

SCAPA PROGRAM TELECONFERENCE 05-05

THURSDAY, JULY 28, 2005; 10:30 AM-11:30 AM

Participants:

- Larry Campbell, Fluor Hanford
- Jeng Chang, NA-41
- Doug Craig, ATL International
- Wayne Davis, WSMS
- Cliff Glantz, PNNL
- John Harris, OROO
- Courtney Lester, WSMS Mid-America
- Po-Yung Lu, ORNL
- Amber Martin, WSMS Mid-America
- Carl Mazzola, Shaw Environmental
- Rocky Petrocchi, Washington Group
- Tony Pierpoint, ATL International
- Brad Salmonson, INL
- Richard Thomas, Intercet
- Gustavo Vazquez, EH-412
- Jim Weeks, ATL International

Teleconference Highlights

I. Roll Call

Carl Mazzola conducted a roll call and acknowledged that 16 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. Dorothy was on vacation and was unable to participate in the teleconference 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 6/21/05 SCAPA Program Teleconference 05-04 has been issued. 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 has been requested to post the 6/21/05 SCAPA Program Teleconference 05-04 highlights on the EMI SIG/SCAPA website.

SCAPA Action Item Status: Carl Mazzola briefly discussed the updated SCAPA Program Action Item (AI) listing, dated July 7, 2005. Progress on closure continues since the last teleconference and SCAPA meeting. At the time of this teleconference, 16 action items still remain open.

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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. Tom was unable to participate in this teleconference.

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 discussed the need for the submission of additional abstracts to the American Nuclear Society (ANS) 9th Topical Meeting on Emergency Preparedness & Response (EP & R), to be held February 12-15, 2006 at Salt Lake City, UT. Jim Fairobent is sponsoring two sessions on hazards assessment and complex terrain atmospheric transport and dispersion modeling. So far, Doug Craig, Rocky Petrocchi, Cliff Glantz, and Jim Jamison, have submitted abstracts. The abstract deadline is August 1, 2005. Submission of abstracts can be accomplished through accessing www.2006sharingsolutions.com. Wayne Davis and John Nasstrom have indicated intent to submit an abstract.

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 04-04: Doug is proceeding with Revision 21 of the TEELs which will include all chemicals that have interim or final AEGLs. Doug has produced TEELs for 424 new chemicals, which are under a quality assurance (QA) review by Rocky Petrocchi and that the QA review was completed for about 300 of the new chemicals. For these new chemicals, a "source of TEELs" column will be added. Doug indicated that he believed Revision 21 would be completed around the end of August. TEELs Revision 21 will have 2,943 chemicals.

The remaining 400+ chemicals that are not part of Revision 21 will become part of the Revision 22 TEEL work to be accomplished in FY06. **ACTIVITY PROCEEDING.**

AI 04-22: At earlier teleconferences, it was noted that completion of the "complete" TEEL-derivation Methodology paper was essential before any meaningful SQA could ever begin. After the call, Doug indicated that the TEEL Methodology Paper review activity has been assigned to Jim Weeks, ATL International, to whom relevant files have been forwarded. Jim Weeks will be meeting with Doug Craig on August 15, 2005 to review the scope of the task. **ACTIVITY PROCEEDING.**

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AI 04-53: There was no discussion on the upcoming session at the 2006 EMI SIG meeting regarding the effect of SQA guidance on TEEL and HCN 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 has begun. Ray Lux is developing documentation and Doug Craig is working this week in Richland, WA with the PNNL summer intern, Eduardo Donoso, to determine what elements of SQA are needed. The early stages of this process revealed that the TEEL software is more complex than previously thought with a large number of macros to be documented and tested. **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 has developed about 10% of the HCNs for the approximately 300 new chemicals in the latest TEEL Revision 20. Further work will be undertaken after the TEELs Revision 21 QA effort is completed. **ACTIVITY PROCEEDING.**

AI 04-44: At an earlier teleconference, Rocky 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. **ACTIVITY PROCEEDING.**

AI 04-48: At an earlier teleconference, Rocky mentioned that updating the older HCN 4.00 chemicals will be accomplished after HCN development of new chemicals in TEELs Revision 20 is completed. **ACTIVITY PROCEEDING.**

AI 05-02: At an earlier teleconference, Al Feldt indicated 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 seven Consequence Assessment Modeling (CAM) Working Group action items and activities.

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AI 03-08: At an earlier conference call, 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. An update on their progress and other NARAC news was briefly discussed at the NARAC User Group meeting at the EMI SIG meeting. **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 04-52: At earlier teleconferences, Cliff 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 414.1D and DOE G 414.1-1 are issued.

The SQA order and guide was issued in June 2005 and have been placed on the Central Registry's website to assist the DOE/NNSA sites in determining the appropriate level of SQA for codes used at the sites that affect safety. The DOE/EH-sponsored videoconference to kick off the SQA effort occurred on July 25, 2005. Due to technical problems, it was not completed. The remainder of the videoconference is scheduled for August 4, 2005. Cliff intends to issue a guidance memo after the completion of the videoconferences to discuss the impact to DOE/NNSA emergency management programs.

