Volatilization to Indoor Air Pathway (VIAP) Screening Levels and Site-Specific Criteria Overview

UNRESTRICTED RESIDENTIAL SCREENING LEVELS

Residential structure w/ basement

- Groundwater: Shallow/In Contact
  - **Depth below grade ≤ 10 ft**
  - EGLE shallow groundwater α
- Soil: Infinite source
- Vapor: EPA Default **α = 0.03**

- Groundwater: Not In Contact
  - **Depth below grade > 10 ft**
  - EPA Default **α = 0.001**
- Soil: Infinite source
- Vapor: EPA Default **α = 0.03**

RESTRICTED NONRESIDENTIAL SCREENING LEVELS

Nonresidential structure < 50,000 ft^2 of continuous open space w/ slab-on-grade *NOTE: Not applicable for former residential now nonresidential use structures*

- Groundwater: Shallow/In Contact
  - **Depth below grade ≤ 5 ft**
  - EGLE shallow groundwater α
- Soil: Infinite source
- Vapor: EPA Default **α = 0.03**

- Groundwater: Not In Contact
  - **Depth below grade > 5 ft**
  - EPA Default **α = 0.001**
- Soil: Infinite source
- Vapor: EPA Default **α = 0.03**

Note: Groundwater Not In Contact scenario aligns with EPA's approach for groundwater vapor intrusion screening levels

Option 1

Site-Specific Volatilization to Indoor Air Criteria (SSVIAC)

FACILITY SPECIFIC USING VIAP CALCULATOR

UNRESTRICTED RESIDENTIAL SSVIAC

- Building: House w/ basement
- Incorporates:
  - Site geology
  - Actual groundwater depth
  - J&E model

MAY BE COMBINED

RESTRICTED SSVIAC

- Residential and Nonresidential
- Building:
  - Other use(s)/ sizes
  - Other foundation types
- Incorporates:
  - Site geology
  - Actual groundwater depth
  - J&E model

Option 2

Proposed SSVIAC Pursuant to Sec. 20120b

- Alternate approaches proposed to the Department for review and approval

SSVIAC PURSANT TO Sec. 20120b

Model Selection

- Biovapor/PVIScreen
- Multi-layer J&E Model
- Big Building
- Other

MAY BE COMBINED

Parameter Selection

- Toxicological
- Chemical physical
- Building characteristics
- Other