



**Highlights**  
**DMCC Program Teleconference 10-04**  
**Tuesday, September 21, 2010, 12:30 – 1:30 p.m. EDT**

**Participants**

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John Ciolek, AlphaTRAC  
Kirk Clawson, ARL FRD  
Dorothy Cohen, ORISE  
Dave Freshwater, NA-41  
Chuck Hunter, SRNL  
Erik Kabela, SRNL

Carl Mazzola, Shaw Environmental  
John Merrick, DOE/SR (Retired)  
Jeremy Rishel, PNNL  
Walt Schalk, ARL SORD (Chairman)  
Gustavo Vazquez, DOE-HS-21

**Roll Call**

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

**Administrative Matters**

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***Previous Teleconference Highlights and Action Items***

Carl stated that highlights of the previous teleconference have been developed and are posted on the DMCC portion of the EMI SIG web page.

***DMCC Action Item Status***

Carl indicated that eight DMCC Program action items were open, and the progress on these AIs will be discussed in today's conference call. The status of the active and upcoming assist visits (AVs) will also be discussed during the teleconference.

***NRC Draft Regulatory Guide***

Carl alerted the teleconference participants to a new Nuclear Regulatory Commission (NRC) draft Regulatory Guide, DG-1247, which provides guidance on extreme wind events (e.g., hurricanes, tornadoes, straight-line winds). In addition, NRC issued NUREG/CR-7004 and NUREG/CR-7005 as supporting technical documents. Carl recommended that these be posted on the DMCC web page.



**Assist Visit Status**

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Carl discussed the status of the ongoing DMCC Assist Visit (AV) program as follows:

Site	DMCC Assist Visit Status
<b>Y-12</b>	Tom Bellinger continues to address the 24 observations and recommendations from the May 24-25, 2008 AV.
<b>Hanford</b>	Will Shaw continues to address the 28 observations and recommendations from the September 25-26, 2008 AV.
<b>Oak Ridge National Laboratory (ORNL)</b>	Kevin Birdwell continues to address the 23 observations and recommendations from the March 24-25, 2009 AV.
<b>Savannah River National Laboratory (SRNL)</b>	Erik Kabela indicated that SRNL continues to address the 11 observations and recommendations, which were well-received by both DOE and SRNL stakeholders. SRNL has acquired a research Sound Direction and Ranging (SODAR) remote instrument which may become an operational SODAR in the future.
<b>Brookhaven National Laboratory (BNL)</b>	Joe Terranova indicated that BNL is addressing the 17 observations and recommendations from the July 30-31, 2009 AV and has funded a 0.75-FTE position and budgeted \$240,000 for instrumentation upgrades.
<b>Lawrence Livermore National Laboratory (LLNL)</b>	The spring 2008 LLNL downsizing resulted in the loss of its two operational meteorologists. In addition, LLNL is the only major DOE/NNSA site that has not had an AV. Contact has been made with LLNL's Nicholas Bertoldo to provide information about the DMCC and discuss the possibility of a future AV. A site visit by Walt may be set-up in FY11.
<b>Idaho National Laboratory (INL)</b>	A follow-up assist visit was conducted on April 20-21, 2010 with nine new observations and recommendations and closure of many of the 21 2004 AV observations and recommendations. The final report was issued on August 31, 2010. ARL FRD expressed satisfaction with the AV effort.
<b>Los Alamos National Laboratory (LANL)</b>	Scot Johnson postponed his request to have a follow-up AV in the summer 2010 by two years until summer 2012, which will be six years since the initial AV.

## **DMCC Projects**

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### *AI 07-02: DOE EH-0173 Update and Draft DOE O 458.1 (Activity proceeding)*

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. Non-concurrences are almost resolved and this order is expected to be issued in late-November 2010. Earlier, DMCC reviewed the meteorological section of the draft and did not have any comments.

The revised 11-chapter 1991-vintage DOE/EH-0173T guidance has been 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 can 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 back in 2004.

### *AI 08-05: DMCC Consequence Assessment Self-Appraisal Guide (Activity proceeding)*

NA-41 comments to the draft DMCC Consequence Assessment Self-Appraisal Guide were provided on January 5, 2010. Steve Vigeant and Carl Mazzola developed responses to the comments. Once the final comments are addressed, the Guide will be completed and subsequently issued to DMCC members for use in self-appraisals. No further discussion during this conference call

## **DMCC Issues**

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### *AI 06-12 (Activity proceeding)*

Jeremy Rishel for Cliff Glantz reported that the Software Quality Assurance (SQA) guidance for consequence assessment software will soon be posted on the SCAPA web site. Now that the new SQA guidance will be available, all DOE consequence assessment models will undergo a gap analyses against the guidance, with CAPARS selected as the first model. For legacy software the gap analysis will focus on providing adequate documentation, problem reporting, configuration management, and testing files for users. It is hoped that any identified SQA gaps can be closed by the end of FY11. 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 completed, attention will turn to developing SQA guidance for meteorological software.

