



**Highlights
DMCC Teleconference 13-01
Tuesday, January 15, 2013, 12:30–1:30 p.m. EST**

Participants

John Ciolek, AlphaTRAC
Kirk Clawson, NOAA ARLFRD/INL
Dave Freshwater, NA-41
Cliff Glantz, PNNL
Chuck Hunter, SRNL

Laura Kidd, ORISE
Carl Mazzola, Shaw Environmental
Ivy Olberding, BNL
Walt Schalk, ARLSORD/NNSS

Roll Call and Welcome

Carl Mazzola conducted a roll call and acknowledged that nine individuals from five DOE/NNNSA sites involved in the EMI SIG DMCC program were present, and the first DMCC teleconference of 2013 was called to order at 1:05 p.m. EST.

This is the first teleconference that started with the round robin to ensure that time did not run out before completing this important portion of the teleconference.

Round Robin

DOE/NNNSA Site	Discussion
BNL (Ivy Olberding)	Performed a self-assessment in 2011. One improvement item from the self-assessment was to improve the Central Complex Engineering meteorological tower and instrumentation. A bid packet has been sent to vendors and the atmospheric sciences engineer is overseeing effort.
Hanford/PNNL (Cliff Glantz)	PNNL no longer operates the Hanford meteorological services program. However, Cliff Glantz remains a customer of the Hanford meteorological program but is not currently involved with the operational or technical aspects of the Hanford meteorological program.
INL (Kirk Clawson)	Final approvals are being acquired for the new five-year Interagency Agreement (IA). The Memorandum of Understanding (MOU) between NOAA and INL, associated with a research



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DOE/NNSA Site	Discussion
	<p>partnership, was signed in October 2012.</p> <p>The INL HYSPLIT code is under review to become part of the SCAPA toolbox. A Software Quality Assurance (SQA) gap analysis was prepared by the HYSPLIT team and submitted to SCAPA. This package will be assessed as soon as the SCAPA SQA team completes its work with the NARAC modeling system.</p> <p>Initiating a Birch Valley canyon flow wind study using SODARs and wind profilers that became available from a prior experiment in Texas. The Missoula Fire Science Laboratory is partnering and contributing 80 anemometers. Dennis Finn is the Principal Investigator. Study also has a wind energy generation nexus. Will be collecting information until the Fall or possibly later.</p> <p>Attended the American Meteorological Society Annual Meeting this month and received word from RM Young that its three-dimensional sonic anemometers do not need to be calibrated semi-annually since studies have shown that there is no drift. RM Young will be recommending annual calibrations.</p>
NNSS (Walt Schalk)	<p>Since the five-year IA expires at the end of FY13, efforts to revise it have begun. The NNSS mesonet continues to be updated with all new towers and sensors.</p> <p>The open electrical technician position was posted in December 2011. Hiring decision likely a few months. Cross-training of existing staff is filling the gap. New weather center has been completed with a forecasting bay in the front and consequence assessment center in the rear.</p> <p>Two new long-term proposed programs at NNSS will require support; one has Oak Ridge National Laboratory as a partner.</p> <p>Very good meeting with Todd Lericos (MIC), Dan Berc (WCM), and Stan Czyzyk (SOO) from the local NWS office. All parties showed interest to collaborate together.</p>
SRS (Chuck Hunter)	<p>Replacing legacy bivanes and cup anemometers with sonic anemometers. One tower was equipped last August to pilot the</p>



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DOE/NNSA Site	Discussion
	<p>changeover and the results were successful. The other eight towers will now be equipped with sonic anemometers by the end of FY13.</p> <p>In response to a DOE-STD-1020 requirement, return period analyses for tornadoes, extreme straight-line winds and floods due to extreme precipitation are undergoing a 10-year update.</p>

Old Business

EMI SIG-DMCC Meeting 2013 (Activity continuing)

Walt provided an update on the 2013 EMI SIG meeting status, which was approved at the Secretary of Energy (S-1) level in late-December 2012. The meeting will be held in the Chicago, IL area, May 6-10, 2013. Walt discussed new restrictions on the DMCC meeting, which include the need to send in requests for presentation to ORISE by no later than January 25, 2013. The EMI SIG Screening Committee will push down presentations that are best suited for the DMCC meeting. Walt and Carl will then develop an agenda, which has to be completed by February 2013 under the new meeting rules. There was discussion on which local professionals would be invited to speak.

