Thomas Barth, Ph.D. Survival Factors Investigator NTSB

## Crash Survivor Challenges Evacuating a Motorcoach with Postcrash Fire

On April 10, 2014, a Volvo tractor trailer crossed Interstate 5 near Orland California and struck a Setra Motorcoach transporting 45 high school student passengers. The NTSB investigation addressed fire performance for the motorcoach as well as issues with the passenger safety briefings and emergency exit design. The motorcoach driver and 8 passengers were fatally injured, 10 suffered serious injuries, and 27 had minor injuries. The presentation focuses on the experiences of the passengers.

Responses were obtained from 36 surviving passengers; 29 were full interviews conducted by the NTSB and an additional 7 were abbreviated interviews by the California Highway Patrol (CHP). All of these passengers evacuated out of the side windows. Eleven percent (4 of 36) were involved in opening an exit; sixty-two percent (18 of 29) expressed fear or difficulty using the exits; and sixty-seven percent (20 of 29) attributed injuries to their evacuation. Other observations include the demographics of the passengers, knowledge of the emergency exits and safety briefing, effects of the smoke and fire environment, and passengers waiting in a cue to exit.

As a result of the investigation, the NTSB found deficiencies and made recommendations concerning flammability test methods, pretrip safety briefings, and emergency exit design. These will be compared with flammability requirements and evacuation of large transport aircraft.