



Highlights
SCAPA STWG Annual Meeting
Tuesday, May 3, 2011, 7:00 a.m. EDT

Participants

Dennis Armstrong, WSMS	Jim Jamison, SAIC
Jayne-Anne Bond, ATL	Aprill Jivelekas, URS Hanford
Stuart Bayne, AWD Management Services	Carl Mazzola, Shaw Environmental
Kevin Birdwell, ORNL	Edwin Morgan, URS SMS
Darryl Bonner, Bechtel Jacobs	Phil Pfeiffer, INL
John Ciolek, AlpaHTRAC	Chuck Rives, B&W Pantex
Wayne Davis, WSMS	Richard Thomas, Intercet
Dave Freshwater, NA-41	Melissa Thornton, WSMS
Annah Garrison, URS SMS	Tom Tuccinardi, ATL
Cliff Glantz, PNNL	Michele Wolfgram, ORNL
Courtney Haggard, WSMS	

Roll Call

Michele Wolfgram conducted a roll call and acknowledged that 21 professionals were present, and the STWG annual meeting was called to order. Michele mentioned that there were presentations from the STWG that were made during the Hazard Assessment Subcommittee (HASC) and Subcommittee on Consequence Assessment and Protective Actions (SCAPA) meetings on Monday, May 2, 2011.

Old Business

STWG AI 08-01 (Activity can be closed)

The white paper on DOE-STD-5506-2007, the DOE TRU Standard, and its potential applications to Emergency Planning Hazards Assessments (EPHAs) was developed by STWG and has incorporated the last comment from Dr. Jim Powers, NA-41. The White Paper is now complete and will be posted on the SCAPA STWG web page.

STWG AI 09-03 (Activity Continuing)

Wayne Davis developed a recommendation paper and made a presentation at this meeting, discussing the use of non-respirable source terms to ensure that non-respirable particle dose

impacts (e.g., ground shine) are being considered under the appropriate circumstances. The focus of this paper was that the analyst must ensure appropriate treatment of the respirable factor. Non-respirable gamma-emitting particulates, from releases that deposit on the ground, produce a ground shine component that is not accounted for by the five-factor formula which focuses only on respirable dose. This consequence assessment complexity also affects the dose-equivalent curies action item.

Wayne's presentation, "Accounting for the Gamma Source Term," showed examples when gamma shine may need to be considered. He performed several analyses for meteorology of F stability at 1 meter/second wind speed with deposition velocities ranging from 0.1 cm/second to 1 cm/second and respirable fractions of 0.3 and 1.0 with 4 days of ground shine. Sr-90, which is not a gamma-emitter, was less than 1% of the Total Effective Dose (TED), Cs-137m which has a 661.7KeV gamma, was approximately 26% of the TED and Co-60, which has a 1.337 MeV gamma, was approximately 41% of the TED.

The relevant question is: "How high is the gamma content and concomitant ground shine before this consideration becomes meaningful?" Wayne will continue developing the recommendation paper. Denny Armstrong will review the source term aspects; Cliff Glantz and Carl Mazzola will review the atmospheric dispersion and deposition aspects.

STWG AI 09-05 (Activity Continuing)

Dan Connors has changed jobs and has not yet completed a draft objective statement on the use of Dose Equivalent (DE) Curies "to support emergency planning and plume modeling during real events." There was significant discussion as to whether the STWG should continue pursuing this action item since DE curies is only used at Hanford (e.g., when the RADIDOSE model is used for hazard assessments at the K-Basin, per Aprill Jivelekas) and at Pantex, per Chuck Rives. In addition, this matter is not being pursued by the Defense Nuclear Facilities Safety Board (DNFSB). Chuck mentioned that this matter has some value added since DE curies correlates well with field survey data. Cliff Glantz indicated that at Hanford DE Ci values are used for convenience in many emergency preparedness-related assessments even when more detailed radiological inventories are available. In such instances, the convenience of using a single number trumps the precision and inconvenience of using more detailed data.

Dave Freshwater indicated that it is time to determine whether we should go forward or close the action item. Stuart Bayne suggested that the issue be clearly defined before additional activity is commenced. Carl Mazzola suggested a survey of the DOE sites be performed. Michele took an action to do a survey of the DOE sites to see how DE curies is used.

New Business

There was some discussion about which new topics the STWG can focus its energies on in the next year. Suggestions included:

1. Multiple release scenarios from Beyond Design Basis Events (BDBEs) similar to what happened at the Fukushima Dai-ichi nuclear plants after the BDBE earthquake and subsequent tsunami.
2. The applicability of the ARCON96 code in collocated worker dose calculations since that code has passed regulatory muster with the Nuclear Regulatory Commission (NRC) in Regulatory Guide 1.194 to be applicable to receptors as near as 10 meters.
3. Investigate the Hotspot non-respirable fraction factor of 8.
4. Provide a better explanation of deposition velocity, per Chuck Rives.

Next SCAPA STWG Meeting

Michele indicated that next SCAPA STWG teleconference is scheduled for **July 14, 2011** at **2:00 pm EDT**.

Adjournment

The meeting was adjourned at **8:00 a.m. EDT**. Michele thanked everyone for their time and excellent contributions.