Highlights
SCAPA Teleconference 10-05
October 21, 2010, 12:30 p.m. EDT

Participants

Maureen Alai, LLNL NARAC
Tom Bellinger, Y-12
Jayne-Anne Bond, ATL
Dorothy Cohen, ORISE
Doug Craig, ATL
Wayne Davis, SRS
Diana de la Rosa, SNL
Cliff Glantz, PNL
Jim Jamison, SAIC
Vickie Locklair, NA-43
Po-Yung Lu, ORNL
Dan Marsick, DOE/HS
Carl Mazzola, Shaw Environmental
Shana Petersen, Y-12
Rocky Petrocchi, Petrocchi Associates
Jim Powers, NA-41
Frank Roberto, INL
Brad Salmonson, INL
Joe Terranova, BNL
Richard Thomas, Intercet
Jamie Wright, Y-12
Xiao-Yung Yu, PNNL

Roll Call

Carl Mazzola conducted a roll call, noting that 22 emergency management professionals (identified in the participant list) involved in various aspects of the SCAPA and related programs were present. The teleconference was called to order.

Administrative Matters

Carl Mazzola indicated that the highlights from SCAPA Program Teleconference 10-04 have been approved and will soon be posted by ORISE on the EMI SIG/SCAPA website.

SCAPA Working Group Activities

Chemical Exposures Working Group (CEWG)

PAC/TEEL Revision 26 (Activity can be closed)

Doug Craig and Jayne-Anne Bond discussed the completion of the PAC/TEEL Revision 26 effort which has PAC/TEELs for 3,383 chemicals. The searchable TEEL data base and PAC/TEEL workbook have also been posted on the website. This revision includes toxicity data updates using the most recent toxicology information for 770 chemicals that had TEELs developed on or before September 30, 1997 and also includes any changes made to the updated AEGLs and ERPGs. In addition, results of the review of the chemical and physical properties of the oldest 750 chemicals have also been included.

PAC/TEEL Revision 27

Doug Craig indicated that work will soon begin on PAC/TEEL Revision 27, which will include toxicity data updates for about 800 chemicals after September 30, 1997, changes in AEGLs and ERPGs prior to its publication, and any new chemicals that sites or external organizations request through the "Need PACs for a New Chemical?" option on the PAC/TEEL webpage menu (see http://orise.orau.gov/emi/scapa/chem-pacs-teels/pac-new-chemical.htm) . NA-41 will decide whether any recommendations of the outside review group will be incorporated into the Revision 27 PAC/TEELs.

Cyanuric Chloride TEEL Request (Activity proceeding)

During a previous teleconference, Kerry Ward asked if there would be a PAC/TEEL for cyanuric chloride, CASRN 108-77-0, as INL was expecting a shipment of this chemical soon. Kerry was directed to submit his request through the PAC/TEEL webpage. All such requests automatically go to NA-41 and the PAC/TEEL development team for consideration. Kerry was unavailable for an update as to whether he has filed a request

Chemical Mixtures Working Group (CMWG)

CMM Revision 26 (Activity proceeding)

Xiao-Ying Yu reported that quality assurance screening has been completed for the 2009 update of the Health Code Numbers (HCNs). About 1,000 chemicals from the Chemical Mixture Methodology (CMM) are involved in this update. These revised HCNs will soon be published in CMM Rev 26, which is scheduled to be released in late October or November (shortly after the release of PAC/TEEL Revision 26)

CMM Revision 27

PNNL intern Hua He, working under the direction of Xiao-Ying and Rocky Petrocchi, has this summer completed HCN updates for the next batch of more than 1,000 chemicals in the CMM data set. After quality assurance screening is completed, these updates are slated to be included in CMM Rev 27 (likely to be published in 2011).

Second HCN Technical Paper (Activity proceeding)

Xiao-Ying Yu indicated that work on a second HCN journal article, associated with using surrogate source terms in the CMM, is still ongoing. The writing team is thinking about changing the emphasis of this article to focus more on how the CMM can be used as an effective tool to improve emergency preparedness and response. Many of the CMWG members will be co-authors if this article. Xiao-Ying is looking for the best place to publish this article. Carl Mazzola recommended that the upcoming American Nuclear Society (ANS) Topical Meeting on Emergency Preparedness and Response in Knoxville, TN, August 8-10, 2011, might be a

good forum for presenting a paper on this topic. The Call for Papers for that topical meeting will commence in November 2010.

