



# Preliminary Remediation Goals (PRG) and Dose Compliance Concentrations (DCC) Calculators



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

DCC: <http://epa-dccs.ornl.gov/>

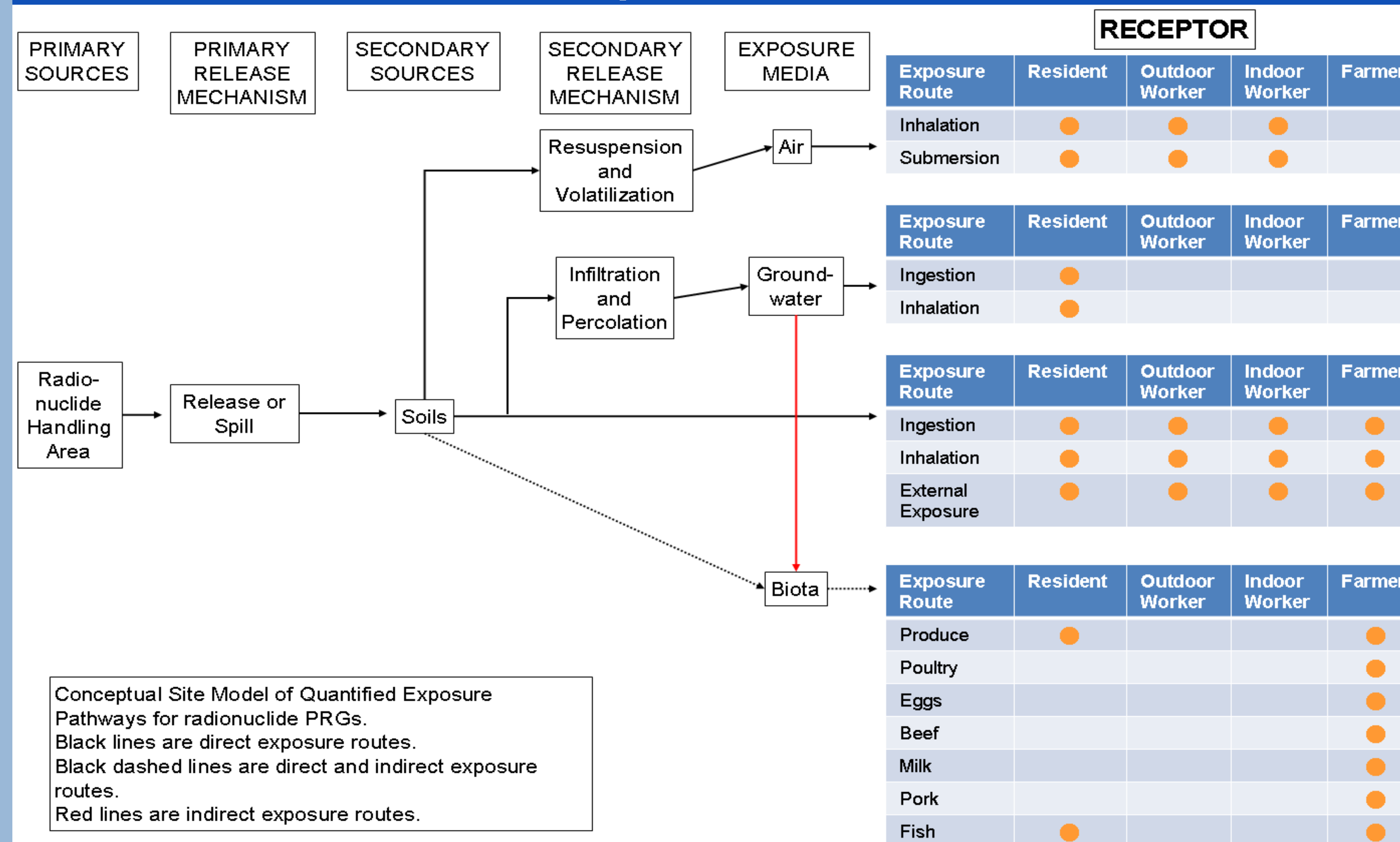
## PRG Calculator

- Calculates risk-based, **preliminary remediation goals (PRGs)** for use in **radiation risk assessments** at CERCLA sites. Useful when ARARs (Applicable or Relevant and Appropriate Requirements – regulations set by governments) are not available.
- Calculates cleanup concentrations based on a target cancer risk of  $1 \times 10^{-6}$ , except for MCLs in soil-to-groundwater scenario.
- Not cleanup standards – used for site screening and initial cleanup goals.

