Fluor employee authors emergency-response book

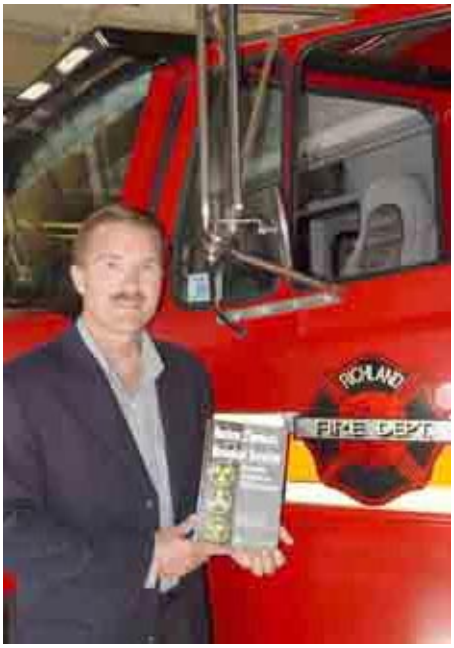
Karin Nickola, *Fluor Hanford*

Shortly after the terrorist attacks of Sept.11, 2001 — two years ago this week — Fluor Hanford senior scientist Mark Byrnes began receiving telephone calls from an emergency responder colleague of his in New York City. Among other things, his colleague wanted to know how people could protect themselves from a terrorist attack involving a "dirty bomb."

Byrnes helped his colleague and other New York City emergency responders by developing a short manual describing the various types of radiation that could be encountered from these weapons, along with the ways a person could be exposed and ways to minimize the exposure.

"The manual was warmly received," Byrnes said, "but my answers always led to other questions about nuclear weapons and chemical and biological agents. There seemed to be a real need for information on the subject, so I decided to write a textbook."

The result is *Nuclear, Chemical, and Biological Terrorism — Emergency Response and Public Protection*, a 173-page textbook issued in July 2003 by Lewis Publishers. Designed for emergency-response training centers across the United States, Byrnes' book is written in layman's terms for those who have no background in this technical area.



A new textbook written by Fluor Hanford's Mark Byrnes, provides insightful information for emergency response organizations. Brynes currently works in the Groundwater Protection Program.

Enlisting contributors

To complete his final manuscript, Byrnes enlisted the services of several co-authors. They include David King, a certified health physicist with Science Applications International Corporation, and Philip Tierno, director of Clinical Microbiology and Diagnostic Immunology at Tisch Hospital, part of New York University Medical Center. Six contributing authors from Bechtel Hanford, Microecologies and Duratek Federal Services also assisted Byrnes in the areas of health physics, industrial hygiene, chemical agents and conventional explosives.

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The new textbook covers the following subjects:

- The types of weapons of mass destruction that could be used in a terrorist attack
- Mechanisms by which terrorists could disperse various types of nuclear, chemical, or biological agents
- The types of conventional explosives terrorists could use to disperse nuclear, chemical, or biological agents; the routes by which one could be exposed to these agents; and the types of health hazards that could result from exposure
- How emergency responders can minimize exposure to nuclear, chemical, or biological agents, and potential medical treatment options
- How to best increase a person's chances of surviving a nuclear explosion
- Emergency preparedness for a variety of settings, including government installations
- How emergency responders should prioritize injuries
- How to decontaminate personnel before medical treatment
- Radiation exposure guidelines
- Training guidelines. ■