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 Toolbox Registry, and what criteria this graded approach would involve. The emergency management group at Hanford has made its own determination that Level B applies to some emergency planning and preparedness codes. Larry Campbell mentioned that at Hanford, SQA is a large issue and the operating contractor has been instructed that it cannot use its codes until the SQA for the affected codes is completed.

Cliff Glantz stated that he attend the 9th annual atmospheric transport and dispersion modeling meeting at George Mason University and noted that there was no discussion on model SQA. The focus of this meeting was on technical innovation and research.

After the teleconference, it was determined to close this action item since the SQA order and guide have been issued and the Central Registry completed its rollout videoconferences. Implementation of the SQA activities, inclusive of the toolbox model selection, will be tracked through AI 05-04. **THIS ACTION ITEM CAN BE CLOSED.**

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AI 05-01: At earlier teleconferences, there was considerable discussion on the hazard assessment of uranium hexafluoride (UF₆) that was requested by Wayne Davis. UF₆ 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. 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 Wayne Davis, Rocky Petrocchi and Po-Yung Lu. Richard Thomas and Gus Vazquez indicated they would provide further comments. The White Paper indicated that the AEGL-2 for uranium hexafluoride represents the best toxic endpoint value.

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.

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. **ACTIVITY PROCEEDING.**

05-04: There was no discussion on the candidate toolbox models for the Central Registry. **ACTIVITY PROCEEDING.**

05-05: There was no discussion on NARAC ingestion of the ARCON96 model. **ACTIVITY PROCEEDING.**

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AI 05-07: The need to determine an appropriate dose conversion factor (DCF) to use in EPHAs and consequence assessment models was made into an action item during the last teleconference.

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.

Wayne Davis indicated he has developed a 2-page Statement of the Problem, and will submit it 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.

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

Biosafety Working Group (Cliff Glantz, Acting Chairman)

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

Although there are no open action items, Cliff mentioned that the biosafety working group has been active in providing its integrated comments to Jim Powers, NA-41, on a the Biosafety EMG. Cliff has been in contact with Dina Sassone, the LANL Biosafety Officer (BSO) and has been contacted by the SRNL BSO who also wants to participate.

IV. SCAPA Web Page Report

Cliff Glantz mentioned that photographs taken during the SCAPA meeting and the SCAPA Meeting Report have been posted on the EMI SIG/SCAPA web page.

There was some discussion on posting a questionnaire for a longer version of the PAC Workshop, described in AI 05-02, on the EMI SIG website. Rocky said that Dorothy had requested a modified version of the flyer used for the workshop in May, which was sent to her. Dorothy needed this so she could post it along with a questionnaire so that EMI-SIG members could express their needs for a longer version of the workshop. Rocky asked whether Jim Fairbent needs additional input to decide on a longer version of the workshop. Cliff Glantz will follow up.

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V. TEEL Documentation and Database Project

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

Tony indicated that approval to begin the sections on the development of TEEL methodology and the use of TEELs has been received and work is progressing. A draft of Section 3 is expected by August 18 and a complete draft of the entire document is targeted for November 2005. Jim Weeks will be meeting with Doug at his home in Egg Harbor, NJ, in August to work with him on these sections. (After the teleconference Tony sent an annotated outline which is attached to these minutes).

Tony also indicated that when Revision 21 of the TEELs has been completed, he will upload the information to the searchable TEELs database. CAMEO Version 1.2, the 2004 National Institute for Occupational safety and Health (NIOSH) pocket guide, and the 2004 Department of Transportation (DOT) Guidebook have been added to the searchable TEELs database.

ACTIVITY PROCEEDING.

VI. EPA AEGLs/DHS PALs Status

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

Po-Yung indicated that there are two new interim AEGLs, which he will send to Doug Craig to integrate into the TEEL Revision 21 work.

The next National Academy of Sciences (NAS) meeting is scheduled for the end of August.

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 will provide a point-of-contact to acquire further information.

VII. PAGs Status

Gustavo Vazquez briefly reported on two initiatives regarding PAGs.

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. They are expected to be released at the end of the summer. Gus will send everyone an e-mail when these are finalized.

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

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Richard Thomas reported on the development of ERPGs.

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

Gustavo Vazquez discussed a meeting with the Office of Air, Water and Radiation Protection with a group of Kentucky state regulators regarding uranium conversion at Paducah and Portsmouth. There was also a meeting with the Ohio regulators on HF and residual radioactivity for clean release.

X. Next SCAPA Conference Call

Carl Mazzola tentatively scheduled the next SCAPA Conference call for **September 7, 2005 at 10:30 a.m.**

XI. Adjournment

The teleconference was adjourned at **11:30 a.m.**

XII. SCAPA Program Action Item Status

Based on the information exchange from this teleconference, Action Item **04-52** will be closed. Two new Action Items, **05-08**, "Stimulate Abstracts for the 9th EP & R Topical Meeting", and **05-09**, "TEEL Documentation and Database Project" resulted from this Teleconference. Existing action items that are not closed are colored green. New action actions are colored yellow, while action items 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 has been increased to 17.

Respectfully Submitted,

Carl Mazzola
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