivation documentation and traceability as part of the SQA is has moved forward. An evaluation performed by a PNNL intern this summer established that the TEEL logic was functioning and performing properly. However, some changes to the Revision 21 TEELs were made after this initial SQA effort.

At an earlier teleconference, it was discussed that the SQA process also revealed that the TEEL software is more complex than previously thought with a large number of macros to be documented and tested and thus, a procedure for updating this product and a software custodian are needed. The report, when finalized will ultimately become an internal NA-41 report. **ACTIVITY PROCEEDING.**

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AI 05-10: Doug mentioned that the effort of establishing TEELs for almost 400 new chemicals has become part of the Revision 22 TEEL effort, which has been initiated. At an earlier meeting, Doug requested all DOE/NNSA site participants to submit requests for new chemicals now that the next cycle of TEEL development has begun. Doug does not believe that he can have the Revision 22 TEELs ready for the 2006 SCAPA Meeting in May, but expects them to 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 three 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. Once these HCNs are established, they will be placed in the Excel CMM file. Rocky expects this to be completed by May-June 2006.

The updating the older HCN 4.00 chemicals will be accomplished after HCN development of new chemicals in TEELs Revision 20 is completed.

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 submitted to the *Journal of Applied Toxicology* for publication. Much of its text will come from the HCN Development procedure. A first draft continues to be developed and when completed, will undergo peer review by selected SCAPA members. No target date for the completion of the first draft was provided. **ACTIVITY PROCEEDING.**

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. Al Feldt will follow up. **ACTIVITY PROCEEDING.**

Consequence Assessment Modeling Working Group (Cliff Glantz, Chairman)

Carl Mazzola led the discussion and provided an update on the following six Consequence Assessment Modeling (CAM) Working Group action items and activities. Cliff Glantz, who joined the teleconference a little late, due to a conflict, provided additional information.

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AI 03-08: At an earlier teleconference, John Nasstrom, LLNL NARAC, had reported that NARAC is 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. This activity continues to progress. **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. There was 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 (UF_6), which hydrolyzes into UO_2F_2 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 UF_6 release. Moreover, Central Registry toolbox models (e.g., ALOHA, EPICODE) do not explicitly consider the hydrolysis of UF_6 and are likely to be inappropriate for assessing the phenomenology of a given release.

Jim Jamison had earlier developed a draft White Paper which 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- UF_6 , RASCAL, ALOHA, and EPICODE models to determine which transport and dispersion model is most appropriate to the solution of this problem, although this effort has so far produced inconclusive results. (It should be noted that the HGSYSTEM- UF_6 , and RASCAL codes have algorithms that account for uranium hexafluoride hydrolysis.) Accordingly, it was determined that Michele Baker will not be integrating her results into Jim's paper. However, the paper will discuss modeling in more general terms and not present an exhaustive comparison on the modeling results.

The ultimate end product of this effort will be the full technical paper that will be part of the proceedings of the 9th Emergency Preparedness & Response Topical Meeting. This will advise the affected DOE/NNSA emergency management organizations on which approach is most technically sound and defensible.

Separately, Michele will be working the code comparisons that will support the technical needs of DOE Portsmouth. These modeling results will be separate from Jim's work which will be used for the planning and response mode. **ACTIVITY PROCEEDING.**

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AI 05-04: There some additional discussion on the candidate toolbox models for the Central Registry. At an earlier teleconference, Cliff Glantz indicated that the Central Registry has rolled out the order (i.e., DOE O 414.1C) and guide (i.e., DOE G 414.1-1), but is remaining in a reactive mode, and that the full SQA process may take several years. Cliff mentioned that it will probably be by the end of 2005 before toolbox candidates will be established.

At an earlier teleconference, Cliff stated that the SQA efforts relative to NARAC will be discussed during the next NARAC conference call.

Larry Campbell elaborated on the significant effort at Hanford on development of SQA documentation for the MetView and APGEMS codes; where the 10 required documents, listed in DOE G 414.1-1, are presently under M & O Contractor (Fluor-Hanford) review. These internal reviews indicated that documents from the Quality Assurance, Information Technology, and Emergency Planning programs were being affected by the SQA effort, and this was adding complexity to the process. When the SQA documentation is finalized, it will provide a blueprint for other DOE/NNSA sites to pursue their SQA activities. **ACTIVITY PROCEEDING.**

AI 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.**

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 use the ICRP-30 DCFs, some use the ICRP-68/72 DCFs, while others are considering using the upcoming ICRP-90 DCFs. (Note: 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.

