



# Preliminary Remediation Goals (PRG) Calculator



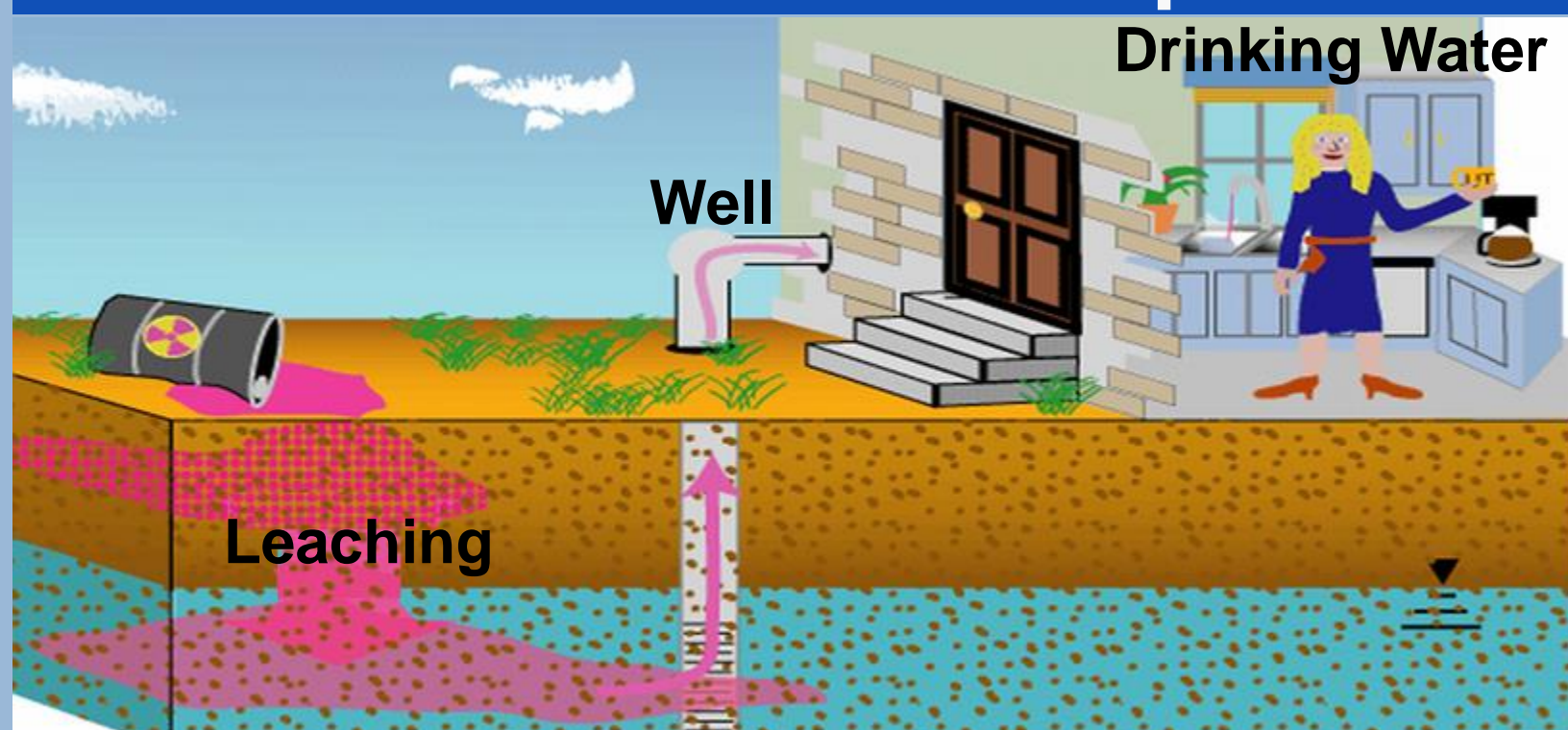
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PRG: <http://epa-prgs.ornl.gov/radionuclides>

## What is PRG?

- PRG stands for **Preliminary Remediation Goal**.
- PRGs are the initial cleanup goals at a Superfund site and usually are not final cleanup levels.
- Used when there is no appropriate government regulation of cleanup levels.

## Soil to Groundwater Exposure



## PRG Calculator

- The **PRG Calculator** is a tool that allows EPA to calculate initial cleanup levels for radiation in soil, water, and air 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 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 calculated by the PRG calculator are shown in the diagrams below.

