

WRT1.7 Paleg, B., Varley, E.; College of Agriculture and Natural Resources, University of Maryland; bp2@umail.umd.edu. **FOOD SAFETY RISK ANALYSIS E-LEARNING PROGRAM.**

A collaborative, interdisciplinary team from the University of Maryland and the Food and Drug Administration received a USDA grant to develop a global Food Safety Risk Analysis E-Learning program. Consisting of five professional development short courses; targeted at risk analysis, risk assessment, risk management, and risk communication issues, this program uses new and emerging information technologies to train food safety professionals in the fundamentals of risk analysis. We will discuss the uniqueness of the program, including the challenges of developing and delivering professional development e-learning. Piloting the program's courses to learners in three countries with an intent of developing a learning community through group activities led to both expected and unexpected experiences. Lessons learned from the feedback of the pilot enabled the team to redesign specific modules to minimize barriers to effective learning.

P3.9 Panko, J.M., Shay, E.C., Unice, K.M.; AMEC Earth & Environmental, Inc.; julie.panko@amec.com. **RISK PERCEPTION: THE REOCCUPANCY OF LOWER MANHATTAN OFFICE SPACE FOLLOWING THE NATIONAL TRAGEDIES OF SEPTEMBER 11, 2001.**

The collapse of the World Trade Center (WTC) on September 11th, 2001 destroyed or severely damaged nearly 15,000 businesses in its vicinity, and generated concern about potential human exposure to airborne pollutants in the ambient outdoor air, as well as in indoor air. An international bank occupied offices in One Liberty Plaza, a building adjacent to Ground Zero, that was severely damaged by the collapse, and wanted to reoccupy its space and resume work following the destruction of the WTC. To do so required extensive cleaning, renovation and IAQ monitoring to ensure the safety and comfort of the returning employees. The bank's offices experienced severe physical damage from the falling debris. The debris consisted of finely ground building materials from the two towers, some of which contained asbestos. Initial cleaning and renovation work included removal of all soft furnishings (i.e., upholstered items) and cleaning of all hard surface furnishings, office equipment, cabinets, interior structural/decorative items, HVAC ductwork (including perimeter units) and lighting fixtures] before reoccupancy to reduce asbestos levels. Although the initial evaluation focused on exposure to asbestos, the emphasis shifted to include other constituents that the EPA was monitoring in the outdoor ambient air (i.e. benzene, hexavalent chromium, lead, polychlorinated biphenyl (PCB), dioxin, PM 2.5 and PM 10). USEPA screening levels for outdoor air pollutants were established as the indoor reoccupancy standards. In addition to final clearance and follow-up air monitoring, other issues such as employee complaints of odor infiltration, various irritation effects, and concerns regarding drinking water, airborne particulates, and mold were evaluated and addressed. The education of company executives and addressing employee perceptions of air monitoring data from the EPA and NYC Department of Health, as well as news media reports were also part of the scope of work.

M15.3 Paoli, G.M.; Decisionalysis Risk Consultants, Inc.; gpaoli@decisionalysis.com. **A REVIEW OF THE INTEGRATION OF EPIDEMIOLOGY AND RISK ASSESSMENT FOR FOODBORNE MICROBIAL HAZARDS.**

The management of microbial hazards provides considerable opportunity to integrate epidemiological analysis with standard risk assessment techniques. This paper will review a variety of applications in which these complementary approaches have been employed. Examples include: the use of epidemiological data to derive and adjust dose-response relationships; the use of serotyping data together with risk assessment methodology to estimate attributable risk among commodities; incorporation of epidemiologically determined risk factors within risk assessment models; the use of molecular epidemiology and risk assessment to improve the understanding of sources of contamination; the use of surveillance data for validation of risk assessment predictions; and recent advances in computational epidemiology involving Bayesian inference combined with simulation to improve the detection of outbreaks or terrorist attacks. At times, risk assessment and epidemiological approaches have led to contradictory findings. Examples of these situations will also be described and assessed.

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