Consequence Assessment Modeling Working Group (CAMWG)

Consequence Assessment Guide (Activity proceeding)

A Consequence Assessment Guide, developed for use by DMCC or NNSA/DOE meteorological program managers to conduct assessments of the meteorological components of the site's consequence assessment program, received extensive comments from NA-41, and resolutions of these comments were provided two weeks later. NA-41 will be completing its final review and will provide final guidance. When issued, this guide will compliment the Meteorological Data Program Assessment Guide that was issued at the 2008 EMI SIG meeting. No additional discussion during this teleconference.

Central Toolbox Registry—SQA & Candidate Models (Activity proceeding)

Jeremy Rishel reported on the SCAPA toolbox effort. With SCAPA's preliminary SQA guidance finalized, model developers will be able to use this living document to perform a preliminary gap analysis on their model's SQA program. Selected members of the CAMWG will evaluate these gap analyses. The ultimate goal is to work with model developers to close gaps on all SCAPA toolbox models in a timely manner.

CAPARS, the ORNL emergency response consequence assessment code, has been selected as the first model to undergo an SQA gap analysis, and John Ciolek has prepared the documentation for the reviewers, which include Carl Mazzola, Cliff Glantz, Wayne Davis, and others. These documents are ready, and a conference call will be conducted to determine specific assignments for each reviewer. Jeremy indicated that NARAC would be the second model to undergo a gap analysis and APGEMS, the third model that will undergo review for admission into the SCAPA toolbox. The goal is to have all codes evaluated by the end of FY11. There will be a CAMWG conference call to discuss preliminary results of the CAPARS review in mid-November 2010.

DOE O 414.1X (Activity proceeding)

During the June 2010 SCAPA teleconference, Jeremy Rishel mentioned that HS-31 is developing a revision to the SQA order, DOE O 414.1X. As part of this revision process, a revised version of DOE G 414.1-4 will be drafted. Volunteers from SCAPA are invited to assist in the drafting of the revised DOE SQA Guidance document. No further discussion during this teleconference.

NARAC User Documentation (Activity proceeding)

There was a brief discussion on Hanford's suggested improvements to user documentation associated with NARAC web.

Biosafety Working Group (BWG)

ABSA Meeting Highlights (Activity can be closed)

Frank Roberto mentioned that several BWG members attended the annual meeting of the American Biological Safety Association (ABSA) in Denver, CO in late-September and presented a poster paper, "Incident Response Planning of Biosafety Facilities." The following presents highlights of the ABSA Meeting:

- Kathryn Harris, National Institutes of Health (NIH), Bethesda, MD, reported on upcoming revisions of the NIH guidelines. Expanded biosafety responsibilities in a number of areas are to be expected, such as a need to review proposals and modifications to existing projects for potential dual-use issues and inclusion of synthetic genomics for review. New guidance will be posted on genetic experimentation *("Recent and Proposed Update to the NIH Guidelines for Research Involving Recombinant DNA Molecules").*
- T The status of the NIH onsite inspection program for Institutional Biosafety Committees (IBCs) was discussed. One to two hundred inspections are being performed each year in support of biosafety programs at the approximately 800 facilities in the United States, with 4-10% of the inspections being unannounced.
- The NIH Office of Biotechnology Activities has developed a self-assessment tool as a resource that institutions may use to appraise their own IBCs and programs of oversight of recombinant DNA research. This resource is based on the requirements articulated in the *NIH Guidelines for Research Involving Recombinant DNA Molecules* (*NIH Guidelines*). The self-assessment tool is posted at: http://oba.od.nih.gov/rdna_ibc/ibc.html. Both a fillable PDF and Excel Spreadsheet versions of the tool are provided. It might be useful for DOE facilities to conduct a self-assessment exercise before the ABSA comes around to do an official inspection.
- NIH also wants to see principal investigators (PIs) be trained in biosafety. Only a small percentage of facilities have formal biosafety training for their PIs.
- ABSA, the American National Standards Institute (ANSI), and the American Industrial Hygiene Association (AIHA) all have initiatives to administer biocontainment lab accreditation. In some cases, there is overlap of biosafety professionals participating in these initiatives. It will be interesting to see if a formal laboratory accreditation program is established, and which organization rolls out such a program first. The ABSA plan is patterned after the animal lab accreditation program run by the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC).
- Among the pre-conference courses, Dina Matz-Siegel found the course on *Basic Virology and Virus-Based Gene Vectors* (by Patrick Condreay, PhD, GlaxoSmithKline, Research Triangle Park, NC) to be very worthwhile. This course provided a much needed introduction to the science of virology. Dina reported that even attendees with academic training in virology found the course to be useful and informative, as well as very useful for IBC members to understand rDNA research.
- There was an interesting presentation regarding a survey on hand washing *(Hand and Hygiene in the Biosafety Level 2 Lab: Is it a Matter of Training?* by James Johnston, University of Utah, Salt Lake City, UT). This survey found that lead researchers set the

