



**Highlights**  
**DMCC Program Teleconference 10-01**  
**Tuesday, January 19, 2010, 12:30–1:30 p.m. EST**

**Participants**

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Fernando Aluzzi, NARAC  
John Ciolek, AlphaTRAC  
Dave Freshwater, NA-41  
Cliff Glantz, PNNL  
John Harris, DOE/OR

Erik Kabela, SRNL  
Carl Mazzola, Shaw Environmental  
John Merrick, DOE/SR (Retired)  
Gustavo Vazquez, DOE-HS-21  
Steve Vigeant, Shaw Environmental

**I. Roll Call**

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Carl Mazzola conducted a roll call and acknowledged that 10 individuals involved in the DMCC program were present. The teleconference was called to order.

**II. Administrative Matters**

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**A. Previous Teleconference Highlights and Action Items**

Carl related that highlights of the previous teleconference are on the DMCC portion of the EMI SIG web page, as verified by Dorothy Cohen.

**B. DMCC Action Item Status**

Carl indicated that an updated DMCC Program Action Item (AI) listing was included with today's agenda, showing nine open AIs. The existing DMCC AI list and assist visits (AV) status table will be updated on the basis of information exchange during this teleconference and from developments of other relevant events.

**C. DMCC Meeting**

Carl discussed the EMI SIG Conference, May 3–6, 2010, in Las Vegas, NV. The DMCC Meeting will be held from 8:00 a.m. to noon on Monday, May 3, 2010. A meeting agenda will be available soon. Cliff suggested that DMCC conduct a dinner similar to what SCAPA does; Wednesday night, May 5, appears to be the best option since the SCAPA dinner is on May 4 and the EMI SIG icebreaker is on May 3. Walt will poll the DMCC membership to determine its viability.

### **III. Assist Visit Status**

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Carl discussed the status of the ongoing DMCC Assist Visit (AV) program.

#### **Y-12**

Tom Bellinger is addressing the 24 observations and recommendations from the May 24–25, 2008, AV.

#### **Hanford**

Will Shaw is addressing the 28 observations and recommendations from the September 25–26, 2008, AV. Cliff mentioned that changes are slow to occur at this time due to uncertainty about whether the Meteorological Program will be transferred to a different DOE contractor. Once this issue is settled, it is hoped that more substantive changes to the program will be implemented.

#### **Oak Ridge National Laboratory (ORNL)**

Kevin Birdwell is addressing the 23 observations and recommendations from the March 24–25, 2009, AV. Kevin met with Matt Parker and Carl Mazzola in Aiken, SC, on November 30, 2009, to solicit advice on the implementation of some of the recommendations. ORNL has hired a summer intern to assist Kevin in day-to-day duties. John Harris mentioned that the ETTP/Y-12's possible sharing of CAPARS has not worked out. Therefore, ETTP and Y-12 are considering the MIDAS AT code for its EPHA and consequence assessment needs.

#### **Savannah River National Laboratory (SRNL)**

Erik Kabela indicated that SRNL continues to address the 11 observations and recommendations, which were well-received by both DOE and SRNL stakeholders. SRNL acquired a research SODAR which may become an operational SODAR in the future.

#### **Brookhaven National Laboratory (BNL)**

An AV, requested by Joe Terranova, took place on July 28–29, 2009, provided 17 observations and recommendations. The draft report was sent on September 30, 2009. BNL has indicated agreement with all recommendations but still has not sent in formal comments. Implementation of some of the recommendations has commenced.

#### **Lawrence Livermore National Laboratory (LLNL)**

The Spring 2008 LLNL downsizing resulted in the loss of its two operational meteorologists. In addition, LLNL is the only major DOE/NSA site that has not had an AV. LLNL's Nicholas Bertoldo was contacted with information about the DMCC and the possibility of a future AV was discussed. A site visit by Walt may be set-up next year.

#### **Idaho National Laboratory (INL)**

Kirk Clawson drafted a formal response to the 2004 AV, and requested a follow-up AV for April 20–21, 2010.

#### **Los Alamos National Laboratory (LANL)**

Scot Johnson requested a follow-up AV in Summer 2010, which will be four years after the initial AV. Carl contacted Gina Deola, SNL, to try and arrange an AV there during the same week.

**Pantex**

Brent Bowen conducted a self-appraisal of the Pantex site in February 2009. The last AV at Pantex was conducted in April 1997; DMCC can augment this self-appraisal, if requested. John Ciolek reported that Brent has left Pantex and that they are again without a meteorologist.