DOE/EH-0173T Revision Support (Activity can be closed)

Gus Vazquez sent an e-mail to thank the DMCC for its comments on the draft revision of DOE/EH-0173T. The writing team indicated that the comments received significantly improved the draft.

Issues with Wind Speed Data and MACCS2 X/Q (Activity continuing)

Earlier in the year, Walt was contacted by Chip Lagdon, DOE/HSS, to coordinate a response to a technical issue found by a MACCS2 user that involves the resolution of the wind speed data used in MACCS2 and the appropriate determination of 95% X/Q values. Carl reported that the White Paper on this issue is virtually complete and he will be providing it for DMCC and SCAPA Consequence Assessment Modeling Working Group peer review by the end of the month. Carl also contacted Nate Bixler, the MACCS2 custodian to address an associated issue involving 95% X/Q values at adjacent downwind receptors occasionally exhibiting a slight increase with distance downwind. This was observed for a ground-level release, but only when low resolution wind speed data were used. After DMCC and SCAPA review, the White Paper will be sent to NA-41 for its review.



SODAR Survey: (Activity continuing)

Earlier, Jean Dewart, who needs to replace the now defunct LANL SODAR, requested DMCC support. Walt sent out a survey of SODAR equipment that is being used at the DOE and NNSA sites and is compiling the information to send out as a DMCC product. No additional discussion at this teleconference.

MADIS Data Quality Assurance Standard (Activity continuing)

At an earlier teleconference, John Ciolek mentioned that CAPARS at ORNL uses readily-available MADIS data. This large data base has various levels of quality assurance, some of which may not be sufficient to ensure that the consequence modeling results can be trusted. In addition, some of the instrumentation may not be properly sited. John stated that there is a need to develop a standard to screen the data. No additional discussion at this teleconference.

ALOHA-HYSPLIT (Activity continuing)

At an earlier teleconference, Mark Miller presented the new Hybrid HYSPLIT model developed by NOAA NOS Seattle, WA, NOAA ARL HQ, Silver Spring, MD, and NOAA ARL FRD, Idaho Falls, ID. Mark described the new model setup as an integration of the ALOHA model into the HYSPLIT model. No additional discussion at this teleconference.

Experiments at Dugway Proving Grounds (Activity can be closed)

At an earlier teleconference, John Ciolek discussed experiments to be conducted at Granite Mountain in the Utah desert. This area has been instrumented with a sensor spacing of approximately 1 km which will give high-resolution meteorological information on katabatic winds and inversion formation and depth. Information should be available during the April-June 2013 timeframe. A copy of the presentation was posted on the DMCC web page.

DMCC Pre-Call Update

Walt Schalk and Carl Mazzola prepared a pre-call update that was sent out on January 4, 2013, which covered: (1) Assist Visit activities; (2) Voluntary Consensus Standards activities; (3) DMCC web page update; and, (4) Forecast models and GPUs. Attachment I shows the pre-call update.

Assist Visit Activities: Carl and Walt briefly discussed the status of all Assist Visits. During FY13, there are plans for assist visits at Los Alamos National Laboratory (LANL) and Sandia National Laboratory (SNL), which can also be accomplished in the same week. There also may be an AV at NNSA.



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Voluntary Consensus Standards Activities: John Ciolek and Carl Mazzola gave brief updates of the many voluntary consensus standards (VCSs) on which DMCC members are working.

DMCC Web Page Update: Cliff Glantz discussed several new additions to the DMCC web page since the last teleconference.

Forecast Models and GPUs: No additional discussion beyond the pre-call notes.

New Business

John Ciolek requested that DMCC consider two new projects: (1) Local Climate Zones (LCZs): Investigate potential applications of proposed LCZ scheme for dispersion parameterization, meteorological sensor siting, urban heat island effects, etc.; and, (2) Mesonet Quality: What rules should be followed and recommendations to improve the quality of data outside of our control that we still use in our models.