tone for their staff's hand washing routines. Self-reporting indicated that appropriate hand washing is occurring only 40% of the time. However, when workers were actually monitored, only 11% of workers in BSL facilities were doing appropriate hand washing. The survey also found that sick people touch their faces a lot when working in BSL labs, which is particularly problematic. It is important to get people practicing appropriate hand washing.

- A recent national survey of IBC management and practices was discussed. Frank will send out the survey results to the BWG, which was presented at the Denver ABSA conference (*Current Trends in Institutional Biosafety Committees (IBC)–National Survey of IBCs*).

Review of EO 13546 (Activity proceeding)

Frank Roberto reported that several BWG members are on a panel associated with EO 13546, "Optimizing the Security of Biological Select Agents and Toxins in the United States." This EO goes hand-in-hand with EO 13486, "Optimizing Security of Select Agents," and is looking at the redefinition of select agents and their security at Federal installations.

The Federal Experts Security Advisory Panel (FESAP) working groups were convened by NIH and the United States Department of Agriculture (USDA) to follow up on Executive Order 13546, "Optimizing the Security of Biological Select Agents and Toxins (BSAT) in the United States," signed by President Obama in July 2010. The FESAP is considering recommendations resulting from the Trans-Federal Working Group on Strengthening the Biosecurity of the United States. These include tiering of select agents, and possible tiering of requirements, personnel reliability (PR), and physical/cyber security.

Dina Matz-Siegel is participating on the PR and tiering working groups, and Frank Roberto is on the PR working group. The BWG also learned that Tricia Barbosa and George Anderson at LLNL have been participating on the physical/cyber security working group. The recommendations of these working groups are not yet final, but it can be generally said that recommendations from the working groups will not be radically out of line with DOE/NNSA practices for PR and physical/cyber security programs.

However, there is a lot of concern about making recommendations that would be difficult for academia to implement. The Tier 1 organisms will include infectious microbes and viruses that pose the greatest immediate risk to human and animal health. Tier 2 bio-agents will have lower requirements, and some select agents may even be removed.

Tier 1 bio-agents will have the highest PR requirements. Tier 1 will be a select group of bacterial and viral agents. However, it is unsure how much loosening of recommendations may occur for Tier 2. Compliance with the new guidelines should be easy for national laboratories but will be much harder for the academic/university laboratories. Of particular difficulty for them is the issue on how to handle medical and psychological information collected to reduce the insider threat. They need to worry about compliance with HIPAA requirements and how to fund the costs associated with an enhanced PR program. There is clearly hesitancy in the

academic community to implement full-blown programs as are present at Department of Energy (DOE) laboratories. There will be three major recommendations coming out of an upcoming panel meeting.

On the PR working group, there are a lot of heavy hitters who know a great deal about establishing PR programs at various federal agencies. The PR program for biosafety at LANL is based on the PR program established for the nuclear program. It includes medical assessment, a psychological evaluation, etc.

BWG doesn't have much information on the Physical and Cyber Security working group. Patricia Barbosa and other DOE professionals are participating in this working group. They are planning to pipe in as things crystallize. There is concern that restrictions on academia may put a damper on research.

BWG Technical Paper (Activity proceeding)

Frank mentioned that the poster paper presented at the ABSA meeting will be expanded to a full paper. The *Journal of Applied Biosafety* is the targeted journal, and it is hoped that the paper will be ready for publication in the January 2011 issue.

Source Term Working Group (STWG)

Carl Mazzola reported for Michele Wolfgram and stated that the STWG continues to address several issues.

DOE TRU Standard (Activity proceeding)

A draft paper on the DOE TRU Standard (DOE-STD-5506-2007) and its potential applications to Emergency Planning Hazards Assessments (EPHAs) continues to be reviewed by Dr. Jim Powers, NA-41. Jim is seeking a knowledgeable source in DOE/EM to assist him in this review. The final disposition of this item will be made when NA-41 completes its review and its comments are appropriately addressed.