**IV. DMCC Projects**

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**AI 07-02: DOE EH-0173 Update and Draft DOE O 458.1:** Gus Vazquez provided a status on the DOE EH-0173T update which will become a companion to the upcoming revision of DOE O 5400.5, *Radiation Protection of the Public and the Environment* (DOE O 458.1). Draft DOE O 458.1 will also be consistent with 10 CFR 835 and DOE O 450.1A, closely aligned with Integrated Safety Management System (ISMS) requirements and containing requisite meteorological requirements. Hundreds of comments from the PSOs and field elements were received during RevCom review and this order is expected to be issued in Spring 2010. DMCC reviewed the meteorological section of the draft and did not have any comments.

The revised 11-chapter 1991-vintage DOE/EH-0173T guidance was updated to align with the new order and is still being held at HS-20. Once DOE O 458.1 is issued, the revision of DOE/EH-0173T will be completed to ensure consistency between the two documents. DOE/EH-0173T is expected to be issued 6–12 months after DOE O 458.1. At that time, Gus will request a DMCC review of Chapter 5 of DOE/EH-0173T since it was prepared in 2004. **ACTIVITY PROCEEDING**

**AI 08-03: DOE/NNSA Meteorological Program Equipment Survey:** John Ciolek indicated that the work on the DOE/NNSA meteorological program equipment survey is being jointly conducted with the Nuclear Utility Meteorological data User Group (NUMUG). John reported that the fourth of seven surveys relating to *met* hardware is completed. He was requested to provide the information on the first four surveys to Walt Schalk for dissemination to the DMCC. Ken Wastrack put together the fifth mini-survey, which is scheduled to be sent to the sites at the end of January 2010. **ACTIVITY PROCEEDING.**

**AI 08-05: DMCC Consequence Assessment Self-Appraisal Guide:** NA-41 comments to the draft DMCC Consequence Assessment Self-Appraisal Guide were provided on January 5, 2010. Steve Vigeant and Carl Mazzola will develop the response to the comments. Once the comments are addressed, the guide will be completed and subsequently issued to DMCC members for use in self-appraisals. **ACTIVITY PROCEEDING.**

**V. DMCC Issues**

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**AI 06-12:** SCAPA is preparing Software Quality Assurance (SQA) guidance for consequence assessment software that is not covered by DOE's safety software designation. A draft of this guidance document was reviewed for technical accuracy by key SCAPA members (some of whom are also DMCC members). The next step towards its release is a DOE/NA-41 and DOE/HSS review. Publication of the document is targeted for late February 2010.

Once the new SQA guidance is published, all DOE consequence assessment models will undergo a gap analysis against the guidance. For legacy software the gap analysis will focus on providing

adequate documentation, problem reporting, configuration management, and testing files for users. The goal is that any identified SQA gaps can be closed by the end of FY10. The expectation is that the future development and modification of consequence assessment software (including legacy software) will follow the SCAPA SQA guidance. A SCAPA modeling toolbox will be established for consequence assessment software that adheres to SCAPA's SQA guidance. Once this activity is complete, attention will turn to developing SQA guidance for meteorological software. **ACTIVITY PROCEEDING.**

## **VI. Status of Related Federal/Private Sector Programs**

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### **AI 04-11: Meteorological Monitoring and Meteorological Modeling Voluntary Consensus Standards (VCSs):**

DMCC members are involved in the development and maintenance of eight national voluntary consensus standards (VCSs) with the American Nuclear Society (ANS) as the Standards Development Organization (SDO). The following presents the status of each of these eight standards development efforts:

