

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

Participants:

- Denny Armstrong, LANL
- Michele Baker, WSMS Mid-America
- Cindy Brizes, SRS
- Jeng Cheng, NA-41
- Dorothy Cohen, ORISE
- Doug Craig, ATL International
- Wayne Davis, WSMS
- Robert Gee, Y-12
- Jerry Gilbeault, INL
- Cliff Glantz, PNNL
- John Harris, OROO
- Eva Hickey, PNNL
- Chuck Hunter, SRNL
- Jim Jamison, SAIC
- Po-Yung Lu, ORNL
- Pete Matonis, INL
- Carl Mazzola, Shaw Environmental
- Margaret MacDonnell, ANL
- John Nasstrom, NARAC
- Tony Pierpoint, ATL International
- Frank Roberto, ID
- Brad Salmonson, ID
- Dina Sassone, LANL
- Gustavo Vazquez, EH-41
- Terry Ward, INL
- Gary Winter

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.

During the previous two SCAPA conference calls, 26 individuals participated in the SCAPA teleconference.

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

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 10/19/05 SCAPA Program Teleconference 05-07 has been issued.

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 10/19/05 SCAPA Program Teleconference 05-07 highlights on the EMI SIG/SCAPA website.

SCAPA Action Item Status: Carl Mazzola briefly discussed the latest updated SCAPA Program Action Item (AI) listing, dated November 26, 2005. Progress on closure continues since the last teleconference and SCAPA meeting. At the time of this teleconference, 16 action items still remain open. The semiannual SCAPA Program Meeting with NA-41 took place on November 16, 2005. The meeting resulted in the closure of AI 05-02 and the opening of AIs 06-01 through 06-04:

- **AI 06-01:** Central Registry SQA and Toolbox Implementation: NA-41 directed SCAPA to contact the Central Registry to discuss its plans for implementing DOE O 414.1D and DOE G 414.1-1;
- **AI 06-02:** NARAC Code Application for EPHAs: NA-41 directed SCAPA to determine the effect of using NARAC for EPHAs and to quantify the possible non-conservatisms. NARAC may be requested to provide additional documentation and training to its users;
- **AI 06-03:** Biosafety Working Group Teleconferences: NA-41 directed SCAPA to initiate teleconferences with the Biosafety Working Group as DOE O 151.1C is issued and the Biosafety EMG should be issued by the end of the year; and,
- **AI 06-04:** EMI SIG-SCAPA 2006 NA-41 directed SCAPA to begin planning for the 2006 meetings.

These AIs were discussed during this teleconference.

EMI SIG 2006 Presentation Proposals: Dorothy Cohen indicated that there was little time left to respond to the call for presentation proposals to be given at the upcoming EMI SIG Meeting in Las Vegas, NV, May 1-4, 2006. She encouraged all individuals on the teleconference to get their proposals in as soon as possible.

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

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. **ACTIVITY PROCEEDING.**

AI 05-08: Carl Mazzola reported that there will be seven sessions at the American Nuclear Society (ANS) 1st Topical Meeting on Emergency Preparedness & Response and Robotics to be held February 12-15, 2006 at Salt Lake City, UT: (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 full papers either accepted or under review include Jim Jamison, Cliff Glantz, Doug Craig, Rocky Petrocchi, Richard Thomas, Po-Yung Lu, Wayne Davis, Rob Addis, and Chuck Hunter. Greg Martin, Eva Hickey, Cliff Glantz and Carl Mazzola are assisting Jim Fairobent in the reviews. The deadline for the approval of full papers is December 12, 2005.