## How does the PRG Calculator Work?

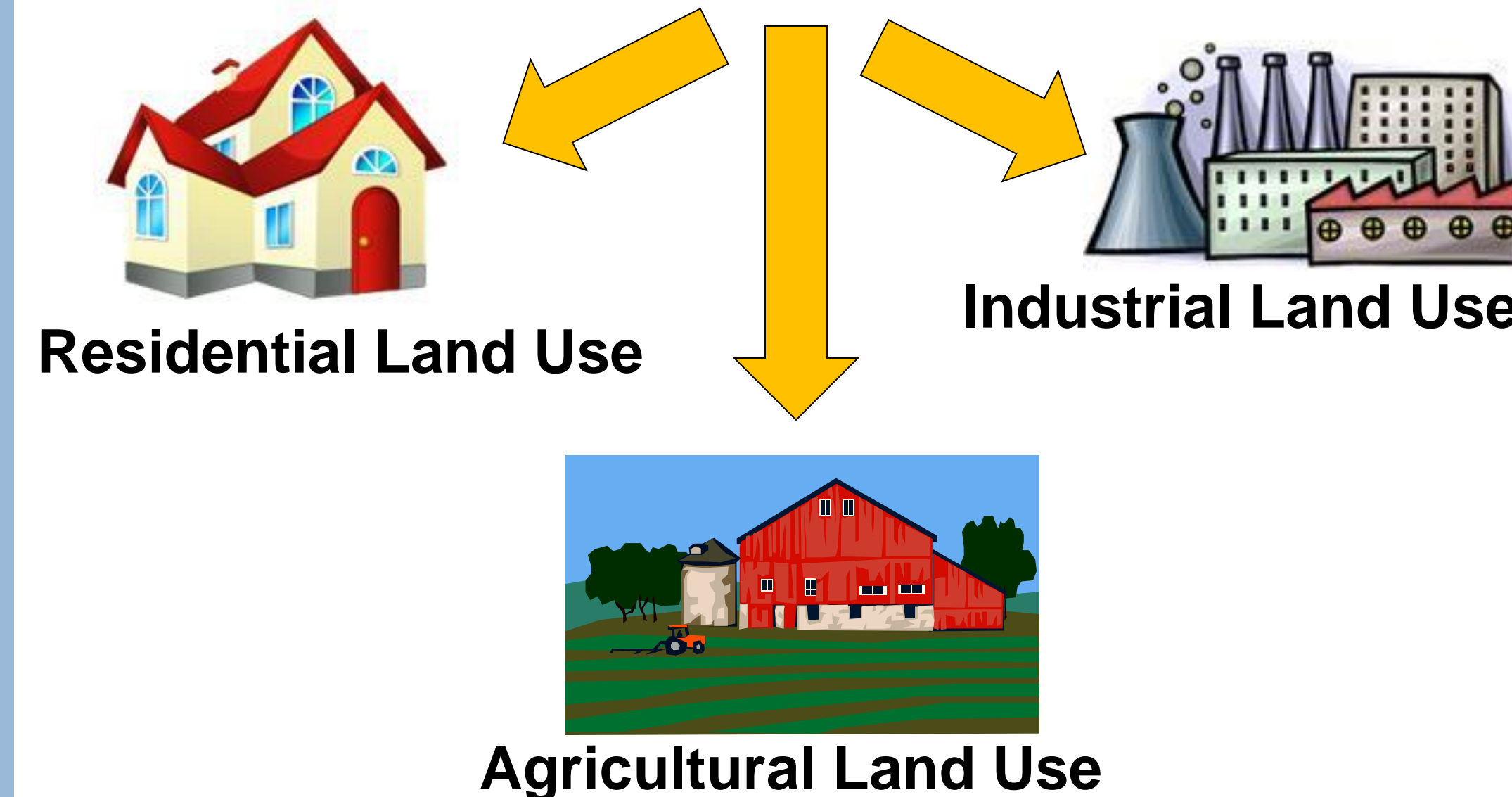
### Slope Factors



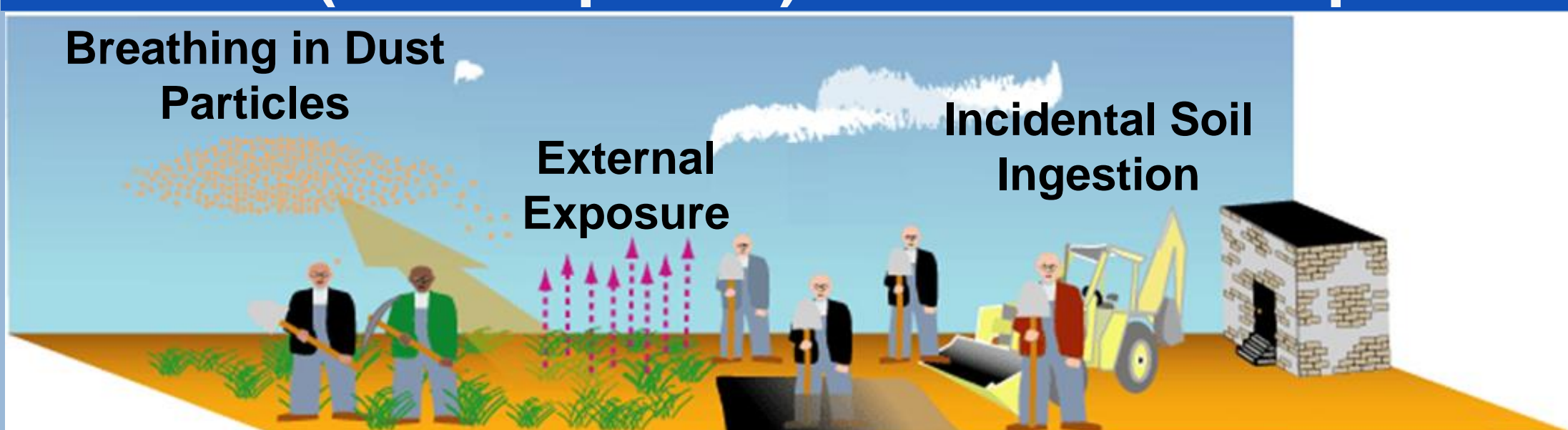
### PRG Equations



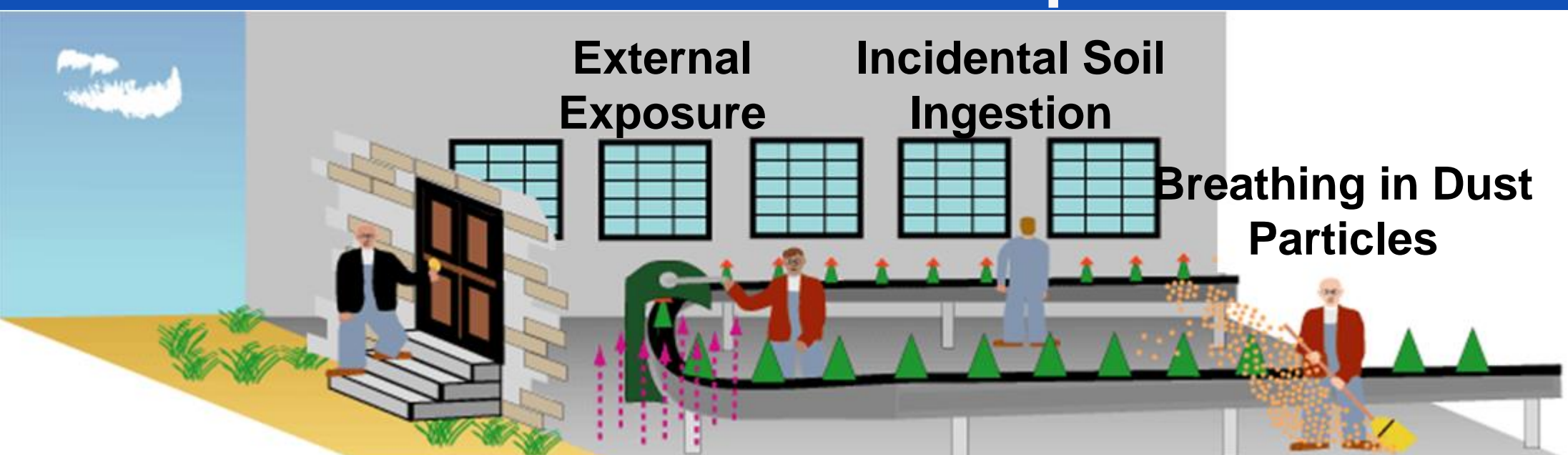
### PRG Calculation



## Outdoor (or Composite) Worker: Soil Exposure



## Indoor Worker: Soil Exposure



## Resident: Soil Exposure



## Agricultural: Soil Exposure



## Tapwater Ingestion Exposure



## Fish Ingestion Exposure