## DCC Calculator

- Calculates **dose compliance concentrations (DCCs)** for use in **radiation risk assessments** at CERCLA sites.
- Superfund is **NOT** a dose-based program.
- DCCs are useful for demonstrating compliance to ARARs.

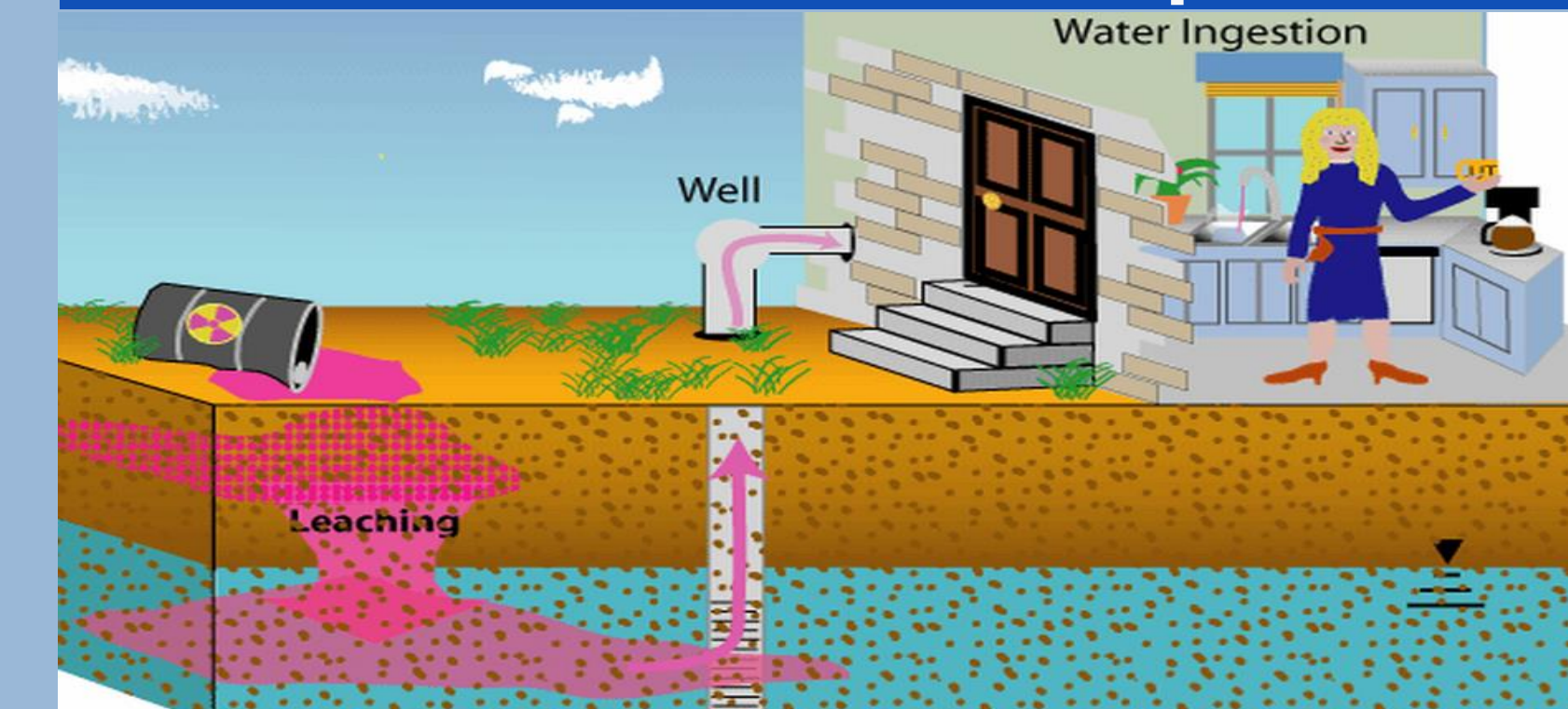
## Conceptual Site Model



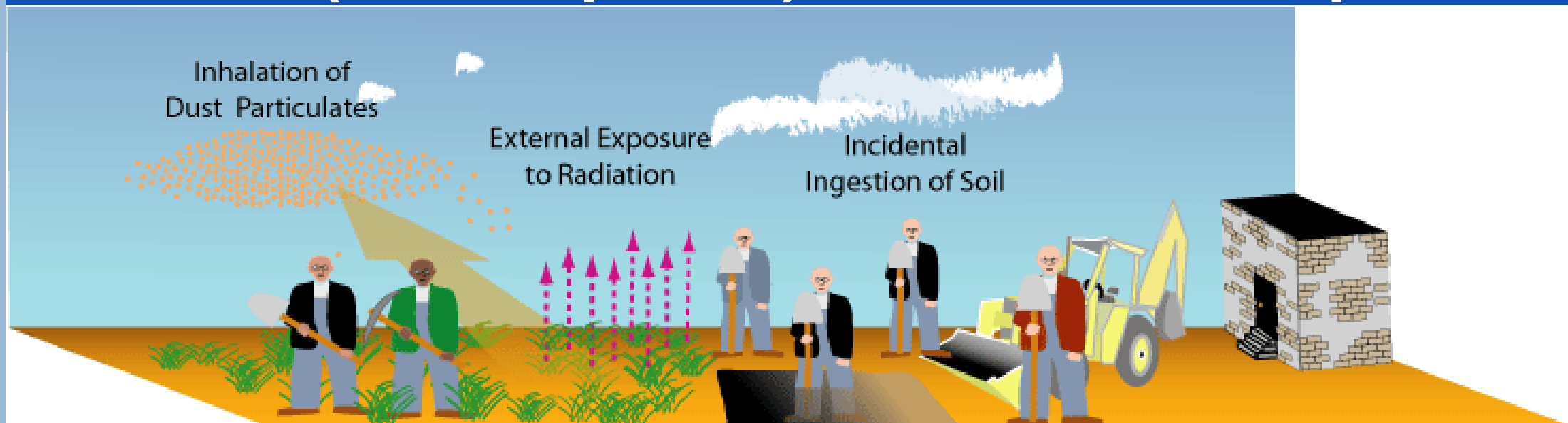
## Using the Calculators

- Select scenario:** 7 exposure scenarios below (air and 2D scenarios not pictured).
- Select PRG/DCC type:** use default parameters or site-specific. Defaults useful for initial site assessments. If data is collected, may use site-specific data to set more accurate cleanup goals.
- Select units:** units of activity in pCi or Bq.
- Select isotopes of interest:** Select the radionuclides and/or radionuclide decay chains present at site.
  - +D includes activity of daughter nuclides (100 yr).
  - +E includes activity of daughter nuclides (1000 yr).

