



**Highlights**  
**STWG Teleconference 12-01**  
**Wednesday, January 11, 2012, 1:00 p.m. EST**

**Participants**

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Denny Armstrong, URS SMS SRS	Bill Possidente, NNSS
Cliff Glantz, PNNL	Josh Price, URS SMS/Oak Ridge
Courtney Haggard, URS SMS/Oak Ridge	Chuck Rives, Pantex
Steve Homann, LLNL/NARAC	Brad Salmonson, INL
Jeff Hudson, URS SMS/Oak Ridge	Melissa Thornton, URS SMS/Oak Ridge
Aprill Jivelekas, Ascendent Engineering/Hanford	Kerry Ward, INL
Mike O'Keefe, NNSS	Michele Wolfgram, ORNL

**Roll Call**

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Michele Wolfgram conducted a roll call and noted that 14 working group members were participating in the teleconference.

**Administrative Matters**

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Michele mentioned that Carl Mazzola is required to participate in a Savannah River Site Mixed Oxide (MOX) Project ES&H management meeting every Wednesday at 2:00 p.m. EST, which conflicts with the usual STWG teleconference meeting time. Carl has requested that STWG move its periodic teleconference up one hour to 1:00 p.m. EST. Michele asked if there was any objection to this, and hearing none, the starting time from this point forward will be changed to 1:00 p.m. EST.

**Old Business**

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**STWG-AI-09-03 (Activity Continuing): Respirable vs. Non-respirable Source Terms (Wayne Davis)**

The final draft of Wayne Davis' Respirable vs. Non-respirable Source Terms paper was sent out for review. Wayne received extensive comments and has planned to incorporate final comments by the end of January 2012. After Wayne releases the next version of this paper, one last review will be conducted prior to posting on the website.



**STWG-AI-09-05 (Activity Continuing): Dose Equivalent Curies (Michele Wolfgram)**

Michele continues to work on a draft position paper on the use of Dose Equivalent Curies and is targeting the distribution of an initial draft of this paper in the March or April 2012 timeframe; ideally before the next STWG teleconference.

**STWG-AI-11-01 (Activity Continuing): HotSpot Deposition Velocity**

HOTSPOT uses a non-respirable deposition velocity of 8 cm/sec that apparently needs some justification. In September 2011, Michele sent out a project proposal about the HotSpot non-respirable deposition velocity matter. STWG and Hazards Assessment Subcommittee members have responded very positively to participating in this project, and work will begin shortly.

Brad Salmonson asked about the objective of this work, and Michele responded that a key focus will be to explore the impact of different deposition velocities, particularly as used in MACCS2, have on assessments supporting emergency management applications.

**New Business**

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**STWG AI 12-01 (New Activity): Source term characterization document**

Chuck Rives suggested that it might be worthwhile to develop a document that would provide new professionals with guidance on characterizing source terms for emergency planning applications. Chuck agreed to work on assembling a draft and intends to have it out for the group to review this spring.

Other suggestions on topics that could be explored by the STWG included:

- (1) How to estimate plume rise for different types of source terms.
- (2) How to consider resuspension of deposited materials as applied to emergency response.
  - a. Steve Homann has been wrestling with this matter in his work at LLNL.
  - b. Lynn Anspaugh, who has done extensive work in resuspension, may be funded to address public health issues associated with the 1986 accident at Chernobyl and the role that resuspension contributed to the public dose in the dose reconstruction.
- (3) Updating atmospheric release fractions for different types of source terms.
  - a. *Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facilities (DOE-HDBK-3010-94)* provides guidance.
  - b. *Material* in this handbook is almost 20 years old.



## SCAPA Source Term Working Group (STWG)

- (4) How to develop a source term for assessing criticality events. (Michele stated that some material on this topic may already be available on the STWG web pages.)
- (5) How to develop source terms associated with weapons-grade plutonium.
  - a. This is an important issue at Pantex.
  - b. Chuck Rives addressed this as part of a Pantex multidisciplinary team that included various radiation safety experts.
  - c. Mike O'Keeffe noted that based on the age of the mixture, you get different ratios for the radionuclide abundances within the mixture due to decay and daughter ingrowth.
  - d. Steve Homann has also wrestled with this issue in his work at LLNL, noting that there is increased build-up of americium-241 in the mixture as it ages; increasing the dose since it is a gamma-emitter.

### **Next STWG Meeting**

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The next STWG teleconference is scheduled for **March 14, 2012, at 1:00 p.m. EDT.**

### **Adjournment**

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The meeting adjourned at **2:35 p.m. EST.** Michele thanked everyone for their time and contributions.