Next DMCC Teleconference

The next DMCC teleconference is scheduled for **Tuesday, March 19, 2013**, at **12:30 p.m. EST**. All 2013 DMCC conference calls are scheduled to be conducted on the third Tuesday of every odd month, with the exception of May, unless circumstances dictate otherwise.

Adjournment

The meeting adjourned at **1:32 p.m. EST**. Walt thanked everyone for their contributions.

Respectfully Submitted,

Carl Mazzola



ATTACHMENT I

Assist Visit Program

Brookhaven National Laboratory (BNL): Joe Terranova is addressing the 17 observations and recommendations from the July 30-31, 2009 AV. BNL management have funded a 0.75-FTE position and budgeted \$240,000 in FY11 for instrumentation upgrades. **Discuss follow-up AV at EMI SIG meeting.**

Hanford: Paul Fransioli referred to the 28 observations and recommendations from the September 25-26, 2008 AV in planning the transition of the meteorological program from PNNL to Hanford's Mission Support Alliance (MSA). No information is known as to changes and improvements in the program. The DMCC has attempted to contact the Hanford program for updates and a follow-up Assist Visit. **No response as of yet.**

Idaho National Laboratory (INL): Kirk Clawson is addressing the 9 new observations and recommendations from the follow-up AV that was conducted on April 20-21, 2010. **Kirk Clawson to send letter to DMCC.**

Lawrence Livermore National Laboratory (LLNL): A consultation was performed on September 14, 2011 and is under review. **Tony Wegrecki will be broadening the scope with a self-assessment of some other program areas that were not covered.**

Los Alamos National Laboratory (LANL): Scot Johnson postponed his request to have a follow-up AV in the summer 2010 by 2 years until summer 2012, which will be 6 years since the initial AV in August 2006. **Scot has taken a 1-year sabbatical for CY12. Summer 2013 AV possibility with-mail sent to Jean Dewart.**

Nevada National Security Site (NNSS): The last AV was conducted in September 2007. **Walt Schalk to decide whether a follow-up AV is needed. Fall 2013 is a possibility depending on when system upgrades are completed and 6 years would have passed since last AV.**

Oak Ridge National Laboratory (ORNL): An AV was conducted the week of August 6-10, 2012, coupled with a Y-12 AV update. **The ORNL Assist Visit report was developed and distributed in mid-October to ORNL Meteorologists, Kevin Birdwell and Erik Kabela.**

Pantex: The last AV was conducted in 1997. **Still no point of contact to discuss a follow-up AV. Carl to ask Chuck Rives to identify a POC.**



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Sandia National Laboratory (SNL): The last AV was in 2003. DMCC will attempt to combine SNL with LANL in 2012 if SNL agrees to a follow-up AV. **Gina Deola was sent an e-mail to see if there was an interest in a follow-up AV during the summer 2013.**

Savannah River National Laboratory (SRNL): Chuck Hunter continues to address the 11 observations and recommendations from the June 2009 AV, which were well-received by both DOE and SRNL stakeholders.

Waste Isolation Pilot Plant (WIPP): The last AV was in August 2005. **Dan Watterson was sent an e-mail to determine if there was an interest in a follow-up AV. No response as of yet.**

Y-12: **An AV was conducted the week of August 6-10, 2012, coupled with an ORNL AV update. The Y-12 Assist Visit report was developed and distributed in mid-October to the Y-12 Meteorologist, Tom Bellinger.**

ANS/ANSI VCS

ANSI/ANS-2.3 (Mazzola) Standard for Estimating Tornado, Hurricane, and Extreme Straight Line Wind Characteristics at Nuclear Power Sites: Issued on April 22, 2011; supporting the Natural Phenomena Hazard (NPH) DOE standard (i.e., DOE-STD-1020-2011). **ACTIVITY COMPLETED**

