



TRADE
Emergency Management Issues Special Interest Group
Hazards Assessment Subcommittee Conference Call
August 17, 2005

HIGHLIGHTS
DRAFT

Hazards Assessment Conference Call Participants

Armstrong	Dennis, LANL
Campbell	Larry, Hanford
Chang	Jeng, NA-41
Cohen	Dorothy, ORISE
Davis	Wayne
de la Rosa	Diana, Sandia
Haggard	Courtney, WSMS
Harris	John
Harris	John, DOE-ORO
Kerley	Janet, Kirtland Operations
Martin	Amber, WSMS
Mazzola	Carl, Shaw Environmental
O'Keefe	Michael, NTS
Peterson	Shana, Y-12
Possidente	Bill, NTS
Powers	Jim, DOE NA-41
Rives	Chuck, Pantex
Salmonson	Brad, INL

The Hazards Assessment Subcommittee met by conference call on Wednesday, August 17 from 2:00 – 3:00 p.m., Eastern Daylight Savings Time. The above 16 persons participated in the call.

Chuck Rives, Subcommittee Chair, moderated the meeting.

Discussion

Screening Processes

Chuck Rives stated that a draft is being developed of screening processes at Pantex. He is reviewing Wayne Davis' presentation from the EMI SIG Meeting and looking at ways of combining screening processes that various sites are using. OA-30 had been at Pantex and it is expected that hazards assessment will receive comment.

Carl Mazzola discussed the results of Chuck Rives' hazards assessment analysis that indicated for puddle evaporation hazards assessments for a 30-meter collocated worker receptor, the wind speed variable appeared in both the source

term and atmospheric transport portions of the analysis. The evaporation rate is a function of $u^{0.78}$, while the atmospheric effect of dilution is a function of u^{-1} . The dilution term is always greater than the evaporative source generation term, which intuitively leads to the conclusion that the consequence maximizes at the lowest wind speed. However, Chuck indicated that this analysis showed an effect on the 95% meteorology and changed it to E-stability class at 2.2 meters/second. After some discussion, Carl asked Chuck for a copy of the analysis so he could share it with the SCAPA Consequence Assessment Modeling Working Group and collectively provide a reason why this result occurred.

Chuck will provide a detailed write-up of the problem and Carl will do an analysis.

Malevolent Acts

Wayne Davis introduced the subject of including malevolent actions in EPHAs and provided the following information:

At SRS, while moderate malevolent acts are explicitly addressed in EPHAs, extreme malevolent acts are addressed primarily through reference to the applicable Radiological / Chemical Sabotage Analysis (RCSA). As RCSAs are not updated as frequently as is needed for EPHA support (and are unnecessary for some facilities that require an EPHA) another process is needed to ensure compliance with DOE O 151.1 and the implementing Guide.

The Design Basis Threat (DBT) analyzed in the RCSA involves sabotage using a large quantity of explosives. Explicit analysis of the DBT within an EPHA would make it classified, which is undesirable. As is indicated in DOE G 151.1, scenarios initiated by malevolent acts result in consequences similar to those caused by other initiators. Some sites have chosen to postulate a large aircraft crash as the initiator of a worst-case extreme malevolent act. After evaluating the level of damage, source term, and consequence that could be expected from a worst-case aircraft crash, it is apparent that this same outcome would be expected from any initiator that would cause an energetic, unmitigated release of a facility's hazardous material inventory (e.g., beyond design basis earthquake w/ full facility fire).

For example, consider a building housing radiological material. A postulated crash might damage the structure in such a way as to render ventilation inoperable, allowing a ground level unfiltered release. Fuel from the aircraft could result in a full facility fire involving all material at risk. Rather than postulate a specific extreme malevolent act such as an aircraft crash or bomb, a worst-case scenario can be postulated that is based upon an unmitigated (i.e., unfiltered, ground level) release of the inventory. A bounding release fraction, which for thermal stress for example, could then be applied to the inventory. The resultant source term could then be used for the worst-case extreme malevolent act.

Round Robin

Sandia

Diana de la Rosa mentioned the upcoming NARAC class which Sandia is sponsoring on October 4 and 5th.

Sandia finished the final corrective action plan for their OA audit last spring. About 75 percent of the correction actions will be completed by Christmas.

The consequence assessment position is still open; interviewing internal candidates but may consider other applicants as needed.

Pantex

Chuck Rives reported that the site is experiencing dead time between the OA-30 visit and issuance of the draft report.

NTS

Mike O'Keefe asked the question, "When you look at biological agents, how do you categorize them?" Dr. Powers said that there is screening criteria for biological agents in the new order.

Savannah River

Wayne Davis stated that the site had its annual exercise at the defense waste facility; it was an operational, security event.

SRS is continuing to address hazards assessments and revising them based on the new order.

ORNL

Jeff Long said the site conducted its full participation exercise in June with no major findings.

A Joint OA-30 and OA-10 inspection is scheduled for September.

Standard EPHAs are being revised.

LANL

Dennis Armstrong stated that their full participation exercise has been postponed until mid November. The OA-30 inspection which was a possibility for November

is now scheduled for the second quarter of next year. These delays are due in part to the pending new contractor for the laboratory.

INL

Brad Salmonson reported that the site is following up on audit findings.

Y-12

Shana Peterson said the site participated in a Lead Federal Manager exercise, which had not been conducted before as a reservation. Events were simulated at two sites.

Next Conference Call: September 21 at 2:00 P.M. Eastern Time. Call-in number: **301-903-6011.**