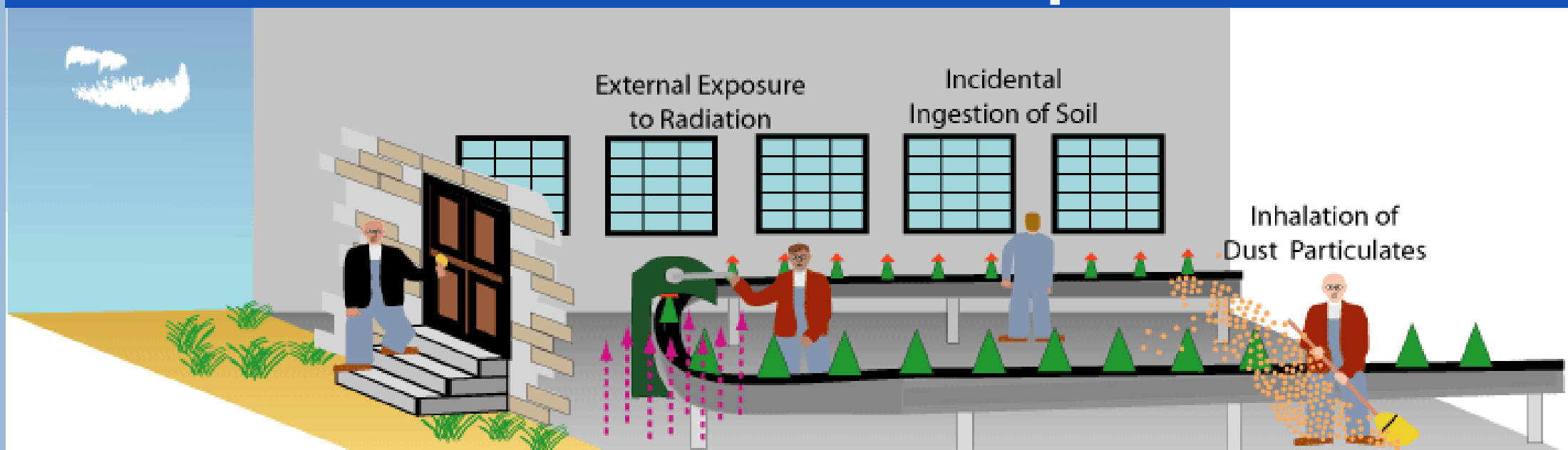
## Soil to Groundwater Exposure



## Outdoor (or Composite) Worker: Soil Exposure



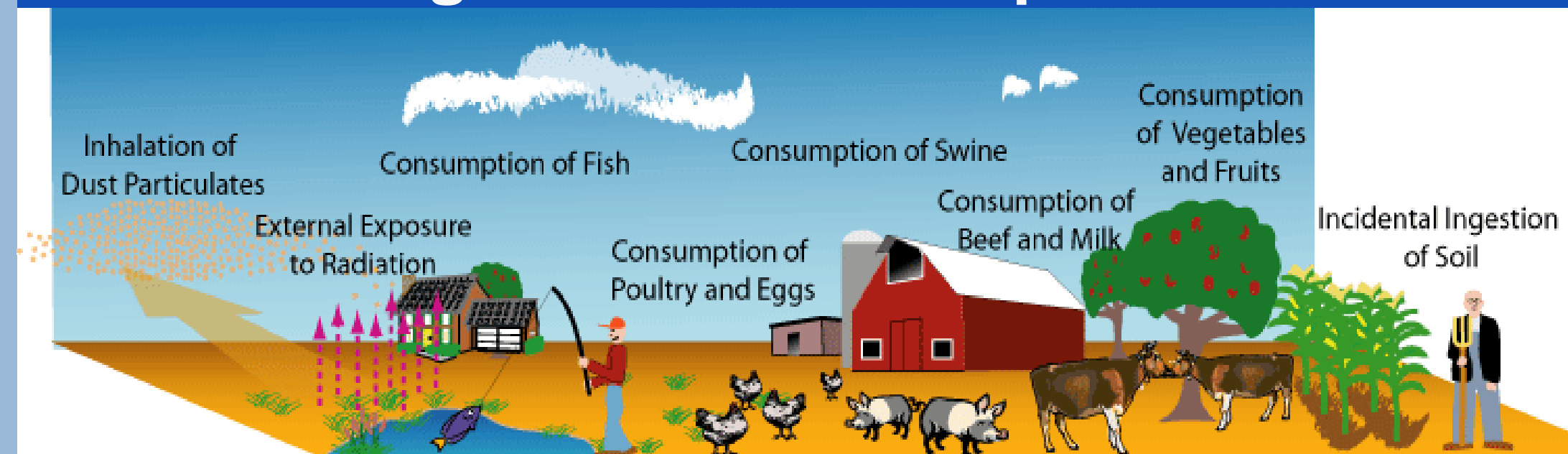