- **ANSI/ANS-2.15, ANSI/ANS-2.16, and ANSI/ANS-3.8.10:** John Ciolek indicated that after ANSI/ANS-2.15 moves into the consensus review process, ANSI/ANS-2.16 and ANSI/ANS-3.8.10 will be developed. The ANSI/ANS-2.15 working group has reformatted and changed the focus of the standard from descriptive to prescriptive. John received the last sections from the authors last week and is removing redundant sections to create a first draft for working group review. A schedule for consensus review is in progress. . **ACTIVITY PROCEEDING**
- **ANSI/ANS-2.21:** Steve Vigeant, Chairman, is developing a foreword for ANSI/ANS-2.21 and publication is expected in Summer 2010. **ACTIVITY PROCEEDING**
- **ANSI/ANS-2.3:** Carl Mazzola reported that the ANSI/ANS-2.3 working group has developed a later draft of ANS-2.3, targeted for issuance in February 2010. This standard will support Natural Phenomena Hazard (NPH) DOE guides and standards. **ACTIVITY PROCEEDING**
- **ANSI/ANS-2.31:** A Project Initiation and Notification System form was prepared and a working group is being formed to develop a new standard on extreme precipitation events. **ACTIVITY PROCEEDING**
- **ANSI/ANS-3.11:** Matt Parker is submitting an analysis to support a reaffirmation of ANSI/ANS-3.11 shortly since the standard reaches its five-year sunset at the end of 2010. **ACTIVITY PROCEEDING**
- **ANSI/ANS-58.25:** Carl reported on the standard associated with Level III probabilistic risk assessments that addresses both meteorological data (Section 4.7) and atmospheric transport and diffusion models (Section 4.8) for risk-informed safety evaluations. A draft, sent to RISC for consensus review in October 2009, was well-received. Hundreds of comments were received, but none was a show-stopper. Forty-one comments targeted Sections 4.7 and 4.8. The working group meets in Washington, DC, on March 1, 2010, to resolve the remaining comments before it is submitted for consensus review. The standard is expected to be issued in fall 2010. **ACTIVITY PROCEEDING**

## **VII. NNSA/DOE Site Initiatives**

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**AI 09-01:** John Ciolek reported that NCAR continues to develop the WRF model on Graphical Processing Unit (GPU) hardware and that there is still a need to rewrite the code to the C language specific to GPUs. A new small-scale GPU card is in production and should be ready by Spring 2010, which will likely change how code is parallelized. More information on GPUs is posted in the DMCC web forum. **ACTIVITY PROCEEDING.**

**AI 09-02:** At the last teleconference, Chuck Hunter indicated that SRNL plans to develop a short White Paper on the evaluation of vector versus scalar wind speed usage as ideas crystallize. No further discussion occurred during this teleconference. **ACTIVITY PROCEEDING.**

**AI 09-03:** At the last teleconference, Chuck Hunter discussed some of the details about the carbon dioxide tracer experiment that SRNL is performing in conjunction with Brookhaven National Laboratory (BNL) and mentioned that one of the nights of sampling did pick up the low level jet and gravity waves that was one of the key objectives of the program. SRNL is analyzing the tall tower flux covariance data and is waiting for BNL to conclude its tracer gas (fluorinated hydrocarbons) analysis. No further discussion occurred during this teleconference. **ACTIVITY PROCEEDING.**

**AI 09-08:** Carl mentioned that the NRC has issued Regulatory Guide 5.71 on cybersecurity. Now that the regulatory guide is issued, Cliff will develop a White Paper as to how new cybersecurity requirements for safety, security, and emergency preparedness systems may affect DOE/NNSA nuclear facilities and their meteorological programs. **ACTIVITY PROCEEDING.**

## **VIII. DMCC Web Page and DMCC Forum Reports**

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**DMCC Web Page:** Cliff mentioned that the EMI SIG website is still undergoing an update to fix broken links and post technical papers of interest. A working group was formed to identify meaningful papers in the literature to be posted on the web pages. The website will soon have information on DMCC meeting logistics. Carl will update the AI listing for the web page.

**DMCC Forum:** John Ciolek reported that the Forum is back on-line and continues to be available for the membership to post useful information and share ideas.

## **IX. New Business: Round Robin**

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Carl led a brief round robin discussion:

**ORNL:** John Ciolek mentioned that Kevin Birdwell is pursuing his Ph. D and working on his dissertation. ORNL will be losing its east tower and will be replacing it with a free-standing 60-meter tower. ORNL is also working with NOAA ATDD on a ridgeline tower.

## **X. Next DMCC Conference Call**

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The next DMCC Conference call is scheduled for **March 16, 2010**. All future 2010 DMCC conference calls will be conducted the third Tuesday of every odd month.



## **XI. Adjournment**

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The teleconference was adjourned at **1:23 p.m. EST**. Carl thanked everyone for their time and their contributions.

## **XII. DMCC Program Action Item (AI) Status**

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Based on the information exchange from the DMCC Meeting and this teleconference, no AIs were closed, and no AIs were opened. This number of DMCC AIs remains at nine.

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.

Respectfully Submitted,

**Carl Mazzola**