Non-Radiological Versus Radiological Health Effects (Activity proceeding)

Jim Jamison is developing a FAQ since DOE G 151.1-1 is somewhat silent on how to address the non-radiological vs. radiological health effects issue and will seek STWG review on his draft. Jim made a presentation on this at the Hazards Assessment Subcommittee (HASubC) meeting and a path forward was discussed at the annual STWG meeting.

Non-Respirable Source Term (Activity proceeding)

Wayne Davis was developing a recommendation paper discussing the use of non-respirable source terms to ensure that non-respirable dose impacts (e.g., ground shine) are being considered. Wayne had emphasized that this is not limited to emergency management, but that safety basis organizations are interested since they generally only model the respirable source term as well.

Wayne has not had an opportunity to address this AI further but indicated that he will have a draft ready for STWG review by October 31, 2010.

Dose-Equivalent Curies (Activity proceeding)

Dan Conners is developing an objective statement on the use of Dose Equivalent (DE) Curies to support emergency planning and plume modeling during real events. He has received Hanford-related feedback from field survey teams and safety basis organizations on his first draft. Dan will issue the objective statement for STWG review by October 31, 2010.

Carl reminded everyone that the next STWG teleconference is scheduled for November 10, 2010.

SCAPA Web Page and EMU Report

Cliff Glantz reported that ORISE is continuing to make improvements to the SCAPA web pages; inclusive of the SQA links. PAC/TEEL Revision 26 has been posted, and CMM Revision 26 will likely be posted by the end of October 2010. There will also be an extensive upgrade to the BWG page.

Tom Tuccinardi was not available to discuss Emergency Management Updates (EMUs).

EPA AEGLs Status

Po-Yung Lu reported that the next National Advisory Committee (NAC) meeting is scheduled for April-May 2011 to evaluate new chemicals. In addition, the National Academy of Sciences (NAS) will be reviewing up to 40 chemicals that are presently at interim status at its meeting from October 26-29, 2010.

Present status of AEGLs is 62 final and 201 interim, all of which are incorporated in PAC/TEEL Revision 26.

AIHA ERPGs Status

Richard Thomas reported on recent Emergency Response Planning (ERP) Committee activities. He indicated that this was a transition year as the ERP has moved to an independent 501(c)(3) status. ERP is preparing its annual 2011 handbook, which will follow the new formatting of the 2010 handbook. Due to some errors after publication of the 2010 handbook, an errata sheet is under preparation for publication. However, the errors do not affect any of the values in the 2010 handbook. For 2011, it looks like there will be 12 new ERPGs; of which six involve new chemicals and the other six, revisions to chemicals. These will be included in PAC/TEEL Revision 27.

ERP will meet again in Florida in February 2011. Prior to this next meeting, it will conduct a series of half-day teleconferences on a monthly basis that will be published on the ERP website.

Round Robin

BNL: Joe Terranova asked whether any energetic event codes are being used by the sites. Carl Mazzola indicated that ALOHA Version 5.4.1.2 had capabilities to evaluate blast overpressures, Boiling Liquid Expanding Vapor Explosions (BLEVEs), and radiant heat impacts from fires. Joe was interested in additional codes beyond ALOHA and was recommended to speak to Ron Lipinski, SNL, who is familiar with several SNL fire codes (e.g., SINDA, FUEGO).

Joe Terranova is also looking for any PAC/TEELs for nanomaterials since BNL has a national center for nanotechnology research. Dan Marsick mentioned that there has been more funded research in health effects of nanomaterials on the human body over the past three years, but there is still too little information out there for PAC/TEEL development. In addition, the shape of the materials has a bearing on human health effects (e.g., carbon nanotubes). Dan also mentioned that the National Institute for Occupational Safety and Health (NIOSH) has done some work on titanium oxide nanomaterials health effects.

Next SCAPA Conference Call

The next SCAPA conference call is scheduled for **Thursday, December 16, 2010 at 2 p.m. EST**.

Adjournment

The teleconference adjourned at **2:56 p.m. EDT**. Carl thanked everyone for their time and contributions.

SCAPA Program Action Item (AI) Status

Based on the information exchange from this teleconference, 11 activities were continued, 2 activities were closed, and 4 new activities were opened, for a total of 13 activities.

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.**
- **AIs to be closed are colored blue.**

Respectfully Submitted,

Carl Mazzola

SCAPA Executive Secretary