

1106-J1-1267

Stephanie Fitchett* (sfitchett@neptuneinc.org). *Is my indoor air affected by vapor intrusion? If so, is it dangerous?*

Radon is the most common vapor intrusion concern. Other compounds can enter a building in a similar way, through the foundation, and a home may be especially susceptible to problematic vapor intrusion if it sits over a contaminated plume of groundwater. While testing for radon is easy and inexpensive, testing for other contaminants can be quite expensive, and concentrations can vary dramatically depending on building construction, geographic location, and weather conditions. Thus, while it would be valuable to be able to determine if a building has a vapor intrusion problem based on the results of a single indoor air sample taken over a short duration, making such a determination is challenging. This talk discusses a statistically based decision analysis tool that helps one to estimate the extent to which a single indoor air sample may be indicative of vapor intrusion. The tool further provides estimates for the likelihood that long-term average concentrations – which are not measured directly, but are modeled and are relevant to health risks – are high enough to raise concerns. The working team includes risk analysts, mathematicians, statisticians, and web programmers at a private consulting company. (Received September 11, 2014)