

The Graniteville Train Crash: Emergency Response Support provided by the Savannah River National Laboratory

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ABSTRACT

During the early morning hours of January 6, 2005, a train crash in Graniteville, South Carolina, resulted in the airborne release of several toxic chemicals, including chlorine, and nine deaths and the hospitalization of 100s of others. The Atmospheric Technologies Group of the Savannah River National Laboratory (SRNL) provided plume modeling and weather forecast support to the myriad of emergency responders at the scene through a pre-existing mutual aid agreement with regional county emergency management agencies. The approach, including prior training, to simulating the chlorine release and a discussion of the prevailing weather conditions will be presented. A post-analysis of the release will also be given based on non-meteorological data, such as local terrain influences, damages to foliage and fatalities, collected during and after the event.