The author discusses a few of the many computer models available: AEIRS, AIR3D, AIRFLOW/SVE, AIRTOX, API DSS, GEMS, HELP, HSSM, IRIS, IRPTC, LEAD-SPREAD, MULTIMED, RAPS, RBCA, ReOpt, RISC, RISK * ASSISTANT, RISKPRO, SITES, SUTRA and WET.

Gary F. Bennett

PII S0304-3894(97)00084-8

Chemical Hazards, Mitigation and Preparedness in Areas of High Seismic Risk: A Methodology for Estimating the Risk of Post-Earthquake Hazardous Materials Release, by H.A. Seligson, R.T. Eguchi, K.J. Tierney and K. Richmond, National Center for Earthquake Engineering Research, Buffalo, NY, 1996, price unlisted, 144 pp. ISBN: none

One of the earthquake safety provisions that intrigued me was the use of shelf barriers to prevent chemical bottles from being shaken off the shelf and spilling. But earthquakes pose greater hazards, i.e., releases from large-scale storage of chemicals, both liquids and gases.

Although there has never been a major incident involving hazardous materials in a U.S. earthquake, smaller releases have occurred in events that were moderate in size. A recent example is an accident at a chlorine repackaging facility in the 1987 Whittier Narrows Earthquake, in which nearly one ton of chlorine gas was released. The research for this project combines seismic hazard analyses, findings from research on earthquake-related failures in industrial facilities, and data on airborne toxic releases to estimate the magnitude of the risk.

The study examined 22 sources within the city limits of Los Angeles, and from the impact of chlorine and ammonia releases as well.

"Based on the 22 sources identified for this study, the most serious releases would occur not in the largest postulated earthquake, but in the earthquake causing the strongest ground shaking at the hazardous materials sources. This earthquake, the Magnitude 7.0 Newport–Inglewood event, would cause ground shaking of at least intensity 8.0 at all but two of the studied sources. In contrast, the M 8.3 San Andreas event causes MMI 8.0 or more at only 4 sites."

Gary F. Bennett

PII S0304-3894(97)00086-1

Environmental Modeling: Fate and Transport of Pollutants in Water, Air, and Soil, by J.L. Schnoor, Wiley Interscience, John Wiley & Sons, Inc., New York, NY, 1996, $69.95, 682 pp. ISBN: 0-471-12436-2

This book (according to the author) is an attempt to wed elementary concepts of pollutant fate and transport with chemical principles in order to assess environmental