Environmental Risk Assessment Program

Cleanup
CU-770

RESEARCH CATEGORY: 6.2 Applied Research

LEAD AGENCY: U.S. Environmental Protection Agency

LAB: Environmental Criteria & Assessment Office - Cincinnati, OH

PRINCIPAL INVESTIGATOR: Dr. Terry Harvey, (513) 569-7531

FY 1997 COMPLETED PROJECT

OBJECTIVE: The goal of the Environmental Risk Assessment Program (ERAP) has been the improvement of scientific methods and models for the performance and application of risk assessments for human and ecological issues. As such, the program has involved joint scientific reviews, with consensus deliberations, of pollutants of mutual concern to the Department of Defense (DoD), Department of Energy (DOE), and Environmental Protection Agency (EPA), and the development of new and improved human health, exposure and ecological methodologies for assessing risks related to federal facilities. The program has strived to identify and evaluate existing risk assessment processes, data gaps and weaknesses in current methodologies; to explore, develop and validate alternative risk and exposure assessment methods and models for application at DoD and DOE facilities; and to share new risk assessment methods and models across Federal agencies and the scientific community.

BENEFIT: The program will provide consensus toxicity values for assessing human health and ecological risks(s) pertaining to materials and chemicals found at Federal facilities. The program will also make available the most appropriate scientifically based methodologies for consistent application to these risk assessments.

ACCOMPLISHMENT: The work exemplifies the potential for greatly reduced remediation costs. Acute, subacute, subchronic, chronic, toxicokinetic, reproductive, and developmental studies conducted by the U.S. Army and the U.S. EPA provided the scientific database to develop a 600-fold higher Reference Dose (RfD) of 0.03 mg/kg/day for 1,3,5-trinitrobenzene (TNB) based on toxic effects (hematopoietic effects) common to other nitroaromatics. The new RfD has undergone external peer review and is in final adoption stage by the inter-agency Advisory and Coordinating Committee. In addition, a new standard for TNB was successfully included in August 1997 in the U.S. EPA Integrated Risk Information System (IRIS), and was assigned CAS No. 99-35-4.

TRANSITION: Plans include the transfer of ERAP products to local risk assessors and risk managers.