

Improving Hazard Assessments Through Online Training—The EPA/NCEA Benchmark Dose Software Web Site

Jeff Gift
Health Scientist
ORD/NCEA
(919) 541-4828
gift.jeff@epa.gov

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Through the Clean Air Act Amendments of 1990, Congress mandated that EPA reduce cancer and non-cancer risk for those hazardous air pollutants presenting the greatest threat to public health. Determining cancer risk or non-cancer hazard requires the development of health benchmarks. Recently developed benchmark dose methods are integral to the development of the cancer slope factors, reference doses (RfDs), and reference concentrations (RfCs) used along with other scientific information to establish these benchmarks. EPA's benchmark dose software (BMDS) was developed as a collaborative effort between scientists from EPA's National Center for Environmental Assessment and EPA's National Health (NCEA) and Environmental Effects Laboratory (NHEERL) to support Agency and other risk assessors in performing benchmark-dose dose-response assessments. Over the past year, EPA has made BMDS easier to use by improving its user interface and modeling capabilities to keep up with the state-of-the-science in this important and growing risk assessment field. At the same time, the customer base for BMDS has expanded to over 2,000 registered users in over 80 countries. Although some of these users are experienced risk assessors familiar with benchmark dose methods, it is recognized that many of them are new to methods and BMDS. While NCEA has sponsored internal and public hands-on training courses in the use of BMDS, it was recognized that more was needed to support the expanding BMDS customer base. A Web-based, online training program was developed to better assist this broad, international pool of users. The online training course for BMDS reviews the benchmark dose methodology, consistent with the most recent draft of the BMD technical guidance document (EPA, 2000), and the application of BMDS to the various types of data sets that risk assessors may encounter. Several interactive problems and quizzes are included in the training material, and certificates are awarded when a passing grade is achieved. This presentation will provide an overview of the training course, including NCEA's plans to improve the online training program to stay current with the latest Agency risk assessment methods. This training course continues to provide a valuable resource to EPA Program Office, Regional, State, and international risk assessors, but must be kept up to date so that BMDS is not misused.