AI 06-04: Carl Mazzola briefly discussed the planned meetings at this year's EMI SIG Meeting, and encouraged everyone on the teleconference to participate:

- Monday, May 1, 2006: Hazards Assessment Working Group Meeting;
- Monday, May 1, 2006: DOE Meteorological Coordinating Council (DMCC) Meeting;
- Monday, May 1, 2006: Operational Emergencies Workshop;
- Monday, May 1, 2006: Screening Methodology Workshop;
- Tuesday May 2, 2006 and Wednesday May 3, 2006: Chemical Exposures and Chemical Mixtures Working Group Meeting;
- Tuesday May 2, 2006 and Wednesday May 3, 2006: Consequence Assessment Working Group Meeting;
- Tuesday May 2, 2006 and Wednesday May 3, 2006: Biosafety Working Group Meeting;
- Tuesday May 2, 2006 and Wednesday May 3, 2006: NARAC Users Group Meeting;
- Wednesday May 3, 2006: SCAPA session (1:00-2:30 pm) and SCAPA dinner (6:00 pm); and,
- Thursday, May 4, 2006: SCAPA Meeting

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

III. SCAPA Working Group Activities

Chemical Exposures Working Group (Doug Craig, Chairman)

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

AI 04-22: At an earlier teleconference, Doug indicated that the TEEL Methodology Paper activity has been assigned to Jim Weeks, ATL International. Jim 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 SQA effort and the updated TEEL methodology documentation has been essentially completed. **ACTIVITY PROCEEDING.**

AI 05-03: Work on developing the TEEL derivation documentation and traceability as part of the SQA continues to move forward. An evaluation performed by a PNNL intern, Eduardo Donoso, this summer established that the TEEL logic was functioning and performing properly, but the work also revealed 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. Tony Pierpoint mentioned that ATL International is assisting in defining the next steps associated with the TEEL SQA, in conjunction with its efforts on the TEEL derivation documentation. **ACTIVITY PROCEEDING.**

AI 05-10: Doug indicated that the Revision 22 TEEL effort will be establishing TEELs for almost 400 new chemicals. At an earlier teleconference, Doug stated that the Revision 22 TEELs would likely not be ready for the 2006 SCAPA Meeting, but expects them to be completed prior to the end of FY06. **ACTIVITY PROCEEDING.**

Chemical Mixtures Working Group (Doug Craig, Chairman)

Rocky Petrocchi was unavailable, so Doug Craig 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, and once these HCNs are established, they will be placed in the Excel CMM file. The updating the older HCN 4.00 chemicals, as well as further work on the TEELs Revision 21 chemicals will commence once the Revision 20 work is completed. **ACTIVITY PROCEEDING.**

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

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 rough 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: Carl Mazzola reported that at the SCAPA Program Meeting, Jim Fairbent indicated that he has not received any requests for an expanded chemical PAC workshop and does not plan to further pursue it unless significant interest is shown. Carl encouraged the DOE/NNSA site participants to declare their interest, if any, to Jim Fairbent, either by e-mail or letter. John Nasstrom mentioned that several people from the NARAC program have expressed interest. **THIS ACTION ITEM IS CLOSED.**

Consequence Assessment Modeling Working Group (Cliff Glantz, Chairman)

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

AI 03-08: John Nasstrom, LLNL NARAC, reported that he is still working to create technical documentation for the NARAC system and will make them available to the NARAC user community and SCAPA shortly. **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 (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. Moreover, 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's draft White Paper which indicated that the AEGL-2 for uranium hexafluoride represents the best toxic endpoint value is being reconfigured into a full technical paper that will be part of the proceedings of the 1st Emergency Preparedness & Response and Robotics Topical Meeting. This will advise the affected DOE/NNSA emergency management organizations on which approach is most technically sound and defensible.

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

AI 06/02: As part of the UF₆ effort, Michele Baker continues to develop code comparisons that will support the technical needs of DOE Portsmouth. These modeling results, due December 31, 2005, involve the NARAC, ALOHA and RASCAL codes. In the process of performing this evaluation, 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. Michele has established that F-1 meter/second is still the 95% meteorology using NARAC for Portsmouth. A separate conference call will be scheduled to work this issue further. **ACTIVITY PROCEEDING.**

AI 05-04/06-01: At an earlier teleconference, 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, and that the full SQA process may take several years. At the SCAPA Program Meeting, NA-41 directed SCAPA to contact the Central Registry to discuss its plans for implementing DOE O 414.1D and DOE G 414.1-1. Cliff intends to contact Debra Sparkman to determine the Central Registry's implementation plans.