Wayne mentioned that 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. Wayne has begun comparison runs for each of the DCFs and has observed that the results are also highly dependent on the isotope mix, and the lung clearance classes. Wayne also indicated that his abstract was accepted for presentation at the February 2006 EP & R Topical Meeting and his full paper, which will contain the comparative results and recommendations, will hopefully provide a consensus on which DCFs to use DOE/NNSA-wide. **ACTIVITY PROCEEDING.**

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Biosafety Working Group (Cliff Glantz, Acting Chairman)

Cliff Glantz led the discussion and provided an update on the following Biosafety Working Group activities. The first Biosafety Working Group Teleconference is planned for the end of October 2005, or once the Order and Biosafety EMG have been issued, whichever comes first.

Frank Roberto, INL 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. DOE 151.1C has not yet been released from ME (i.e., DOE Office of Budget, Management, and Evaluation). Once it has been released from that office, Jim Fairbrent may consider issuing a draft version. Al Feldt mentioned that the EMG process is not moving very quickly.

Frank mentioned that some new emerging issues may hasten the onset of the conference call. Frank discussed the recent report from the DOE Inspector General (IG) which concluded that biosafety activities are not well coordinated within the DOE/NNSA complex. Frank will provide a hyperlink to that report. DOE needs to develop a response to this report, but no action item will be opened at this time. Once the issue is discussed more thoroughly during the upcoming Biosafety Working Group teleconference, an action item will be scoped and opened.

Frank also indicated that 42 CFR 73, issued March 2005, requires BSOs to participate in annual emergency response exercises and integrated within Emergency Response Organizations. The upcoming EMG should provide the proper framework to address this Department of Health and Human Services (DHHS) enabling regulation requirement.

IV. SCAPA Web Page Report

Cliff Glantz mentioned that the EMI SIG/SCAPA web page continues to be well-managed by ORISE and is up-to-date.

The Revision 21 TEELs, inclusive of the tables and excel worksheets, have been posted on the website.

Cliff indicated that he received a call from the University of Florida, who discovered SCAPA through its website and requested information on modeling chemicals in the solid phase.

V. TEEL Documentation and Database Project

AI 05-09: Rocky Petrocchi (for Tony Pierpoint) reported on the TEEL documentation and database project.

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Rocky indicated that Sections 2-4 are under SCAPA review and look good. A first draft of the entire document is still targeted for November 15.

In addition, the searchable TEELs database has been updated with TEELs Revision 21.

ACTIVITY PROCEEDING.

VI. EPA AEGLs/DHS PALs Status

AEGLs: Po-Yung Lu reported on EPA/AEGL activities.

A National Academy of Sciences (NAS) meeting was held in mid-September in Woods Hole, MA and a National Advisory Committee (NAC) for AEGLs was held on September 28-30 in Washington, DC. Various issues on human toxicology that have been raised have emerged and the 15 chemicals that are under review will not be moving forward at this time until these issues can be resolved.

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 and that they should be ready for review in the December 2005 timeframe.

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.

VIII. AIHA ERPGs Status

Richard Thomas reported on the ERPG Committee meeting that was held September 22-23, 2005 at Nantucket, MA.

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Richard indicated that ERPGs for 14 substances were approved and will appear on the AIHA website on December 31, 2005 and in the annual update of the AIHA ERPG and WEEL Handbook in late-February 2006. At this meeting, AIHA also finalized the 16 substances that it will look at in 2006, ensuring that it will not look at new chemicals in which AEGLs are being developed.

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 **November 29, 2005 at 10:30 a.m.**

Carl mentioned that the Annual SCAPA Program review meeting with NA-40 will be held in the Forrestal Building on November 16, 2005.

XI. Adjournment

The teleconference was adjourned at **11:30 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.

Carl Mazzola will update the action item list based on the information exchange from this conference call. The number of open action items remains the same at 16.

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Respectfully Submitted,

Carl Mazzola

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