Building Preliminary Remediation Goals (BPRG) Calculator

Stuart Walker – walker.stuart@epa.gov, (703) 603-8748
Office of Superfund Remediation and Technology Innovation, US Environmental Protection Agency

BPRG: http://epa-bprg.ornl.gov

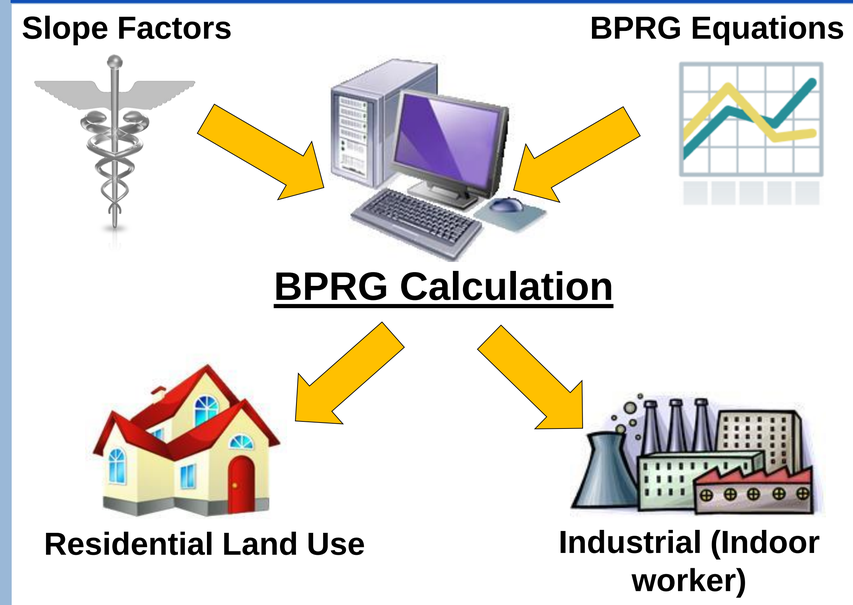
What is BPRG?

- BPRG stands for **Building Preliminary Remediation Goal**.
- BPRGs are the initial cleanup goals for contamination inside of buildings at a Superfund site and usually are not final cleanup standards.
- Used when there is no appropriate government regulation of cleanup levels.
- Used for residential and commercial/industrial indoor worker exposure.

BPRG Calculator

- The **BPRG Calculator** is a tool that allows EPA to calculate radiation cleanup levels inside of buildings at Superfund sites.
- Uses **slope factors** to calculate cleanup levels based on a **target cancer risk of 10^{-6}** .
  - **Slope factors** provide cancer risk posed by lifetime exposure to specific radionuclides. Slope factors also take into account the type of exposure (inhalation, ingestion, or external) and the amount of exposure. For example, a resident on a site would expect to have a different exposure level than a worker on the same site.
  - **Target cancer risk of 10^{-6}** means that a person exposed to the contamination has a one in a million chance of developing cancer. (Target is based on highest estimated level of exposure. Most people will have less of a chance of developing cancer.)
- The exposure pathways used by the BPRG calculator are shown in the diagrams below.

How does the BPRG Calculator work?



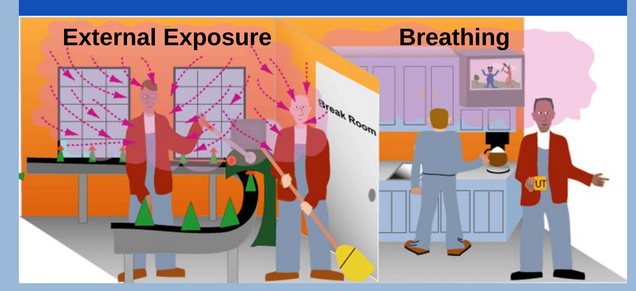
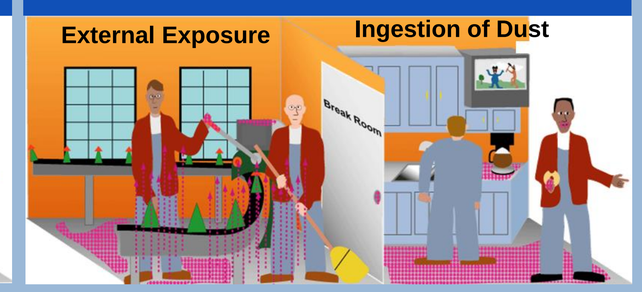
Resident: Settled Dust

Resident: Ambient Air

Resident: Contaminated Building Materials

Indoor Worker: Contaminated Building Materials

Indoor Worker: Ambient Air



Indoor Worker: Settled Dust