## Indoor Worker: Soil Exposure



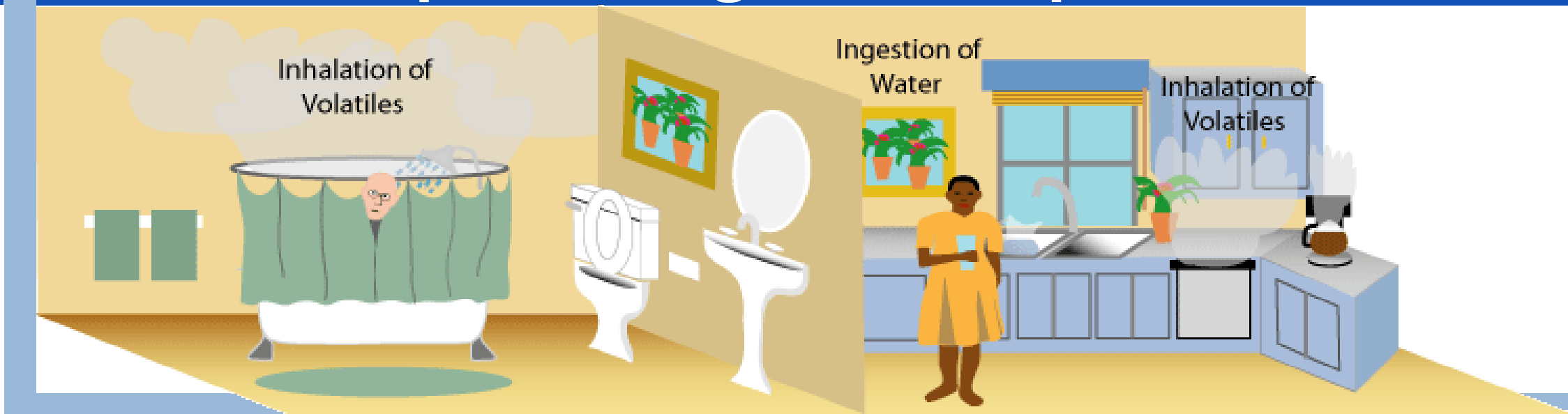
## Resident: Soil Exposure



## Agricultural Soil Exposure



## Tapwater Ingestion Exposure



## Fish Ingestion Exposure

