Introduction to Short Forms for Human Health Risk Assessment

LSP Course # 1352

COURSE DESCRIPTION:

This course is intended to familiarize participants with the purpose and content of the Method 3 Short Forms screening tool which has been provided by MassDEP to assist in streamlining the Method 3 risk assessment process. While Method 3 risk assessments are site specific, many exposure scenarios have become sufficiently standardized to allow for a template approach utilizing the Short Forms. The course includes a general overview of risk assessment and the Short Forms and a discussion on how to develop exposure point concentrations. In addition, a practical "hands-on" application using the Short Forms is included during which participants can practice on their computers.

For the "hands-on" portion of the webinar, participants are expected to be able to work on an Excel window with MassDEP spreadsheets while also on the Zoom platform. In addition, participants will need to print paper copies of some slides in advance of the webinar to use for this portion.

OBJECTIVE:

The course objective is to give participants a solid understanding of the valuable applications of the Method 3 ShortForms screening tool, as well as the limitations.

COURSE SCHEDULE:

11:00 AM Introduction

- General Overview of Risk Assessment
  - Basic Steps of Risk Assessment
  - Role of Risk Assessment in the MCP
- General Overview of ShortForms
  - Potential Uses of ShortForms
  - Scope of ShortForms Available
    - Receptor Scenarios
    - Exposure Pathways
    - Chemicals of Concern
  - ShortForm Roadmap (Construction and Contents)
  - Site Use/Exposure Profile Selection

11:45 AM Developing Exposure Point Concentrations

- Media
  - Soil
  - Groundwater
  - Indoor Air
- Issues
  - Spatial/Temporal Averaging
  - Quantity and Quality of Data
  - Consideration of Background
  - Modeling

12:45 PM Break

1:00 PM Practical ShortForms Exercises Using Laptops

- Hands-on Application!
- Hypothetical Examples

2:00 PM Applications and Limitations of ShortForms

- Using ShortForms in MCP Risk Characterization
- Other Interesting Uses for ShortForms
- When Not to Use a ShortForm

3:00 PM Adjourn

Lisa J. Campe, MPH, LSP
Woodard & Curran, Inc.

Lisa Campe has extensive experience managing and supervising a variety of risk assessment projects, specializing in both MassDEP risk assessments under the Massachusetts Contingency Plan (MCP) and the US EPA risk assessments under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the Toxic Substances Control Act (TSCA). These assessments included both deterministic and probabilistic evaluation. Ms. Campe has also developed risk-based cleanup goals for the remediation of contaminated buildings, hazardous waste sites, and facility closures, and assisted in the performance of Remedial Investigations and Feasibility Studies and public health exposure evaluations. Based on the results of the evaluations, she has provided assistance to prioritize remedial response actions and associated risk management decisions. She has also negotiated risk-based remedies with regulators and stakeholders and communicated risk assessment and risk management issues to the public.

Ms. Campe has also provided technical input for the ongoing redesign of the MCP, and has served on a number of related technical and policy committees, including the American Society for Testing and Materials (ASTM) Environmental Risk Assessment Committee that develops technical protocols. Ms. Camp is also a Licensed Site Professional (LSP) in Massachusetts and a member of the Regulations and Legislation Committee of the LSP Association. She lectures frequently on risk assessment topics and presents complex technical information to the public as part of the Public Involvement and Participation (PIP) process.

Ms. Campe holds a BS in Geology from Duke University and a Masters of Public Health (MPH) from Boston University.

Stephen G. Zemba, PhD, PE
Sanborn Head & Associates

Stephen Zemba has more than twenty-five years of risk assessment experience as a consultant with Cambridge Environmental, CDM Smith, and Sanborn Head. His projects include both human health and ecological risk assessments, fate-and-transport modeling, exposure assessment, reconstructive modeling and source apportionment, and air quality assessments. He has consulted for both private and public sector clients, and provided expert testimony at hearings and in litigation support. Dr. Zemba also teaches university-level courses on air quality management and air pollution control. He has presented projects and research at numerous conferences on topics including persistent organic compounds (e.g.dioxins and PCBs), decision analysis applications to contaminated sediment management, acid rain, dense gas plume dispersion, indoor air quality and dispersion modeling, ocean disposal of carbon dioxide, multi-pathway risk assessment, landfill gas management, and vapor intrusion.

Dr. Zemba holds a BS from Carnegie-Mellon University, and an MS and PhD from the Massachusetts Institute of Technology, all in the discipline of Mechanical Engineering