Help EPA Build a Better Vapor Intrusion Model

Project Title	Help EPA Build a Better Vapor Intrusion Model
Project Summary	Help EPA Build a Better Vapor Intrusion Model that is more representative of real-world conditions, more accurate, and more user friendly. You will be helping to build a tool for evaluating the threat of contaminated vapor intrusion into buildings.
Country	United States

Project Description

We are seeking a motivated science or engineering student who would like to help evaluate and perhaps modify the updated U.S. EPA Spreadsheet for Modeling Subsurface Vapor Intrusion, which has been under-going re-development. The spreadsheet model implements a steady-state solution to vapor transport through soil. The current version and users guide are available on-line at: https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-level-calculator.
We are seeking someone with a variety of skills to help us make the updated tool more user friendly and well documented. We also want you to help us compare the model results to other similar models and/or develop case studies for use of the model. In so doing, you will be helping to build and document a tool that will help people better evaluate the threat of vapor intrusion into buildings.

Required Skills or Interests

Skill(s)
Analytical writing
Data analysis
Data visualization
Software development
Writing

Additional Information

If you join this project, you will be part of a motivated team of EPA scientists from the Office of Research and Development and the Region 9 Pacific Southwest office in San Francisco, California. We are looking for someone in an environmental science discipline such as soil science, engineering, geology, environmental chemistry, or physical science. We are seeking a person with good math skills, strong writing skills, and at least some comfort/familiarity using computational tools (e.g., MS-Excel). Bonus points if you have familiarity with subsurface vapor transport or human health risk evaluation and related computational tools. Programming experience (especially programming Excel spreadsheet macros and visual basic) would also be a bonus. Applicants who are passionate about supporting EPA’s mission to protect human health and the environment should absolutely apply. Interest in the topic, motivation, and a willingness to learn are the key attributes we are looking for.

EPA Mentor Bio-Sketches:

Richard Kapuscinski, PhD, PE, U.S. EPA Office of Superfund Remediation and Technology Innovation Rich Kapuscinski has more than 30 years of professional experience as an environmental engineer addressing a wide variety of environmental contamination issues. Currently in the Science Policy Branch of the EPA's Office of Superfund Remediation and Technology Innovation, Rich is a primary author and interpreter of the OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air (OSWER Publication 9200.2-154), which was published in June 2015. His current duties include consulting with and providing technical support to Regional staff about vapor intrusion-related issues, upon request.

Matthew C. Small, PhD, PG, is the Regional Science Liaison (RSL) for the Office of Research and Development (ORD) in EPA Region 9 (R9), San Francisco, California. As RSL, Matt works to facilitate communication, collaboration, and technical support between ORD and R9. He is one of the Region’s hydrogeology experts. Matt led the effort to create national EPA OSWER directives and ASTM standards for remediation by natural attenuation and risk-based corrective action. Matt is also well versed in contaminant fate and transport evaluation, contaminated site remediation, long –term management of residual contamination, and evaluating cleanup goals/options. Matt spent five years in private geological consulting prior to joining EPA. B.S. in Geology from CSU Hayward, M. Eng. in Mineral Engineering and a PhD in Civil and Environmental Engineering from UC Berkeley. He is also a licensed professional geologist in the State of California.

Language Requirements

None