ANS-2.15 (Ciolek) Standard for Criteria for Modeling and Calculating Atmospheric Transport of Routine Releases from Nuclear Facilities: A presentation was given at the George Mason University modeling conference in July 2012. The group was informed about the ANSI/ANS standards process, key points of the Standard, and future direction of the working group. Several new volunteers were added to the working group: Steve Hanna, Joe Chang (DHS), Bruce Egan, and Jay Boris (Naval Research Laboratory). **NFSC rebaloting with all technical issues resolved. Standard should be approved by NFSC, ANS Standards Board and ANSI during the winter. ACTIVITY PROCEEDING**

ANS-2.16 (Ciolek/Rishel) Standard for the Criteria for Modeling Design-Basis Accidental Releases from Nuclear Facilities: A presentation was given at the George Mason University modeling conference in July 2012. The group was informed about the ANSI/ANS standards process, key points of the Standard, and future direction of the working group. Several new volunteers were added to the working group: Steve Hanna, Joe Chang (DHS), Bruce Egan, and Jay Boris (Naval Research Laboratory). **First draft under development. ACTIVITY PROCEEDING**

ANS-2.21 (Vigeant) Criteria for Assessing Atmospheric Effects on the Ultimate Heat Sink: All NFSC consensus review negative comments have been resolved and it is at rebalot. **Standard has been issued. ACTIVITY COMPLETED**



ANS-2.31 (Mazzola/Schalk) *Standard for Estimating Extreme Precipitation at Nuclear Facility Sites*: WG has been formed and Walt Schalk and Carl Mazzola are members. WG populated with both meteorologists and hydrologists. Kick-off meeting was held in Cleveland, OH, on October 24, 2011 and writing assignments given out by WG Chairman John Stevenson. Carl Mazzola has completed Sections 2-3. First draft is expected by April 2012. **Comments to second draft was reviewed by the working group on December 6th, 2012 in Las Vegas at the DOE Nevada Support Facility. Third draft expected late-January 2013 which will be ready for ANS-25 review. ACTIVITY PROCEEDING**

ANS-3.8.10 (Ciolek/Rishel) *Standard for the Criteria for Modeling Real-time Accidental Releases at Nuclear Facilities*: The ANS-2.15 working group will begin ANS-3.8.10 for emergency response consequence assessment after it sends ANS-2.16 for consensus review. John Merrick volunteered to be on the working group. A presentation was given at the George Mason University modeling conference in July. The group was informed about the ANSI/ANS standards process, key points of the Standard, and future direction of the working group. Several new volunteers were added to the working group: Steve Hanna, Joe Chang (DHS), Bruce Egan, and Jay Boris (Naval Research Laboratory). **A full working group meeting was held during the NUMUG Conference in October 17, 2012. Discussion continues on what the standard for emergency response should contain. ACTIVITY PROCEEDING**

ANSI/ANS-3.11 (Bellinger/Call) *Standard for Determining Meteorological Information at Nuclear Facilities*: Tom Bellinger(Y-12) and Jennifer Call (TVA) are the new Working Group Co-Chairs. An initial planning meeting was held in Oak Ridge on August 7TH, 2012. A solicitation for reviewers and writers has gone out. **The first full WG meeting was held on October 17, 2012. ACTIVITY PROCEEDING**

ANS-58.25 (Mazzola) *Standard for Radiological Accident Offsite Consequence Analysis (Level 3 PRA) to Support Nuclear Installation Applications*: The standard associated with Level III probabilistic risk assessments that address both meteorological data (Section 4.7) and atmospheric transport and diffusion models (Section 4.8) for risk-informed safety evaluations received 520 comments in the RISC consensus review; 69 associated with Sections 4.7 and 4.8. Some members of the WG met in Chicago, IL in late-October, 2011 and three others in early-November, while at the Winter ANS meeting in Washington DC, to resolve the comments. A full WG meeting was held on January 24-26, 2012 in Atlanta, GA to resolve the comments. The WG met in Chicago on 11-12 July 2012 to address CNRM comments. **Additional CNRM comments are expected. ACTIVITY PROCEEDING**



Forecast Models and GPUs

No updates reported.

DMCC Web Page

No updates reported.