



# Surface Preliminary Remediation Goals (SPRG) and Surface Dose Compliance Concentrations (SDCC) Calculators



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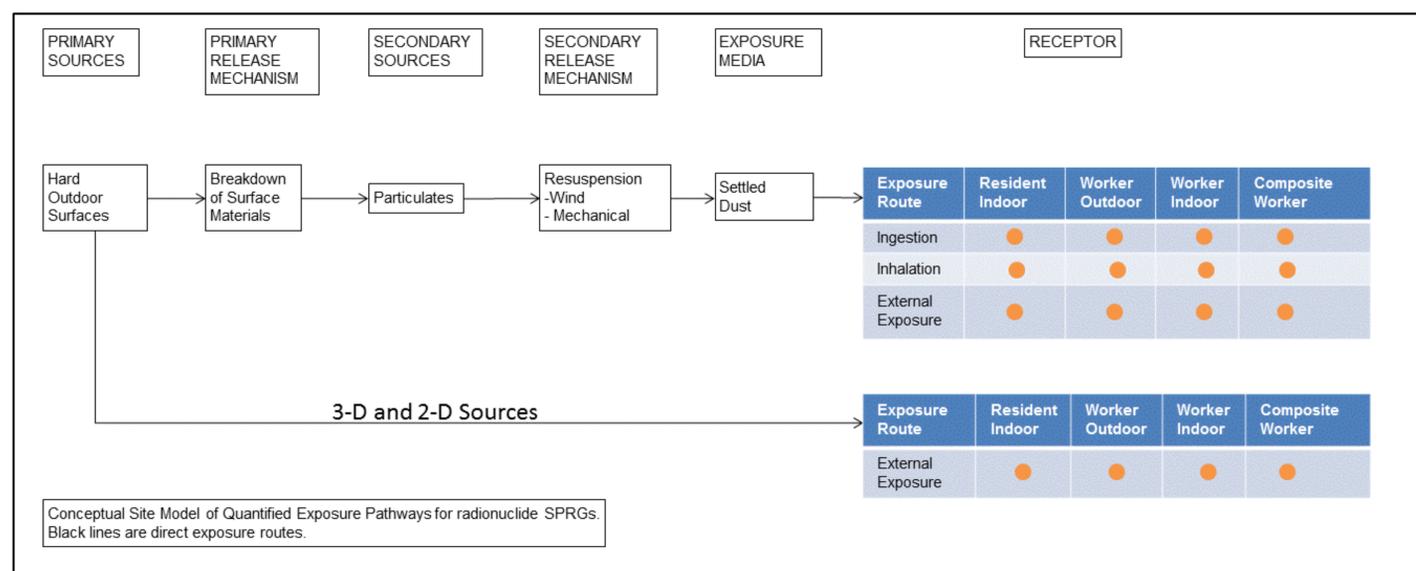
SPRG: <http://epa-sprg.ornl.gov>

SDCC: <http://epa-sdcc.ornl.gov>

## BPRG Calculator

- Calculates risk-based **surface preliminary remediation goals (SPRGs)** for use in **radiation risk assessments** on contaminated outside hard surfaces (streets, pavement, sides of buildings). 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  $1 \times 10^{-6}$ .
- Not cleanup standards – used for site screening and initial cleanup goals.
- Applicable for residential, indoor and outdoor worker exposure scenarios.

## Conceptual Site Model



## Using the Calculators

- Select scenario:** 3 exposure scenarios (resident, indoor worker, outdoor worker) and 5 exposure pathways. All exposure pathways demonstrated below with a sample exposure scenario.
- 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).

## BDCC Calculator

- Calculates **surface dose compliance concentrations (SDCCs)** for use on contaminated outdoor hard surfaces.
- Superfund is **NOT** a dose-based program.
- DCCs are useful for demonstrating compliance to ARARs.

### Settled Dust (Resident)



### 2D Exposure to Fixed Contaminated Finite Slabs (Resident)



### 2D Exposure to Fixed Settled Dust on Finite Slabs (Outdoor Worker)



### 3D Exposure to Fixed Contaminated Building Materials (Outdoor Worker)



### 3D Exposure to Fixed Settled Dust on Outdoor Surfaces (Indoor Worker)

