Radon Vapor Intrusion Screening Level (RVISL) Calculator

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RVISL: http://epa-visl.ornl.gov/radionuclides

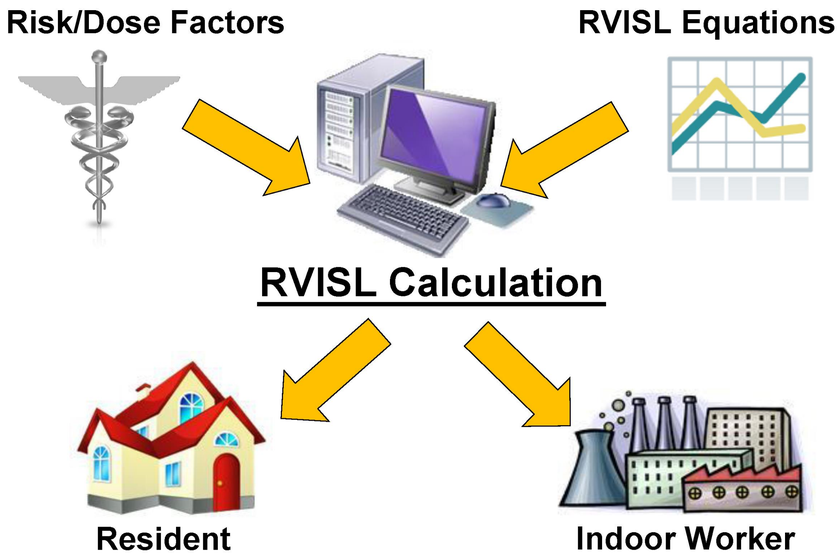
What Is an RVISL?

- RVISL stands for **radon vapor intrusion screening level**.
- RVISLs present the target concentrations of radon in air, soil gas, and groundwater that are protective of people inside building at a Superfund site. RVISLs may also be used to show compliance with federal and state indoor radon standards.
- RVISLs are not cleanup standards – they are used for site screening and initial cleanup goals.
- RVISLs address residential exposures and indoor worker exposures.

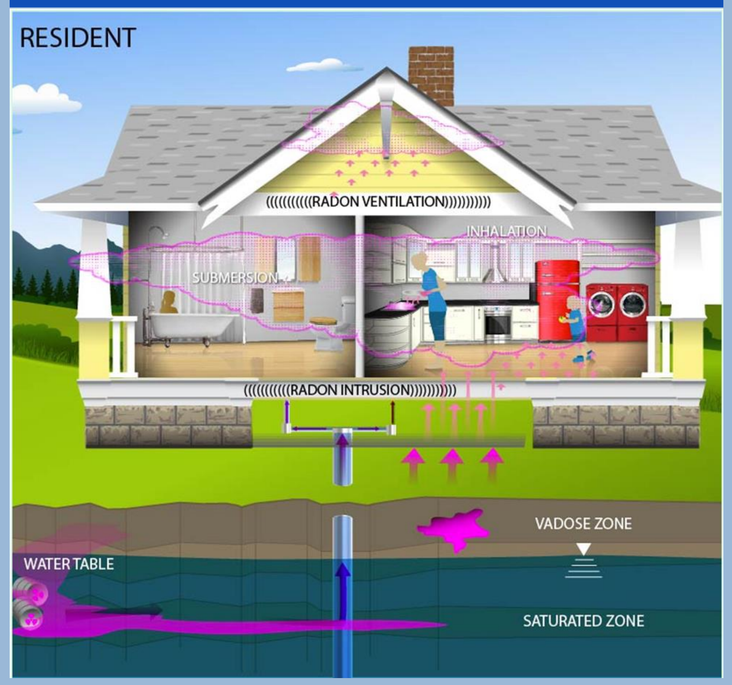
RVISL Calculator

- The RVISL calculator determines the risk of radon exposure for people in their homes or workers on the job when radon caused by soil or groundwater contamination enters a building through vapor intrusion. These pathways are shown in the diagrams to the left and right at the bottom of the page.
- This tool allows EPA to calculate radon screening levels inside buildings at Superfund sites based on risk, dose, working levels (WLs), or pCi/L.
  - **Risk-based RVISL:** the tool calculates screening levels based on a target cancer risk of 10^{-6}. This means that a person exposed to the contamination has a one in a million chance of developing cancer based on the highest estimated level of exposure.
  - **Dose-based RVISL:** the tool calculates screening levels based on a person's exposure to radiation in dose per year, measured in millirems to show compliance with some regulations.
  - **WL (working levels) RVISL:** the tool calculates whether radon levels are compliant with the Uranium Mill Tailings Radiation Control Act (UMTRCA) federal indoor radon standard.
  - **pCi/L (picocuries per liter) RVISL:** the tool calculates whether radon levels are compliant with a state indoor radon standard that uses pCi/L.
- Calculations are based partly on air exchange rates, which measure how much outdoor air circulates and replaces indoor air in a building over time.

How Does the RVISL Calculator Work?



Radon Intrusion Exposure for a Resident



Radon Intrusion Exposure for an Indoor Worker