## 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-2.3:** Carl Mazzola reported that the ANSI/ANS-2.3 is still in concurrence review. This standard, when issued in late-2010, will support Natural Phenomena Hazard (NPH) DOE G 420.1A and other NPH guidance. **(Activity proceeding)**
- **ANSI/ANS-2.15, ANSI/ANS-2.16, and ANSI/ANS-3.8.10:** John Ciolek indicated that ANS-2.15 will be sent to ANS-24 for concurrence review by September 30, 2010, and the working group will begin ANS-2.16 for accident release consequence assessment. The second standard should be developed much faster since there are a lot of similarities with ANS-2.15. **(Activity proceeding)**
- **ANSI/ANS-2.21:** Carl Mazzola for Steve Vigeant reported that ANSI/ANS-2.21 is resolving consensus review comments and publication is expected in late-2010. **(Activity proceeding)**
- **ANSI/ANS-2.31:** Carl Mazzola, who is on this working group, noted that a Project Initiation and Notification System (PINS) have been prepared and a working group continues to be formed to develop a new standard on extreme precipitation events. John Ciolek suggested that some hydrologists become part of this working group. **(Activity proceeding)**
- **ANSI/ANS-3.11:** Carl Mazzola for Matt Parker mentioned that ANSI/ANS-3.11 is in reaffirmation and should be reaffirmed before it reaches its 5-year sunset at the end of 2010. **(Activity proceeding)**
- **ANSI/ANS-58.25:** Carl Mazzola 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. The working group is ready to submit it for consensus review. The standard is expected to be issued in early-2011. **(Activity proceeding)**

## NNSA/DOE Site Initiatives

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### *AI 09-01 (Activity proceeding)*

Previously, John Ciolek reported that the National Center for Atmospheric Research (NCAR) continues to develop the WRF model on Graphical Processing Unit (GPU) hardware. A new small-scale GPU card is in production and should be ready by spring 2010, which will likely change how code is parallelized. John stated that NOAA Global Sciences Division has recently done limited work on the WRF GPU model. In addition, a Portland group has developed a compiler to recode Fortran and is developing other conversion tools. John mentioned that most of the recent work has been on smaller-scale GPUs.



*AI 09-08 (Activity proceeding)*

NRC issued Regulatory Guide 5.71 on cyber security in January 2010. Presently, NRC is preparing updates to the regulatory guide and the nuclear power plant licensees have developed cyber security plans that are being reviewed by the NRC. Once the cyber security plans have been prepared, Cliff Glantz will begin work on a White Paper as to how new cyber security requirements for safety, security, and emergency preparedness systems may affect DOE/NNSA nuclear facilities and their meteorological programs. No further discussion during this conference call.

*AI 10-01 (Activity proceeding)*

At a previous teleconference, Kevin Birdwell requested available guidance that is associated with erecting new meteorological towers and what pitfalls to avoid. Projected changes to the ORNL footprint are resulting in encroachments on existing meteorological tower sites. Kevin was unavailable to update this item.

*AI 10-02 (Activity can be closed)*

Kevin is studying the East Tennessee wind patterns and predictability at Oak Ridge as part of his Ph.D. research. Kirk Clawson contacted Kevin to discuss similar work Roger Carter did at INL on cluster analysis and wind patterns.

**DMCC Web Page and DMCC Forum Reports**

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**DMCC Web Page:** Cliff Glantz was unavailable to report on the recent DMCC web page improvements, and the web site is up to date.

**New Business: Round Robin**

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No new business was raised.

(Round Robin continued on next page)

Carl led a brief round robin discussion on new business items:

<i>Site</i>	<i>Discussion</i>
<b>NTS</b>	<p>Walt Schalk mentioned that no more rawinsonde soundings have been taken at Desert Rock since the summer because the equipment was beyond repair. The National Weather Service did not want to put in a new upper air system there and plans to install one at its Las Vegas Weather Service Office. Due to a weak monsoon season, the lack of upper air data was not as consequential. The ASOS is still operational at Desert Rock.</p> <p>If enough budget funds are available, a SODAR will be installed at Desert Rock to replace the Rawinsonde upper air data.</p> <p>ARL SORD technicians are being retrained to data quality assurance and consequence assessment.</p>
<b>INL</b>	<p>Kirk Clawson stated that ARLFRD continues to adapt HYSPLIT to INL and has conducted a semi-operational beta test. It is working with the emergency management organization to get EPHA scenarios into the model and plans to use it next to MDIF. On July 14, 2010, ARLFRD supported a very large wildfire mitigation effort, providing actual and forecast winds to the firefighters and other responders.</p>
<b>SRNL</b>	<p>Chuck Hunter indicated that SRNL supported a Columbia County transportation exercise with mass casualties based on a scenario with a 3,000-gallon release of chlorine. SRNL performed consequence assessment modeling in its EOC.</p> <p>David Werth has recently published in the <i>Monthly Weather Review</i> on the verification of the NCEPS GFS model.</p>
<b>PNNL</b>	<p>Jeremy Rishel shared that PNNL supported a practical exercise drill at Hanford on a 200-Area earthquake scenario. Training in the UDAC occurred a week earlier.</p>

### Next DMCC Conference Call

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

### Adjournment

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

### DMCC Program Action Item (AI) Status

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Based on the information exchange from the DMCC Meeting and this teleconference, no new AIs were opened and one AI was closed. The number of DMCC AIs is now seven.



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.

Carl Mazzola will update the DMCC action item list based on the information exchange from this conference call.

Respectfully Submitted,

*Carl Mazzola*