Cliff also indicated that the SCAPA web page has much information on the SQA process and links to SQA resources. There are plans to update the web page relative to the toolbox before the 2006 SCAPA Meeting.

At an earlier teleconference, Larry Campbell elaborated on the significant effort at Hanford on development of SQA documentation for the MetView and APGEMS codes. 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 significant discussion on NARAC ingestion of the ARCON96 model. Carl Mazzola provided NUREG/CR-6331 Revision 1 which documents the ARCON96 code, as well as a 30-page White Paper that justifies its use as near as 10-meters from the release point. 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. **ACTIVITY PROCEEDING.**

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

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.

Earlier, Wayne Davis 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. However, he 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, who is recovering from surgery, is in the process of completing his full paper to the topical meeting which will serve as the SCAPA position on this topic. **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.

AI 06/03: The first Biosafety Working Group Teleconference is scheduled for December 8, 2005, now that DOE Order 151.1C and a draft of the Biosafety EMG have been issued.

Dina Sassone, LANL Biosafety Officer (BSO), indicated that she has participated in a tabletop exercise with Denny Armstrong’s Emergency Response Organization and a live exercise is being planned for December, 2005.

At an earlier teleconference, Frank Roberto, INL BSO, discussed the recent report from the DOE Inspector General (IG) which concluded that biosafety activities are not well coordinated within the DOE/NNSA complex and provided a hyperlink to that report. This issue will be discussed more thoroughly during the December 8, 2005 Biosafety Working Group teleconference, which may lead to an Action Item. 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.

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

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. A Biosafety Working Group web page will soon be added.

The hyperlink for DOE O 151.1C was requested. It is <http://www.directives.doe.gov/pdfs/doe/doetext/neword/151/o1511c.html> .

V. TEEL Documentation and Database Project

AI 05-09: Tony Pierpoint reported on the TEEL documentation and database project and indicated that the first draft is completed and comments from Doug Craig and Rocky Petrocchi are being addressed by Jim Weeks. By December 20, 2005, a draft will be provided to NA-41 for more extensive review. **ACTIVITY PROCEEDING.**

VI. EPA AEGLs/DHS PALs Status

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

EPA has commented on the use of human toxicology information and this has led to the postponement of the December 2005 NAC/AEGL meeting. Accordingly, the 15 chemicals under National Academy of Sciences (NAS) preparation will not be moving forward 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). The pathways are oral ingestion and inhalation. 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 reported 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. The technical work was completed in August, but due to the loss of the FEMA Director in September 2005, their release through the Federal Register has been delayed. They are now expected to be released in December 2005.

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

The EPA PAGs have been drafted, but will not be released until the DHS IND/RDD PAGs have been released.

VIII. AIHA ERPGs Status

Richard Thomas was not available to report on the ERPG Committee.

IX. New Business

Robert Gee asked a question on the Revision 21 TEELs and noted that the first choice for a chemical PAC was the 60-minute AEGL-2 value, yet the NARAC default was the 10-minute AEGL-2 value. John Nasstrom mentioned that there is a planned revision to NARAC to resolve this inconsistency. However, in the interim, NARAC can set up special parameters for each user to overcome this issue.

X. Next SCAPA Conference Call

Carl Mazzola tentatively scheduled the next SCAPA Conference call for **January 4, 2006 at 10:30 a.m.**

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 19.

SCAPA PROGRAM TELECONFERENCE 05-08
WEDNESDAY, NOVEMBER 29, 2005; 10:30 AM-11:30 AM

Respectfully Submitted,

Carl Mazzola

Carl Mazzola